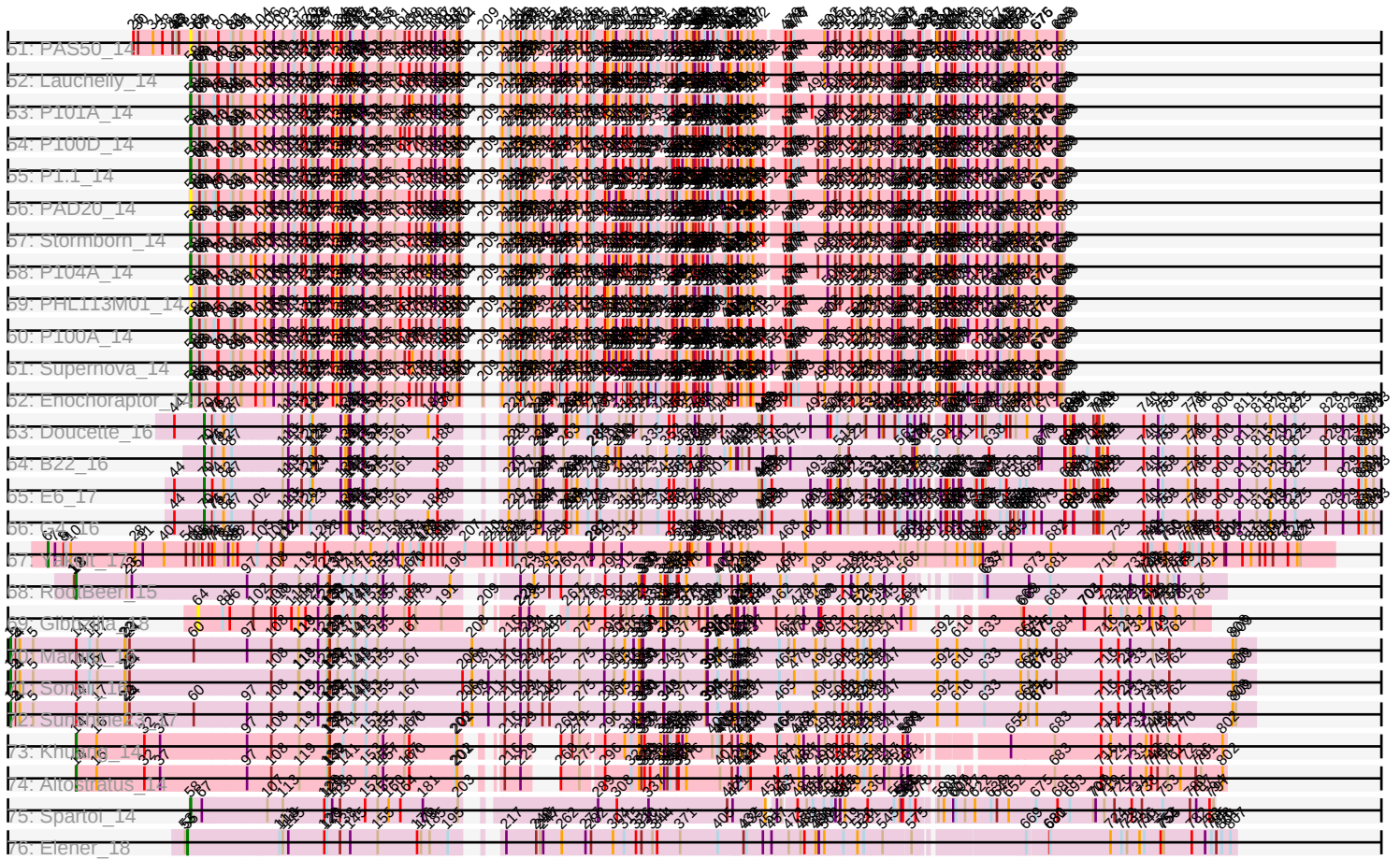




Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 330708 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330708 has 95 members, 15 are drafts.

Phages represented in each track:

- Track 1 : ApoKipo_69
- Track 2 : Kovu_65
- Track 3 : Shrooms_65
- Track 4 : Chipper1996_220, EdgarPoe_22, Kabreeze_22, Chubster_22, Conboy_22, Chocolat_22, Scavito_22, PrincessTrina_22, RosiePosie_22, HumptyDumpty_22
- Track 5 : KBurrousTX_22
- Track 6 : Colucci_21
- Track 7 : ArV1_018
- Track 8 : JaNo_22, Mordred_22, Linus_22, JayCookie_22, Tophat_22
- Track 9 : Lymara_22
- Track 10 : MoyaNatalis_22
- Track 11 : DrYang_22
- Track 12 : Keiki_14, Cota_14
- Track 13 : Kubed_14
- Track 14 : Attacne_14
- Track 15 : P106M_14, P106I_14, P106C_14, P106L_14, P106A_14
- Track 16 : P9.1_14
- Track 17 : MEAK_14
- Track 18 : P107C_14, ATCC29399BC_14
- Track 19 : LilBandit_14
- Track 20 : Solid_14
- Track 21 : Ouroboros_14
- Track 22 : P14.4_14
- Track 23 : MrAK_14
- Track 24 : Procrass1_14
- Track 25 : PHL071N05_14
- Track 26 : PHL114L00_14
- Track 27 : PA6_14
- Track 28 : ATCC29399BT_14
- Track 29 : SKKY_14
- Track 30 : PHL037M02_14
- Track 31 : Enoki_14
- Track 32 : Leviosa_14
- Track 33 : P104B_14
- Track 34 : BruceLethal_14
- Track 35 : PHL060L00_14

- Track 36 : Rileysaurus_14
- Track 37 : PHL111M01_14
- Track 38 : P100.1_14
- Track 39 : Wizzo_14
- Track 40 : Moyashi_14
- Track 41 : P108C_14
- Track 42 : QueenBey_14
- Track 43 : Pirate_14
- Track 44 : Aquarius_14
- Track 45 : PHL010M04_14
- Track 46 : P105_14
- Track 47 : PHL112N00_14
- Track 48 : DrParker_14
- Track 49 : PHL067M10_14
- Track 50 : P107A_14
- Track 51 : PAS50_14
- Track 52 : Lauchelly_14
- Track 53 : P101A_14
- Track 54 : P100D_14
- Track 55 : P1.1_14
- Track 56 : PAD20_14
- Track 57 : Stormborn_14
- Track 58 : P104A_14
- Track 59 : PHL113M01_14
- Track 60 : P100A_14
- Track 61 : Supernova_14
- Track 62 : Enochoraptor_14
- Track 63 : Doucette_16
- Track 64 : B22_16
- Track 65 : E6_17
- Track 66 : G4_16
- Track 67 : Yakult_17
- Track 68 : RootBeer_15
- Track 69 : Gibbzilla_18
- Track 70 : Maruru_16
- Track 71 : Sonali_16
- Track 72 : Sunshine23_17
- Track 73 : Khuang_14
- Track 74 : Altostratus_14
- Track 75 : Spartoi_14
- Track 76 : Elener_18

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

The start number called the most often in the published annotations is 58, it was called in 46 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• ATCC29399BC_14, ATCC29399BT_14, Aquarius_14, Attacne_14, BruceLethal_14, Cota_14, DrParker_14, Enochoraptor_14, Enoki_14, Keiki_14, Kubed_14,

Lauchelly_14, Leviosa_14, LilBandit_14, MEAK_14, Moyashi_14, MrAK_14, Ouroboros_14, P1.1_14, P100.1_14, P100A_14, P100D_14, P101A_14, P104A_14, P104B_14, P105_14, P106A_14, P106C_14, P106I_14, P106L_14, P106M_14, P107A_14, P107C_14, P108C_14, P14.4_14, P9.1_14, PA6_14, PAD20_14, PAS50_14, PHL010M04_14, PHL037M02_14, PHL060L00_14, PHL067M10_14, PHL071N05_14, PHL111M01_14, PHL112N00_14, PHL113M01_14, PHL114L00_14, Pirate_14, Procrass1_14, QueenBey_14, Rileysaurus_14, SKKY_14, Solid_14, Spartoi_14, Stormborn_14, Supernova_14, Wizzo_14,

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

-

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

- Altostratus_14, ApoKipo_69, ArV1_018, B22_16, Chipper1996_220, Chocolat_22, Chubster_22, Colucci_21, Conboy_22, Doucette_16, DrYang_22, E6_17, EdgarPoe_22, Elener_18, G4_16, Gibbzilla_18, HumptyDumpty_22, JaNo_22, JayCookie_22, KBurrousTX_22, Kabreeze_22, Khuang_14, Kovu_65, Linus_22, Lymara_22, Maruru_16, Mordred_22, MoyaNatalis_22, PrincessTrina_22, RootBeer_15, RosiePosie_22, Scavito_22, Shrooms_65, Sonali_16, Sunshine23_17, Tophat_22, Yakult_17,

Summary by start number:

Start 1:

- Found in 3 of 95 (3.2%) of genes in pham
- Manual Annotations of this start: 3 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru_16 (FG), Sonali_16 (FG), Sunshine23_17 (FG),

Start 6:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yakult_17 (CT),

Start 13:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RootBeer_15 (FA),

Start 14:

- Found in 5 of 95 (5.3%) of genes in pham
- Manual Annotations of this start: 2 of 80
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Altostratus_14 (FS), Khuang_14 (FS),

Start 18:

- Found in 20 of 95 (21.1%) of genes in pham
- Manual Annotations of this start: 12 of 80
- Called 60.0% of time when present

- Phage (with cluster) where this start called: Chipper1996_220 (AR), Chocolat_22 (AR), Chubster_22 (AR), Colucci_21 (AR), Conboy_22 (AR), EdgarPoe_22 (AR), HumptyDumpty_22 (AR), KBurrousTX_22 (AR), Kabreeze_22 (AR), PrincessTrina_22 (AR), RosiePosie_22 (AR), Scavito_22 (AR),

Start 19:

- Found in 21 of 95 (22.1%) of genes in pham
- Manual Annotations of this start: 7 of 80
- Called 42.9% of time when present
- Phage (with cluster) where this start called: ArV1_018 (AR), DrYang_22 (AR), JaNo_22 (AR), JayCookie_22 (AR), Linus_22 (AR), Lymara_22 (AR), Mordred_22 (AR), MoyaNatalis_22 (AR), Tophat_22 (AR),

Start 50:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ApoKipo_69 (AL), Kovu_65 (AL),

Start 51:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shrooms_65 (AL),

Start 55:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elener_18 (singleton),

Start 58:

- Found in 58 of 95 (61.1%) of genes in pham
- Manual Annotations of this start: 46 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ATCC29399BC_14 (BU), ATCC29399BT_14 (BU), Aquarius_14 (BU), Attacne_14 (BU), BruceLethal_14 (BU), Cota_14 (BU), DrParker_14 (BU), Enochoraptor_14 (BU), Enoki_14 (BU), Keiki_14 (BU), Kubed_14 (BU), Lauchelly_14 (BU), Leviosa_14 (BU), LilBandit_14 (BU), MEAK_14 (BU), Moyashi_14 (BU), MrAK_14 (BU), Ouroboros_14 (BU), P1.1_14 (BU), P100.1_14 (BU), P100A_14 (BU), P100D_14 (BU), P101A_14 (BU), P104A_14 (BU), P104B_14 (BU), P105_14 (BU), P106A_14 (BU), P106C_14 (BU), P106I_14 (BU), P106L_14 (BU), P106M_14 (BU), P107A_14 (BU), P107C_14 (BU), P108C_14 (BU), P14.4_14 (BU), P9.1_14 (BU), PA6_14 (BU), PAD20_14 (BU), PAS50_14 (BU), PHL010M04_14 (BU), PHL037M02_14 (BU), PHL060L00_14 (BU), PHL067M10_14 (BU), PHL071N05_14 (BU), PHL111M01_14 (BU), PHL112N00_14 (BU), PHL113M01_14 (BU), PHL114L00_14 (BU), Pirate_14 (BU), Procrass1_14 (BU), QueenBey_14 (BU), Rileysaurus_14 (BU), SKKY_14 (BU), Solid_14 (BU), Spartoi_14 (singleton), Stormborn_14 (BU), Supernova_14 (BU), Wizzo_14 (BU),

Start 64:

- Found in 1 of 95 (1.1%) of genes in pham
- No Manual Annotations of this start.

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gibbzilla_18 (FB),

Start 70:

- Found in 4 of 95 (4.2%) of genes in pham
- Manual Annotations of this start: 4 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22_16 (BW), Doucette_16 (BW), E6_17 (BW), G4_16 (BW),

Summary by clusters:

There are 10 clusters represented in this pham: singleton, FS, FA, AL, BU, FB, BW, FG, AR, CT,

Info for manual annotations of cluster AL:

- Start number 50 was manually annotated 2 times for cluster AL.
- Start number 51 was manually annotated 1 time for cluster AL.

Info for manual annotations of cluster AR:

- Start number 18 was manually annotated 12 times for cluster AR.
- Start number 19 was manually annotated 7 times for cluster AR.

Info for manual annotations of cluster BU:

- Start number 58 was manually annotated 45 times for cluster BU.

Info for manual annotations of cluster BW:

- Start number 70 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster CT:

- Start number 6 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster FA:

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

Info for manual annotations of cluster FG:

- Start number 1 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FS:

- Start number 14 was manually annotated 2 times for cluster FS.

Gene Information:

Gene: ATCC29399BC_14 Start: 8502, Stop: 11267, Start Num: 58

Candidate Starts for ATCC29399BC_14:

(Start: 58 @8502 has 46 MA's), (63, 8529), (66, 8535), (69, 8547), (71, 8556), (78, 8589), (80, 8592), (84, 8622), (87, 8637), (89, 8643), (90, 8649), (94, 8664), (95, 8667), (104, 8715), (106, 8745), (108, 8772), (109, 8781), (113, 8814), (115, 8835), (117, 8856), (120, 8886), (122, 8901), (123, 8919), (124, 8928), (125, 8931), (127, 8949), (134, 9006), (136, 9021), (139, 9036), (140, 9039), (143, 9051), (145, 9066), (146, 9069), (147, 9075), (151, 9111), (152, 9120), (153, 9123), (155, 9165), (156, 9177), (161,

9222), (170, 9267), (174, 9288), (180, 9309), (184, 9330), (186, 9342), (187, 9351), (189, 9363), (193, 9384), (194, 9387), (197, 9399), (202, 9417), (204, 9426), (209, 9438), (214, 9450), (219, 9462), (221, 9471), (225, 9492), (226, 9498), (230, 9513), (231, 9519), (233, 9528), (238, 9549), (257, 9615), (266, 9645), (274, 9675), (278, 9708), (285, 9729), (296, 9765), (298, 9774), (301, 9780), (304, 9795), (307, 9807), (314, 9834), (318, 9849), (320, 9858), (327, 9888), (334, 9915), (337, 9921), (339, 9930), (353, 9978), (360, 9996), (361, 9999), (362, 10002), (366, 10014), (373, 10035), (376, 10041), (384, 10068), (385, 10074), (386, 10077), (389, 10086), (390, 10089), (392, 10095), (397, 10110), (399, 10122), (413, 10176), (416, 10185), (418, 10191), (419, 10194), (420, 10197), (427, 10215), (429, 10224), (430, 10227), (436, 10248), (437, 10251), (440, 10260), (442, 10269), (452, 10305), (470, 10359), (473, 10371), (476, 10380), (477, 10389), (483, 10404), (498, 10464), (502, 10479), (505, 10491), (516, 10533), (524, 10578), (527, 10599), (528, 10608), (538, 10641), (540, 10668), (553, 10710), (557, 10719), (560, 10731), (564, 10743), (567, 10752), (572, 10773), (582, 10806), (583, 10815), (584, 10818), (585, 10821), (590, 10839), (592, 10842), (594, 10851), (601, 10875), (603, 10884), (604, 10887), (606, 10896), (608, 10905), (615, 10938), (619, 10941), (626, 10965), (637, 11004), (641, 11034), (643, 11040), (645, 11049), (647, 11058), (658, 11100), (661, 11112), (672, 11148), (675, 11166), (676, 11169), (678, 11175), (685, 11244), (688, 11253), (689, 11262),

Gene: ATCC29399BT_14 Start: 8499, Stop: 11264, Start Num: 58

Candidate Starts for ATCC29399BT_14:

(Start: 58 @8499 has 46 MA's), (63, 8526), (66, 8532), (69, 8544), (71, 8553), (75, 8577), (80, 8589), (87, 8634), (89, 8640), (90, 8646), (94, 8661), (95, 8664), (100, 8694), (104, 8712), (106, 8742), (108, 8769), (109, 8778), (113, 8811), (115, 8832), (117, 8853), (120, 8883), (123, 8916), (124, 8925), (125, 8928), (127, 8946), (134, 9003), (136, 9018), (139, 9033), (140, 9036), (143, 9048), (145, 9063), (146, 9066), (148, 9075), (151, 9108), (152, 9117), (153, 9120), (155, 9162), (156, 9174), (161, 9219), (170, 9264), (174, 9285), (180, 9306), (186, 9339), (189, 9360), (193, 9381), (194, 9384), (197, 9396), (202, 9414), (204, 9423), (209, 9435), (214, 9447), (221, 9468), (225, 9489), (226, 9495), (230, 9510), (231, 9516), (233, 9525), (238, 9546), (245, 9570), (254, 9600), (257, 9612), (259, 9621), (261, 9624), (266, 9642), (274, 9672), (278, 9705), (281, 9714), (285, 9726), (296, 9762), (298, 9771), (304, 9792), (307, 9804), (314, 9831), (318, 9846), (320, 9855), (327, 9885), (330, 9897), (333, 9909), (334, 9912), (337, 9918), (339, 9927), (345, 9951), (353, 9975), (360, 9993), (361, 9996), (362, 9999), (364, 10008), (366, 10011), (373, 10032), (376, 10038), (383, 10062), (384, 10065), (386, 10074), (389, 10083), (390, 10086), (392, 10092), (397, 10107), (399, 10119), (401, 10125), (408, 10158), (413, 10173), (416, 10182), (418, 10188), (419, 10191), (420, 10194), (427, 10212), (429, 10221), (430, 10224), (436, 10245), (437, 10248), (440, 10257), (442, 10266), (452, 10302), (470, 10356), (473, 10368), (476, 10377), (477, 10386), (483, 10401), (498, 10461), (502, 10476), (505, 10488), (516, 10530), (524, 10575), (527, 10596), (528, 10605), (538, 10638), (540, 10665), (553, 10707), (557, 10716), (560, 10728), (567, 10749), (582, 10803), (583, 10812), (585, 10818), (590, 10836), (594, 10848), (601, 10872), (603, 10881), (604, 10884), (606, 10893), (608, 10902), (611, 10914), (619, 10938), (626, 10962), (637, 11001), (641, 11031), (643, 11037), (645, 11046), (647, 11055), (653, 11079), (658, 11097), (661, 11109), (672, 11145), (675, 11163), (676, 11166), (685, 11241), (688, 11250), (689, 11259),

Gene: Altostratus_14 Start: 9122, Stop: 12901, Start Num: 14

Candidate Starts for Altostratus_14:

(Start: 14 @9122 has 2 MA's), (16, 9200), (32, 9383), (37, 9443), (97, 9755), (108, 9845), (119, 9950), (129, 10055), (130, 10061), (132, 10067), (141, 10118), (153, 10205), (155, 10250), (157, 10271), (167, 10352), (170, 10370), (201, 10535), (202, 10541), (216, 10595), (229, 10655), (260, 10697), (275, 10766), (296, 10844), (321, 10937), (328, 10967), (330, 10976), (332, 10988), (338, 11009), (346, 11045), (349, 11057), (354, 11069), (357, 11075), (366, 11102), (368, 11108), (376, 11132), (407, 11261), (420, 11300), (427, 11318), (429, 11327), (437, 11354), (440, 11363), (464, 11465), (471, 11495), (484, 11540), (487, 11549), (499, 11606), (503, 11630), (512, 11672), (518, 11693), (526, 11747), (531, 11771), (538, 11792), (547, 11846), (551, 11864), (565, 11906), (571, 11930), (683, 12281), (716, 12455), (724, 12491), (733, 12566), (742, 12626), (746, 12641), (750, 12662),

(761, 12695), (772, 12734), (786, 12788), (791, 12806), (802, 12887),

Gene: ApoKipo_69 Start: 36687, Stop: 40424, Start Num: 50

Candidate Starts for ApoKipo_69:

(Start: 50 @36687 has 2 MA's), (57, 36705), (62, 36735), (63, 36738), (73, 36789), (108, 36996), (119, 37101), (129, 37206), (130, 37212), (132, 37218), (153, 37356), (165, 37491), (169, 37518), (170, 37521), (186, 37599), (201, 37686), (216, 37749), (223, 37782), (228, 37806), (229, 37809), (234, 37839), (238, 37860), (246, 37893), (252, 37920), (270, 38004), (275, 38031), (281, 38073), (284, 38082), (287, 38097), (293, 38118), (332, 38274), (349, 38343), (350, 38346), (357, 38361), (366, 38388), (371, 38400), (376, 38418), (391, 38475), (405, 38538), (413, 38565), (415, 38571), (420, 38586), (424, 38595), (426, 38598), (427, 38604), (437, 38640), (441, 38652), (445, 38667), (454, 38703), (456, 38724), (460, 38736), (464, 38751), (479, 38814), (484, 38826), (488, 38838), (491, 38847), (499, 38892), (509, 38949), (518, 38979), (522, 39003), (526, 39033), (529, 39048), (531, 39057), (538, 39078), (547, 39132), (552, 39156), (566, 39198), (569, 39207), (592, 39282), (659, 39519), (660, 39525), (675, 39588), (676, 39591), (677, 39594), (688, 39678), (696, 39723), (703, 39768), (711, 39819), (712, 39822), (724, 39870), (728, 39900), (731, 39933), (733, 39945), (736, 39981), (737, 39987), (743, 40005), (752, 40053), (754, 40062), (765, 40101), (775, 40116), (786, 40167), (799, 40248), (802, 40269), (803, 40275), (809, 40320), (810, 40332), (813, 40374), (817, 40413),

Gene: Aquarius_14 Start: 8519, Stop: 11284, Start Num: 58

Candidate Starts for Aquarius_14:

(Start: 58 @8519 has 46 MA's), (63, 8546), (66, 8552), (69, 8564), (71, 8573), (78, 8606), (80, 8609), (87, 8654), (89, 8660), (94, 8681), (95, 8684), (104, 8732), (106, 8762), (108, 8789), (109, 8798), (113, 8831), (117, 8873), (120, 8903), (122, 8918), (123, 8936), (124, 8945), (125, 8948), (127, 8966), (133, 9020), (134, 9023), (136, 9038), (139, 9053), (140, 9056), (143, 9068), (145, 9083), (147, 9092), (151, 9128), (152, 9137), (153, 9140), (155, 9182), (156, 9194), (161, 9239), (170, 9284), (174, 9305), (180, 9326), (184, 9347), (186, 9359), (187, 9368), (193, 9401), (194, 9404), (197, 9416), (202, 9434), (204, 9443), (209, 9455), (214, 9467), (219, 9479), (221, 9488), (225, 9509), (226, 9515), (230, 9530), (231, 9536), (233, 9545), (238, 9566), (241, 9578), (257, 9632), (261, 9644), (266, 9662), (274, 9692), (276, 9704), (278, 9725), (281, 9734), (285, 9746), (296, 9782), (298, 9791), (304, 9812), (307, 9824), (314, 9851), (318, 9866), (320, 9875), (323, 9884), (327, 9905), (328, 9908), (330, 9917), (333, 9929), (334, 9932), (337, 9938), (339, 9947), (342, 9953), (345, 9971), (351, 9992), (353, 9995), (360, 10013), (361, 10016), (364, 10028), (366, 10031), (368, 10037), (369, 10040), (376, 10058), (382, 10079), (384, 10085), (385, 10091), (386, 10094), (388, 10100), (389, 10103), (390, 10106), (392, 10112), (398, 10136), (399, 10139), (401, 10145), (405, 10166), (408, 10178), (409, 10181), (411, 10187), (416, 10202), (418, 10208), (419, 10211), (427, 10232), (429, 10241), (430, 10244), (435, 10262), (436, 10265), (439, 10274), (440, 10277), (443, 10289), (446, 10298), (452, 10322), (457, 10331), (470, 10376), (473, 10388), (476, 10397), (477, 10406), (480, 10415), (502, 10496), (505, 10508), (516, 10550), (524, 10595), (527, 10616), (528, 10625), (538, 10658), (540, 10685), (553, 10727), (557, 10736), (560, 10748), (564, 10760), (567, 10769), (572, 10790), (584, 10835), (585, 10838), (590, 10856), (592, 10859), (594, 10868), (601, 10892), (604, 10904), (606, 10913), (608, 10922), (615, 10955), (619, 10958), (626, 10982), (637, 11021), (641, 11051), (643, 11057), (645, 11066), (647, 11075), (658, 11117), (661, 11129), (672, 11165), (675, 11183), (676, 11186), (678, 11192), (685, 11261), (688, 11270), (689, 11279),

Gene: ArV1_018 Start: 14054, Stop: 17587, Start Num: 19

Candidate Starts for ArV1_018:

(Start: 18 @14048 has 12 MA's), (Start: 19 @14054 has 7 MA's), (27, 14126), (29, 14138), (31, 14159), (35, 14204), (39, 14237), (41, 14255), (43, 14279), (46, 14288), (49, 14309), (61, 14357), (85, 14468), (100, 14552), (113, 14669), (121, 14744), (129, 14837), (135, 14873), (146, 14924), (147, 14930), (150, 14945), (152, 14975), (155, 15020), (156, 15032), (161, 15077), (162, 15086), (168, 15107), (175, 15146), (184, 15185), (196, 15251), (216, 15317), (229, 15377), (236, 15419), (239, 15428),

(246, 15458), (251, 15479), (253, 15485), (254, 15491), (268, 15557), (286, 15650), (287, 15653), (293, 15674), (297, 15692), (298, 15695), (304, 15716), (306, 15725), (310, 15737), (311, 15740), (316, 15761), (318, 15770), (319, 15773), (328, 15812), (332, 15827), (345, 15875), (347, 15890), (365, 15941), (367, 15947), (376, 15971), (379, 15980), (380, 15986), (391, 16022), (417, 16121), (437, 16190), (442, 16208), (450, 16241), (474, 16253), (497, 16325), (504, 16352), (508, 16373), (524, 16442), (525, 16448), (527, 16463), (531, 16484), (537, 16505), (548, 16562), (590, 16595), (592, 16598), (597, 16622), (614, 16691), (622, 16727), (624, 16730), (625, 16733), (637, 16775), (640, 16796), (648, 16835), (664, 16898), (678, 16955), (700, 17096), (702, 17108), (713, 17177), (724, 17219), (728, 17249), (732, 17288), (735, 17309), (742, 17354), (753, 17417), (758, 17426), (774, 17489), (788, 17546),

Gene: Attacne_14 Start: 8505, Stop: 11270, Start Num: 58

Candidate Starts for Attacne_14:

(Start: 58 @8505 has 46 MA's), (63, 8532), (66, 8538), (69, 8550), (71, 8559), (78, 8592), (80, 8595), (84, 8625), (87, 8640), (89, 8646), (94, 8667), (95, 8670), (104, 8718), (106, 8748), (109, 8784), (113, 8817), (115, 8838), (117, 8859), (120, 8889), (122, 8904), (123, 8922), (124, 8931), (125, 8934), (127, 8952), (133, 9006), (134, 9009), (136, 9024), (139, 9039), (140, 9042), (143, 9054), (147, 9078), (151, 9114), (152, 9123), (153, 9126), (155, 9168), (156, 9180), (161, 9225), (170, 9270), (174, 9291), (180, 9312), (184, 9333), (186, 9345), (187, 9354), (193, 9387), (194, 9390), (197, 9402), (202, 9420), (204, 9429), (209, 9441), (214, 9453), (219, 9465), (221, 9474), (225, 9495), (226, 9501), (230, 9516), (231, 9522), (233, 9531), (238, 9552), (245, 9576), (254, 9606), (255, 9612), (257, 9618), (261, 9630), (266, 9648), (274, 9678), (278, 9711), (285, 9732), (296, 9768), (298, 9777), (300, 9780), (304, 9798), (307, 9810), (310, 9819), (318, 9852), (320, 9861), (323, 9870), (327, 9891), (334, 9918), (337, 9924), (339, 9933), (345, 9957), (353, 9981), (360, 9999), (361, 10002), (362, 10005), (364, 10014), (366, 10017), (376, 10044), (383, 10068), (386, 10080), (389, 10089), (390, 10092), (392, 10098), (397, 10113), (399, 10125), (401, 10131), (408, 10164), (409, 10167), (411, 10173), (416, 10188), (418, 10194), (419, 10197), (427, 10218), (429, 10227), (436, 10251), (439, 10260), (440, 10263), (442, 10272), (452, 10308), (470, 10362), (473, 10374), (476, 10383), (477, 10392), (502, 10482), (505, 10494), (510, 10518), (512, 10524), (524, 10581), (526, 10599), (527, 10602), (528, 10611), (538, 10644), (540, 10671), (553, 10713), (557, 10722), (560, 10734), (564, 10746), (567, 10755), (572, 10776), (579, 10800), (582, 10809), (583, 10818), (584, 10821), (585, 10824), (590, 10842), (592, 10845), (594, 10854), (601, 10878), (603, 10887), (604, 10890), (606, 10899), (608, 10908), (615, 10941), (619, 10944), (626, 10968), (637, 11007), (641, 11037), (643, 11043), (645, 11052), (647, 11061), (653, 11085), (658, 11103), (661, 11115), (675, 11169), (676, 11172), (678, 11178), (685, 11247), (688, 11256), (689, 11265),

Gene: B22_16 Start: 9773, Stop: 13753, Start Num: 70

Candidate Starts for B22_16:

(Start: 70 @9773 has 4 MA's), (74, 9800), (75, 9806), (82, 9839), (87, 9863), (113, 10037), (115, 10058), (120, 10109), (123, 10142), (124, 10151), (126, 10163), (139, 10259), (142, 10271), (144, 10283), (145, 10289), (151, 10334), (152, 10343), (153, 10346), (155, 10388), (161, 10445), (188, 10583), (220, 10709), (223, 10727), (239, 10802), (245, 10823), (246, 10832), (247, 10835), (263, 10889), (284, 10985), (285, 10988), (298, 11033), (306, 11063), (310, 11075), (312, 11084), (335, 11174), (352, 11225), (369, 11267), (377, 11297), (380, 11306), (389, 11333), (391, 11345), (395, 11360), (411, 11408), (418, 11429), (426, 11447), (427, 11453), (431, 11468), (438, 11492), (451, 11537), (462, 11570), (475, 11615), (515, 11783), (522, 11819), (563, 11999), (576, 12044), (577, 12047), (580, 12053), (591, 12092), (611, 12173), (638, 12287), (678, 12443), (679, 12455), (691, 12536), (692, 12539), (694, 12557), (697, 12569), (698, 12572), (705, 12623), (710, 12659), (714, 12668), (717, 12680), (718, 12683), (722, 12701), (740, 12839), (751, 12893), (753, 12911), (778, 13007), (786, 13037), (800, 13121), (811, 13205), (815, 13271), (820, 13322), (823, 13379), (825, 13418), (828, 13535), (829, 13601), (830, 13661), (831, 13673), (832, 13688), (833, 13718),

Gene: BruceLethal_14 Start: 8509, Stop: 11274, Start Num: 58

Candidate Starts for BruceLethal_14:

(Start: 58 @8509 has 46 MA's), (63, 8536), (66, 8542), (69, 8554), (71, 8563), (75, 8587), (80, 8599), (87, 8644), (89, 8650), (94, 8671), (95, 8674), (104, 8722), (106, 8752), (108, 8779), (109, 8788), (113, 8821), (117, 8863), (120, 8893), (122, 8908), (123, 8926), (124, 8935), (125, 8938), (127, 8956), (134, 9013), (136, 9028), (139, 9043), (140, 9046), (143, 9058), (145, 9073), (146, 9076), (151, 9118), (152, 9127), (153, 9130), (155, 9172), (156, 9184), (161, 9229), (164, 9250), (170, 9274), (180, 9316), (186, 9349), (187, 9358), (193, 9391), (194, 9394), (197, 9406), (202, 9424), (204, 9433), (209, 9445), (214, 9457), (219, 9469), (221, 9478), (226, 9505), (230, 9520), (231, 9526), (233, 9535), (238, 9556), (255, 9616), (257, 9622), (259, 9631), (261, 9634), (266, 9652), (274, 9682), (281, 9724), (285, 9736), (296, 9772), (304, 9802), (307, 9814), (317, 9853), (318, 9856), (320, 9865), (327, 9895), (328, 9898), (330, 9907), (334, 9922), (337, 9928), (339, 9937), (345, 9961), (353, 9985), (360, 10003), (366, 10021), (368, 10027), (369, 10030), (372, 10039), (373, 10042), (376, 10048), (383, 10072), (384, 10075), (386, 10084), (389, 10093), (390, 10096), (392, 10102), (397, 10117), (398, 10126), (399, 10129), (402, 10138), (405, 10156), (413, 10183), (416, 10192), (420, 10204), (427, 10222), (429, 10231), (436, 10255), (442, 10276), (452, 10312), (470, 10366), (473, 10378), (476, 10387), (477, 10396), (524, 10585), (526, 10603), (527, 10606), (528, 10615), (538, 10648), (540, 10675), (553, 10717), (557, 10726), (560, 10738), (564, 10750), (567, 10759), (582, 10813), (584, 10825), (585, 10828), (590, 10846), (592, 10849), (594, 10858), (601, 10882), (603, 10891), (604, 10894), (606, 10903), (608, 10912), (615, 10945), (619, 10948), (626, 10972), (637, 11011), (641, 11041), (643, 11047), (645, 11056), (647, 11065), (658, 11107), (661, 11119), (672, 11155), (675, 11173), (676, 11176), (678, 11182), (685, 11251), (688, 11260), (689, 11269),

Gene: Chipper1996_220 Start: 15723, Stop: 19265, Start Num: 18

Candidate Starts for Chipper1996_220:

(Start: 18 @15723 has 12 MA's), (Start: 19 @15729 has 7 MA's), (20, 15750), (21, 15753), (31, 15834), (35, 15879), (39, 15912), (41, 15930), (46, 15963), (52, 15993), (59, 16020), (61, 16032), (86, 16149), (91, 16173), (99, 16224), (100, 16227), (111, 16332), (113, 16344), (121, 16419), (123, 16449), (126, 16470), (129, 16512), (150, 16620), (152, 16650), (155, 16695), (156, 16707), (161, 16752), (162, 16761), (175, 16821), (184, 16860), (226, 17040), (229, 17052), (231, 17061), (236, 17094), (238, 17100), (239, 17103), (251, 17154), (253, 17160), (254, 17166), (258, 17190), (265, 17217), (268, 17232), (271, 17244), (286, 17325), (287, 17328), (293, 17349), (297, 17367), (298, 17370), (304, 17391), (311, 17415), (316, 17436), (318, 17445), (319, 17448), (328, 17487), (334, 17511), (345, 17550), (347, 17565), (367, 17622), (376, 17646), (379, 17655), (380, 17661), (391, 17697), (404, 17745), (405, 17754), (417, 17796), (422, 17808), (437, 17865), (442, 17883), (447, 17898), (448, 17904), (497, 18000), (504, 18027), (508, 18048), (524, 18117), (527, 18138), (531, 18159), (548, 18237), (590, 18270), (592, 18273), (597, 18297), (614, 18366), (622, 18402), (624, 18405), (625, 18408), (629, 18423), (640, 18471), (647, 18507), (648, 18510), (664, 18573), (688, 18705), (700, 18771), (706, 18813), (713, 18852), (724, 18897), (732, 18966), (735, 18987), (742, 19032), (753, 19095), (764, 19134), (767, 19149), (781, 19200), (784, 19212),

Gene: Chocolat_22 Start: 15724, Stop: 19266, Start Num: 18

Candidate Starts for Chocolat_22:

(Start: 18 @15724 has 12 MA's), (Start: 19 @15730 has 7 MA's), (20, 15751), (21, 15754), (31, 15835), (35, 15880), (39, 15913), (41, 15931), (46, 15964), (52, 15994), (59, 16021), (61, 16033), (86, 16150), (91, 16174), (99, 16225), (100, 16228), (111, 16333), (113, 16345), (121, 16420), (123, 16450), (126, 16471), (129, 16513), (150, 16621), (152, 16651), (155, 16696), (156, 16708), (161, 16753), (162, 16762), (175, 16822), (184, 16861), (226, 17041), (229, 17053), (231, 17062), (236, 17095), (238, 17101), (239, 17104), (251, 17155), (253, 17161), (254, 17167), (258, 17191), (265, 17218), (268, 17233), (271, 17245), (286, 17326), (287, 17329), (293, 17350), (297, 17368), (298, 17371), (304, 17392), (311, 17416), (316, 17437), (318, 17446), (319, 17449), (328, 17488), (334, 17512), (345, 17551), (347, 17566), (367, 17623), (376, 17647), (379, 17656), (380, 17662), (391, 17698), (404, 17746), (405, 17755), (417, 17797), (422, 17809), (437, 17866), (442, 17884), (447, 17899), (448, 17905), (497, 18001), (504, 18028), (508, 18049), (524, 18118), (527, 18139), (531, 18160), (548,

18238), (590, 18271), (592, 18274), (597, 18298), (614, 18367), (622, 18403), (624, 18406), (625, 18409), (629, 18424), (640, 18472), (647, 18508), (648, 18511), (664, 18574), (688, 18706), (700, 18772), (706, 18814), (713, 18853), (724, 18898), (732, 18967), (735, 18988), (742, 19033), (753, 19096), (764, 19135), (767, 19150), (781, 19201), (784, 19213),

Gene: Chubster_22 Start: 15494, Stop: 19036, Start Num: 18

Candidate Starts for Chubster_22:

(Start: 18 @15494 has 12 MA's), (Start: 19 @15500 has 7 MA's), (20, 15521), (21, 15524), (31, 15605), (35, 15650), (39, 15683), (41, 15701), (46, 15734), (52, 15764), (59, 15791), (61, 15803), (86, 15920), (91, 15944), (99, 15995), (100, 15998), (111, 16103), (113, 16115), (121, 16190), (123, 16220), (126, 16241), (129, 16283), (150, 16391), (152, 16421), (155, 16466), (156, 16478), (161, 16523), (162, 16532), (175, 16592), (184, 16631), (226, 16811), (229, 16823), (231, 16832), (236, 16865), (238, 16871), (239, 16874), (251, 16925), (253, 16931), (254, 16937), (258, 16961), (265, 16988), (268, 17003), (271, 17015), (286, 17096), (287, 17099), (293, 17120), (297, 17138), (298, 17141), (304, 17162), (311, 17186), (316, 17207), (318, 17216), (319, 17219), (328, 17258), (334, 17282), (345, 17321), (347, 17336), (367, 17393), (376, 17417), (379, 17426), (380, 17432), (391, 17468), (404, 17516), (405, 17525), (417, 17567), (422, 17579), (437, 17636), (442, 17654), (447, 17669), (448, 17675), (497, 17771), (504, 17798), (508, 17819), (524, 17888), (527, 17909), (531, 17930), (548, 18008), (590, 18041), (592, 18044), (597, 18068), (614, 18137), (622, 18173), (624, 18176), (625, 18179), (629, 18194), (640, 18242), (647, 18278), (648, 18281), (664, 18344), (688, 18476), (700, 18542), (706, 18584), (713, 18623), (724, 18668), (732, 18737), (735, 18758), (742, 18803), (753, 18866), (764, 18905), (767, 18920), (781, 18971), (784, 18983),

Gene: Colucci_21 Start: 15200, Stop: 18736, Start Num: 18

Candidate Starts for Colucci_21:

(Start: 18 @15200 has 12 MA's), (Start: 19 @15206 has 7 MA's), (27, 15278), (29, 15290), (31, 15311), (35, 15356), (38, 15386), (41, 15407), (46, 15440), (61, 15509), (85, 15620), (91, 15650), (93, 15662), (96, 15683), (100, 15704), (111, 15809), (113, 15821), (121, 15896), (123, 15926), (126, 15947), (129, 15989), (135, 16025), (146, 16076), (147, 16082), (150, 16097), (155, 16172), (156, 16184), (161, 16229), (162, 16238), (168, 16259), (184, 16337), (196, 16403), (198, 16406), (215, 16463), (216, 16469), (229, 16529), (236, 16571), (239, 16580), (251, 16631), (253, 16637), (254, 16643), (257, 16658), (265, 16694), (268, 16709), (293, 16826), (297, 16844), (298, 16847), (303, 16865), (304, 16868), (306, 16877), (311, 16892), (312, 16898), (316, 16913), (318, 16922), (319, 16925), (328, 16964), (334, 16988), (342, 17009), (345, 17027), (347, 17042), (367, 17099), (377, 17126), (379, 17132), (380, 17138), (402, 17213), (410, 17252), (422, 17285), (437, 17342), (442, 17360), (447, 17375), (448, 17381), (497, 17477), (504, 17504), (524, 17594), (527, 17615), (530, 17630), (531, 17636), (548, 17714), (549, 17717), (589, 17744), (590, 17747), (592, 17750), (596, 17765), (622, 17879), (629, 17900), (637, 17927), (640, 17948), (644, 17969), (646, 17975), (650, 17996), (664, 18050), (700, 18248), (702, 18260), (713, 18329), (720, 18353), (724, 18371), (732, 18437), (735, 18458), (742, 18503), (763, 18599), (764, 18605), (792, 18716),

Gene: Conboy_22 Start: 15722, Stop: 19264, Start Num: 18

Candidate Starts for Conboy_22:

(Start: 18 @15722 has 12 MA's), (Start: 19 @15728 has 7 MA's), (20, 15749), (21, 15752), (31, 15833), (35, 15878), (39, 15911), (41, 15929), (46, 15962), (52, 15992), (59, 16019), (61, 16031), (86, 16148), (91, 16172), (99, 16223), (100, 16226), (111, 16331), (113, 16343), (121, 16418), (123, 16448), (126, 16469), (129, 16511), (150, 16619), (152, 16649), (155, 16694), (156, 16706), (161, 16751), (162, 16760), (175, 16820), (184, 16859), (226, 17039), (229, 17051), (231, 17060), (236, 17093), (238, 17099), (239, 17102), (251, 17153), (253, 17159), (254, 17165), (258, 17189), (265, 17216), (268, 17231), (271, 17243), (286, 17324), (287, 17327), (293, 17348), (297, 17366), (298, 17369), (304, 17390), (311, 17414), (316, 17435), (318, 17444), (319, 17447), (328, 17486), (334, 17510), (345, 17549), (347, 17564), (367, 17621), (376, 17645), (379, 17654), (380, 17660), (391, 17696), (404, 17744), (405, 17753), (417, 17795), (422, 17807), (437, 17864), (442, 17882), (447, 17897), (448,

17903), (497, 17999), (504, 18026), (508, 18047), (524, 18116), (527, 18137), (531, 18158), (548, 18236), (590, 18269), (592, 18272), (597, 18296), (614, 18365), (622, 18401), (624, 18404), (625, 18407), (629, 18422), (640, 18470), (647, 18506), (648, 18509), (664, 18572), (688, 18704), (700, 18770), (706, 18812), (713, 18851), (724, 18896), (732, 18965), (735, 18986), (742, 19031), (753, 19094), (764, 19133), (767, 19148), (781, 19199), (784, 19211),

Gene: Cota_14 Start: 8514, Stop: 11279, Start Num: 58

Candidate Starts for Cota_14:

(Start: 58 @8514 has 46 MA's), (63, 8541), (66, 8547), (69, 8559), (75, 8592), (78, 8601), (80, 8604), (87, 8649), (89, 8655), (90, 8661), (94, 8676), (95, 8679), (104, 8727), (106, 8757), (108, 8784), (109, 8793), (113, 8826), (115, 8847), (117, 8868), (120, 8898), (122, 8913), (123, 8931), (124, 8940), (125, 8943), (127, 8961), (133, 9015), (134, 9018), (136, 9033), (139, 9048), (140, 9051), (143, 9063), (145, 9078), (148, 9090), (151, 9123), (152, 9132), (153, 9135), (155, 9177), (156, 9189), (161, 9234), (170, 9279), (174, 9300), (180, 9321), (186, 9354), (187, 9363), (194, 9399), (197, 9411), (202, 9429), (204, 9438), (209, 9450), (214, 9462), (219, 9474), (221, 9483), (225, 9504), (226, 9510), (230, 9525), (231, 9531), (233, 9540), (238, 9561), (245, 9585), (254, 9615), (255, 9621), (257, 9627), (266, 9657), (274, 9687), (276, 9699), (278, 9720), (285, 9741), (295, 9774), (296, 9777), (298, 9786), (304, 9807), (307, 9819), (317, 9858), (320, 9870), (323, 9879), (327, 9900), (330, 9912), (334, 9927), (339, 9942), (351, 9987), (360, 10008), (361, 10011), (362, 10014), (363, 10020), (366, 10026), (376, 10053), (382, 10074), (384, 10080), (385, 10086), (386, 10089), (389, 10098), (390, 10101), (393, 10110), (397, 10122), (399, 10134), (405, 10161), (411, 10182), (413, 10188), (416, 10197), (418, 10203), (419, 10206), (420, 10209), (427, 10227), (428, 10230), (429, 10236), (430, 10239), (437, 10263), (442, 10281), (470, 10371), (473, 10383), (476, 10392), (477, 10401), (483, 10416), (502, 10491), (505, 10503), (516, 10545), (524, 10590), (527, 10611), (528, 10620), (538, 10653), (540, 10680), (553, 10722), (557, 10731), (560, 10743), (564, 10755), (567, 10764), (572, 10785), (582, 10818), (584, 10830), (585, 10833), (590, 10851), (592, 10854), (594, 10863), (601, 10887), (604, 10899), (606, 10908), (608, 10917), (615, 10950), (619, 10953), (626, 10977), (637, 11016), (641, 11046), (643, 11052), (645, 11061), (647, 11070), (658, 11112), (661, 11124), (672, 11160), (675, 11178), (676, 11181), (678, 11187), (685, 11256), (688, 11265), (689, 11274),

Gene: Doucette_16 Start: 9832, Stop: 13926, Start Num: 70

Candidate Starts for Doucette_16:

(44, 9718), (Start: 70 @9832 has 4 MA's), (74, 9859), (75, 9865), (82, 9898), (87, 9922), (113, 10096), (115, 10117), (120, 10168), (123, 10201), (124, 10210), (139, 10318), (142, 10330), (144, 10342), (145, 10348), (151, 10393), (152, 10402), (153, 10405), (155, 10447), (161, 10504), (184, 10612), (188, 10642), (220, 10768), (227, 10807), (239, 10861), (240, 10867), (244, 10879), (247, 10894), (263, 10957), (264, 10966), (266, 10969), (269, 10987), (274, 11008), (279, 11044), (288, 11071), (291, 11083), (311, 11155), (317, 11182), (324, 11209), (329, 11239), (345, 11296), (356, 11338), (362, 11356), (377, 11407), (385, 11437), (390, 11452), (401, 11503), (408, 11536), (448, 11668), (449, 11671), (450, 11680), (453, 11689), (458, 11701), (493, 11827), (505, 11887), (506, 11896), (513, 11917), (521, 11959), (533, 12019), (534, 12025), (541, 12073), (544, 12085), (546, 12091), (556, 12124), (558, 12127), (561, 12142), (571, 12175), (573, 12184), (577, 12199), (583, 12223), (588, 12244), (602, 12289), (604, 12298), (605, 12301), (607, 12313), (612, 12334), (613, 12343), (626, 12397), (627, 12406), (630, 12418), (635, 12430), (645, 12484), (650, 12505), (654, 12520), (659, 12538), (670, 12577), (679, 12628), (691, 12709), (692, 12712), (694, 12730), (697, 12742), (698, 12745), (708, 12820), (710, 12832), (714, 12841), (718, 12856), (740, 13012), (751, 13066), (753, 13084), (778, 13180), (786, 13210), (800, 13294), (811, 13378), (815, 13444), (820, 13495), (823, 13552), (825, 13591), (828, 13708), (829, 13774), (830, 13834), (831, 13846), (832, 13861), (833, 13891),

Gene: DrParker_14 Start: 8544, Stop: 11309, Start Num: 58

Candidate Starts for DrParker_14:

(Start: 58 @8544 has 46 MA's), (63, 8571), (66, 8577), (69, 8589), (71, 8598), (78, 8631), (80, 8634), (87, 8679), (89, 8685), (94, 8706), (95, 8709), (104, 8757), (106, 8787), (109, 8823), (113, 8856), (115, 8877), (117, 8898), (122, 8943), (123, 8961), (124, 8970), (125, 8973), (127, 8991), (133, 9045), (134, 9048), (136, 9063), (139, 9078), (140, 9081), (143, 9093), (145, 9108), (147, 9117), (151, 9153), (152, 9162), (153, 9165), (155, 9207), (156, 9219), (161, 9264), (168, 9294), (170, 9309), (174, 9330), (180, 9351), (186, 9384), (187, 9393), (189, 9405), (193, 9426), (194, 9429), (202, 9459), (204, 9468), (209, 9480), (214, 9492), (219, 9504), (221, 9513), (226, 9540), (233, 9570), (238, 9591), (245, 9615), (254, 9645), (255, 9651), (257, 9657), (266, 9687), (274, 9717), (278, 9750), (285, 9771), (295, 9804), (296, 9807), (298, 9816), (301, 9822), (307, 9849), (310, 9858), (312, 9867), (317, 9888), (318, 9891), (320, 9900), (323, 9909), (327, 9930), (330, 9942), (333, 9954), (334, 9957), (337, 9963), (339, 9972), (340, 9975), (342, 9978), (345, 9996), (351, 10017), (353, 10020), (360, 10038), (361, 10041), (362, 10044), (364, 10053), (366, 10056), (368, 10062), (369, 10065), (376, 10083), (382, 10104), (384, 10110), (385, 10116), (386, 10119), (388, 10125), (390, 10131), (392, 10137), (398, 10161), (399, 10164), (401, 10170), (405, 10191), (408, 10203), (409, 10206), (411, 10212), (416, 10227), (418, 10233), (419, 10236), (427, 10257), (429, 10266), (430, 10269), (435, 10287), (436, 10290), (439, 10299), (440, 10302), (442, 10311), (446, 10323), (452, 10347), (457, 10356), (460, 10365), (470, 10401), (473, 10413), (476, 10422), (477, 10431), (480, 10440), (494, 10488), (502, 10521), (505, 10533), (510, 10557), (524, 10620), (526, 10638), (527, 10641), (528, 10650), (529, 10653), (532, 10662), (538, 10683), (550, 10737), (553, 10752), (557, 10761), (560, 10773), (564, 10785), (567, 10794), (572, 10815), (579, 10839), (582, 10848), (583, 10857), (584, 10860), (585, 10863), (590, 10881), (592, 10884), (594, 10893), (601, 10917), (604, 10929), (606, 10938), (608, 10947), (626, 11007), (637, 11046), (641, 11076), (643, 11082), (645, 11091), (647, 11100), (652, 11121), (653, 11124), (658, 11142), (661, 11154), (675, 11208), (676, 11211), (685, 11286), (688, 11295), (689, 11304),

Gene: DrYang_22 Start: 15693, Stop: 19463, Start Num: 19

Candidate Starts for DrYang_22:

(Start: 19 @15693 has 7 MA's), (27, 15765), (35, 15843), (36, 15852), (39, 15876), (41, 15894), (46, 15927), (52, 15957), (59, 15984), (61, 15996), (82, 16095), (91, 16137), (99, 16188), (100, 16191), (111, 16296), (113, 16308), (117, 16350), (121, 16383), (123, 16413), (129, 16476), (135, 16512), (147, 16569), (155, 16659), (156, 16671), (161, 16716), (162, 16725), (168, 16746), (175, 16785), (184, 16824), (199, 16899), (221, 16977), (229, 17016), (237, 17061), (239, 17067), (242, 17079), (246, 17097), (248, 17103), (249, 17109), (254, 17130), (257, 17145), (265, 17181), (271, 17208), (272, 17214), (273, 17217), (286, 17289), (295, 17322), (298, 17334), (301, 17340), (303, 17352), (316, 17400), (318, 17409), (321, 17421), (322, 17424), (323, 17427), (328, 17451), (336, 17478), (347, 17529), (349, 17532), (355, 17550), (367, 17586), (375, 17607), (379, 17619), (380, 17625), (391, 17661), (397, 17679), (400, 17694), (403, 17703), (404, 17709), (410, 17739), (417, 17760), (422, 17772), (425, 17781), (431, 17805), (437, 17829), (448, 17868), (456, 17904), (457, 17907), (465, 17937), (466, 17940), (471, 17964), (481, 18003), (497, 18066), (504, 18093), (524, 18183), (527, 18204), (537, 18246), (554, 18333), (558, 18339), (563, 18360), (584, 18441), (586, 18453), (589, 18468), (608, 18537), (620, 18588), (622, 18603), (625, 18609), (631, 18633), (637, 18651), (640, 18672), (647, 18708), (651, 18723), (664, 18774), (688, 18906), (700, 18972), (713, 19053), (732, 19164), (735, 19185), (742, 19230), (753, 19293), (758, 19302), (764, 19332), (777, 19386), (788, 19422),

Gene: E6_17 Start: 9880, Stop: 13974, Start Num: 70

Candidate Starts for E6_17:

(44, 9766), (Start: 70 @9880 has 4 MA's), (74, 9907), (82, 9946), (87, 9970), (113, 10144), (115, 10165), (120, 10216), (123, 10249), (124, 10258), (139, 10366), (142, 10378), (144, 10390), (145, 10396), (151, 10441), (152, 10450), (153, 10453), (155, 10495), (161, 10552), (188, 10690), (220, 10816), (227, 10855), (239, 10909), (240, 10915), (244, 10927), (247, 10942), (263, 11005), (264, 11014), (266, 11017), (269, 11035), (274, 11056), (279, 11092), (288, 11119), (291, 11131), (311, 11203), (317, 11230), (324, 11257), (329, 11287), (345, 11344), (356, 11386), (362, 11404), (377, 11455), (385, 11485), (390, 11500), (401, 11551), (448, 11716), (449, 11719), (450, 11728), (453,

11737), (458, 11749), (493, 11875), (505, 11935), (506, 11944), (513, 11965), (514, 11968), (517, 11977), (521, 12007), (533, 12067), (534, 12073), (541, 12121), (544, 12133), (546, 12139), (556, 12172), (558, 12175), (561, 12190), (571, 12223), (573, 12232), (577, 12247), (583, 12271), (588, 12292), (595, 12313), (600, 12331), (602, 12337), (604, 12346), (605, 12349), (607, 12361), (612, 12382), (613, 12391), (623, 12439), (626, 12445), (627, 12454), (630, 12466), (632, 12469), (635, 12478), (645, 12532), (650, 12553), (663, 12601), (669, 12622), (692, 12760), (694, 12778), (698, 12793), (701, 12811), (708, 12868), (710, 12880), (714, 12889), (718, 12904), (722, 12922), (740, 13060), (751, 13114), (753, 13132), (778, 13228), (786, 13258), (800, 13342), (811, 13426), (815, 13492), (820, 13543), (823, 13600), (825, 13639), (829, 13822), (830, 13882), (831, 13894), (832, 13909), (833, 13939),

Gene: EdgarPoe_22 Start: 15722, Stop: 19264, Start Num: 18

Candidate Starts for EdgarPoe_22:

(Start: 18 @15722 has 12 MA's), (Start: 19 @15728 has 7 MA's), (20, 15749), (21, 15752), (31, 15833), (35, 15878), (39, 15911), (41, 15929), (46, 15962), (52, 15992), (59, 16019), (61, 16031), (86, 16148), (91, 16172), (99, 16223), (100, 16226), (111, 16331), (113, 16343), (121, 16418), (123, 16448), (126, 16469), (129, 16511), (150, 16619), (152, 16649), (155, 16694), (156, 16706), (161, 16751), (162, 16760), (175, 16820), (184, 16859), (226, 17039), (229, 17051), (231, 17060), (236, 17093), (238, 17099), (239, 17102), (251, 17153), (253, 17159), (254, 17165), (258, 17189), (265, 17216), (268, 17231), (271, 17243), (286, 17324), (287, 17327), (293, 17348), (297, 17366), (298, 17369), (304, 17390), (311, 17414), (316, 17435), (318, 17444), (319, 17447), (328, 17486), (334, 17510), (345, 17549), (347, 17564), (367, 17621), (376, 17645), (379, 17654), (380, 17660), (391, 17696), (404, 17744), (405, 17753), (417, 17795), (422, 17807), (437, 17864), (442, 17882), (447, 17897), (448, 17903), (497, 17999), (504, 18026), (508, 18047), (524, 18116), (527, 18137), (531, 18158), (548, 18236), (590, 18269), (592, 18272), (597, 18296), (614, 18365), (622, 18401), (624, 18404), (625, 18407), (629, 18422), (640, 18470), (647, 18506), (648, 18509), (664, 18572), (688, 18704), (700, 18770), (706, 18812), (713, 18851), (724, 18896), (732, 18965), (735, 18986), (742, 19031), (753, 19094), (764, 19133), (767, 19148), (781, 19199), (784, 19211),

Gene: Elener_18 Start: 11966, Stop: 15586, Start Num: 55

Candidate Starts for Elener_18:

(53, 11957), (Start: 55 @11966 has 1 MA's), (111, 12311), (113, 12323), (115, 12344), (128, 12482), (129, 12491), (138, 12542), (145, 12575), (155, 12674), (176, 12803), (179, 12818), (185, 12845), (195, 12896), (217, 12974), (240, 13088), (245, 13103), (247, 13115), (262, 13178), (277, 13262), (282, 13283), (304, 13367), (315, 13409), (326, 13451), (330, 13472), (341, 13514), (344, 13532), (371, 13607), (405, 13739), (432, 13835), (435, 13847), (451, 13907), (457, 13937), (473, 14003), (485, 14048), (488, 14060), (496, 14102), (499, 14114), (502, 14135), (519, 14204), (526, 14255), (531, 14279), (545, 14348), (575, 14438), (669, 14804), (680, 14882), (681, 14885), (724, 15110), (729, 15152), (731, 15173), (736, 15221), (741, 15239), (752, 15302), (754, 15311), (755, 15314), (782, 15416), (793, 15467), (795, 15491), (798, 15509), (801, 15530), (807, 15563),

Gene: Enochoraptor_14 Start: 8517, Stop: 11282, Start Num: 58

Candidate Starts for Enochoraptor_14:

(Start: 58 @8517 has 46 MA's), (63, 8544), (66, 8550), (69, 8562), (71, 8571), (78, 8604), (80, 8607), (87, 8652), (89, 8658), (94, 8679), (95, 8682), (104, 8730), (106, 8760), (109, 8796), (113, 8829), (115, 8850), (117, 8871), (120, 8901), (122, 8916), (123, 8934), (124, 8943), (125, 8946), (127, 8964), (134, 9021), (136, 9036), (139, 9051), (140, 9054), (143, 9066), (145, 9081), (147, 9090), (151, 9126), (152, 9135), (153, 9138), (155, 9180), (156, 9192), (161, 9237), (170, 9282), (174, 9303), (180, 9324), (186, 9357), (187, 9366), (193, 9399), (194, 9402), (197, 9414), (202, 9432), (204, 9441), (209, 9453), (214, 9465), (219, 9477), (225, 9507), (226, 9513), (230, 9528), (231, 9534), (233, 9543), (238, 9564), (245, 9588), (254, 9618), (257, 9630), (259, 9639), (261, 9642), (266, 9660), (274, 9690), (276, 9702), (278, 9723), (281, 9732), (285, 9744), (295, 9777), (296, 9780), (307, 9822), (314, 9849), (315, 9852), (318, 9864), (320, 9873), (323, 9882), (327, 9903), (330, 9915), (334, 9930), (337, 9936), (339, 9945), (343,

9963), (345, 9969), (353, 9993), (360, 10011), (361, 10014), (362, 10017), (364, 10026), (366, 10029), (368, 10035), (376, 10056), (384, 10083), (385, 10089), (386, 10092), (389, 10101), (390, 10104), (392, 10110), (397, 10125), (399, 10137), (401, 10143), (413, 10191), (416, 10200), (418, 10206), (419, 10209), (420, 10212), (427, 10230), (430, 10242), (436, 10263), (437, 10266), (440, 10275), (442, 10284), (452, 10320), (470, 10374), (473, 10386), (476, 10395), (477, 10404), (483, 10419), (498, 10479), (502, 10494), (516, 10548), (524, 10593), (526, 10611), (527, 10614), (528, 10623), (538, 10656), (540, 10683), (553, 10725), (557, 10734), (560, 10746), (564, 10758), (567, 10767), (572, 10788), (582, 10821), (583, 10830), (584, 10833), (585, 10836), (590, 10854), (592, 10857), (594, 10866), (601, 10890), (603, 10899), (604, 10902), (606, 10911), (608, 10920), (615, 10953), (619, 10956), (626, 10980), (637, 11019), (641, 11049), (643, 11055), (645, 11064), (647, 11073), (653, 11097), (658, 11115), (661, 11127), (672, 11163), (675, 11181), (676, 11184), (678, 11190), (685, 11259), (688, 11268), (689, 11277),

Gene: Enoki_14 Start: 8500, Stop: 11265, Start Num: 58

Candidate Starts for Enoki_14:

(Start: 58 @8500 has 46 MA's), (63, 8527), (66, 8533), (69, 8545), (71, 8554), (75, 8578), (78, 8587), (80, 8590), (87, 8635), (89, 8641), (94, 8662), (95, 8665), (104, 8713), (106, 8743), (109, 8779), (113, 8812), (115, 8833), (117, 8854), (120, 8884), (122, 8899), (123, 8917), (124, 8926), (125, 8929), (127, 8947), (134, 9004), (136, 9019), (139, 9034), (140, 9037), (143, 9049), (145, 9064), (146, 9067), (147, 9073), (151, 9109), (152, 9118), (153, 9121), (155, 9163), (156, 9175), (161, 9220), (170, 9265), (174, 9286), (180, 9307), (186, 9340), (187, 9349), (193, 9382), (194, 9385), (197, 9397), (202, 9415), (204, 9424), (209, 9436), (214, 9448), (219, 9460), (221, 9469), (226, 9496), (230, 9511), (231, 9517), (233, 9526), (238, 9547), (245, 9571), (254, 9601), (255, 9607), (257, 9613), (266, 9643), (274, 9673), (276, 9685), (278, 9706), (281, 9715), (285, 9727), (295, 9760), (296, 9763), (298, 9772), (301, 9778), (304, 9793), (307, 9805), (310, 9814), (313, 9826), (314, 9832), (317, 9844), (318, 9847), (320, 9856), (323, 9865), (327, 9886), (334, 9913), (337, 9919), (339, 9928), (343, 9946), (345, 9952), (353, 9976), (360, 9994), (361, 9997), (362, 10000), (366, 10012), (368, 10018), (369, 10021), (373, 10033), (376, 10039), (382, 10060), (384, 10066), (385, 10072), (386, 10075), (388, 10081), (389, 10084), (390, 10087), (392, 10093), (397, 10108), (399, 10120), (401, 10126), (408, 10159), (409, 10162), (411, 10168), (416, 10183), (418, 10189), (419, 10192), (427, 10213), (429, 10222), (436, 10246), (439, 10255), (440, 10258), (442, 10267), (452, 10303), (457, 10312), (473, 10369), (476, 10378), (477, 10387), (480, 10396), (502, 10477), (505, 10489), (516, 10531), (524, 10576), (527, 10597), (528, 10606), (538, 10639), (553, 10708), (557, 10717), (560, 10729), (564, 10741), (567, 10750), (582, 10804), (583, 10813), (584, 10816), (585, 10819), (594, 10849), (601, 10873), (604, 10885), (606, 10894), (608, 10903), (626, 10963), (637, 11002), (641, 11032), (643, 11038), (645, 11047), (647, 11056), (653, 11080), (658, 11098), (661, 11110), (675, 11164), (676, 11167), (678, 11173), (685, 11242), (688, 11251), (689, 11260),

Gene: G4_16 Start: 9822, Stop: 13916, Start Num: 70

Candidate Starts for G4_16:

(44, 9708), (Start: 70 @9822 has 4 MA's), (74, 9849), (75, 9855), (82, 9888), (87, 9912), (102, 9978), (113, 10086), (115, 10107), (120, 10158), (123, 10191), (139, 10308), (142, 10320), (144, 10332), (145, 10338), (151, 10383), (152, 10392), (153, 10395), (155, 10437), (161, 10494), (184, 10602), (188, 10632), (220, 10758), (227, 10797), (239, 10851), (240, 10857), (244, 10869), (247, 10884), (263, 10947), (264, 10956), (266, 10959), (269, 10977), (274, 10998), (279, 11034), (288, 11061), (291, 11073), (311, 11145), (317, 11172), (324, 11199), (329, 11229), (345, 11286), (356, 11328), (362, 11346), (377, 11397), (385, 11427), (390, 11442), (401, 11493), (408, 11526), (449, 11661), (450, 11670), (453, 11679), (458, 11691), (490, 11799), (493, 11817), (505, 11877), (506, 11886), (513, 11907), (514, 11910), (517, 11919), (521, 11949), (533, 12009), (534, 12015), (541, 12063), (544, 12075), (546, 12081), (556, 12114), (558, 12117), (561, 12132), (571, 12165), (573, 12174), (577, 12189), (583, 12213), (588, 12234), (595, 12255), (600, 12273), (602, 12279), (605, 12291), (607, 12303), (612, 12324), (613, 12333), (626, 12387), (627, 12396), (630, 12408), (632, 12411), (635, 12420), (645, 12474), (651, 12498), (654, 12510), (656, 12522), (659, 12528), (662, 12540),

(663, 12543), (667, 12555), (669, 12564), (674, 12588), (679, 12618), (691, 12699), (692, 12702), (697, 12732), (698, 12735), (708, 12810), (710, 12822), (714, 12831), (717, 12843), (718, 12846), (740, 13002), (751, 13056), (753, 13074), (778, 13170), (786, 13200), (800, 13284), (811, 13368), (815, 13434), (819, 13482), (820, 13485), (823, 13542), (825, 13581), (828, 13698), (829, 13764), (830, 13824), (831, 13836), (832, 13851), (833, 13881),

Gene: Gibbzilla_18 Start: 9575, Stop: 12856, Start Num: 64

Candidate Starts for Gibbzilla_18:

(64, 9575), (81, 9665), (86, 9692), (102, 9773), (108, 9839), (110, 9854), (116, 9914), (118, 9941), (122, 9968), (127, 10016), (129, 10049), (130, 10055), (131, 10058), (132, 10061), (141, 10112), (147, 10148), (149, 10157), (153, 10199), (155, 10244), (157, 10265), (167, 10346), (170, 10364), (173, 10385), (191, 10475), (209, 10547), (228, 10625), (229, 10628), (235, 10661), (267, 10739), (275, 10781), (280, 10814), (296, 10871), (312, 10928), (317, 10949), (323, 10970), (333, 11021), (338, 11036), (346, 11072), (348, 11081), (354, 11096), (357, 11102), (371, 11141), (376, 11159), (377, 11162), (390, 11207), (394, 11234), (397, 11240), (401, 11258), (420, 11327), (424, 11336), (426, 11339), (427, 11345), (433, 11366), (437, 11381), (444, 11405), (445, 11408), (462, 11486), (479, 11555), (487, 11576), (499, 11633), (500, 11642), (518, 11720), (526, 11774), (527, 11777), (539, 11825), (545, 11870), (565, 11930), (574, 11960), (665, 12176), (668, 12185), (681, 12263), (703, 12386), (704, 12389), (720, 12467), (724, 12488), (729, 12530), (731, 12551), (736, 12599), (745, 12638), (748, 12647), (752, 12680), (759, 12698), (766, 12737), (785, 12794),

Gene: HumptyDumpty_22 Start: 15721, Stop: 19263, Start Num: 18

Candidate Starts for HumptyDumpty_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548, 18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625, 18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: JaNo_22 Start: 15727, Stop: 19263, Start Num: 19

Candidate Starts for JaNo_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548, 18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625,

18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: JayCookie_22 Start: 15730, Stop: 19266, Start Num: 19

Candidate Starts for JayCookie_22:

(Start: 18 @15724 has 12 MA's), (Start: 19 @15730 has 7 MA's), (20, 15751), (21, 15754), (31, 15835), (35, 15880), (39, 15913), (41, 15931), (46, 15964), (52, 15994), (59, 16021), (61, 16033), (86, 16150), (91, 16174), (99, 16225), (100, 16228), (111, 16333), (113, 16345), (121, 16420), (123, 16450), (126, 16471), (129, 16513), (150, 16621), (152, 16651), (155, 16696), (156, 16708), (161, 16753), (162, 16762), (175, 16822), (184, 16861), (226, 17041), (229, 17053), (231, 17062), (236, 17095), (238, 17101), (239, 17104), (251, 17155), (253, 17161), (254, 17167), (258, 17191), (265, 17218), (268, 17233), (271, 17245), (286, 17326), (287, 17329), (293, 17350), (297, 17368), (298, 17371), (304, 17392), (311, 17416), (316, 17437), (318, 17446), (319, 17449), (328, 17488), (334, 17512), (345, 17551), (347, 17566), (367, 17623), (376, 17647), (379, 17656), (380, 17662), (391, 17698), (404, 17746), (405, 17755), (417, 17797), (422, 17809), (437, 17866), (442, 17884), (447, 17899), (448, 17905), (497, 18001), (504, 18028), (508, 18049), (524, 18118), (527, 18139), (531, 18160), (548, 18238), (590, 18271), (592, 18274), (597, 18298), (614, 18367), (622, 18403), (624, 18406), (625, 18409), (629, 18424), (640, 18472), (647, 18508), (648, 18511), (664, 18574), (688, 18706), (700, 18772), (706, 18814), (713, 18853), (724, 18898), (732, 18967), (735, 18988), (742, 19033), (753, 19096), (764, 19135), (767, 19150), (781, 19201), (784, 19213),

Gene: KBurrousTX_22 Start: 15522, Stop: 19298, Start Num: 18

Candidate Starts for KBurrousTX_22:

(Start: 18 @15522 has 12 MA's), (Start: 19 @15528 has 7 MA's), (20, 15549), (27, 15600), (33, 15666), (35, 15678), (36, 15687), (39, 15711), (41, 15729), (46, 15762), (61, 15831), (82, 15930), (85, 15942), (86, 15948), (97, 16011), (100, 16026), (103, 16038), (111, 16131), (113, 16143), (117, 16185), (121, 16218), (123, 16248), (126, 16269), (129, 16311), (133, 16332), (135, 16347), (148, 16407), (155, 16494), (156, 16506), (161, 16551), (162, 16560), (168, 16581), (175, 16620), (215, 16785), (221, 16812), (229, 16851), (237, 16896), (239, 16902), (242, 16914), (256, 16977), (265, 17016), (273, 17052), (286, 17124), (287, 17127), (293, 17148), (297, 17166), (316, 17235), (321, 17256), (323, 17262), (328, 17286), (334, 17310), (365, 17415), (367, 17421), (381, 17463), (393, 17508), (404, 17550), (405, 17559), (410, 17580), (422, 17613), (430, 17643), (437, 17670), (440, 17679), (450, 17721), (455, 17733), (457, 17745), (459, 17751), (461, 17757), (469, 17796), (471, 17802), (476, 17820), (481, 17841), (486, 17853), (497, 17904), (524, 18021), (527, 18042), (537, 18084), (543, 18129), (554, 18171), (556, 18174), (558, 18177), (570, 18219), (586, 18291), (589, 18306), (592, 18312), (617, 18414), (624, 18444), (625, 18447), (640, 18510), (647, 18546), (648, 18549), (662, 18606), (678, 18669), (688, 18744), (696, 18789), (713, 18891), (724, 18933), (732, 19002), (735, 19023), (742, 19068), (758, 19140), (774, 19200), (784, 19245),

Gene: Kabreeze_22 Start: 15721, Stop: 19263, Start Num: 18

Candidate Starts for Kabreeze_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548,

18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625, 18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: Keiki_14 Start: 8514, Stop: 11279, Start Num: 58

Candidate Starts for Keiki_14:

(Start: 58 @8514 has 46 MA's), (63, 8541), (66, 8547), (69, 8559), (75, 8592), (78, 8601), (80, 8604), (87, 8649), (89, 8655), (90, 8661), (94, 8676), (95, 8679), (104, 8727), (106, 8757), (108, 8784), (109, 8793), (113, 8826), (115, 8847), (117, 8868), (120, 8898), (122, 8913), (123, 8931), (124, 8940), (125, 8943), (127, 8961), (133, 9015), (134, 9018), (136, 9033), (139, 9048), (140, 9051), (143, 9063), (145, 9078), (148, 9090), (151, 9123), (152, 9132), (153, 9135), (155, 9177), (156, 9189), (161, 9234), (170, 9279), (174, 9300), (180, 9321), (186, 9354), (187, 9363), (194, 9399), (197, 9411), (202, 9429), (204, 9438), (209, 9450), (214, 9462), (219, 9474), (221, 9483), (225, 9504), (226, 9510), (230, 9525), (231, 9531), (233, 9540), (238, 9561), (245, 9585), (254, 9615), (255, 9621), (257, 9627), (266, 9657), (274, 9687), (276, 9699), (278, 9720), (285, 9741), (295, 9774), (296, 9777), (298, 9786), (304, 9807), (307, 9819), (317, 9858), (320, 9870), (323, 9879), (327, 9900), (330, 9912), (334, 9927), (339, 9942), (351, 9987), (360, 10008), (361, 10011), (362, 10014), (363, 10020), (366, 10026), (376, 10053), (382, 10074), (384, 10080), (385, 10086), (386, 10089), (389, 10098), (390, 10101), (393, 10110), (397, 10122), (399, 10134), (405, 10161), (411, 10182), (413, 10188), (416, 10197), (418, 10203), (419, 10206), (420, 10209), (427, 10227), (428, 10230), (429, 10236), (430, 10239), (437, 10263), (442, 10281), (470, 10371), (473, 10383), (476, 10392), (477, 10401), (483, 10416), (502, 10491), (505, 10503), (516, 10545), (524, 10590), (527, 10611), (528, 10620), (538, 10653), (540, 10680), (553, 10722), (557, 10731), (560, 10743), (564, 10755), (567, 10764), (572, 10785), (582, 10818), (584, 10830), (585, 10833), (590, 10851), (592, 10854), (594, 10863), (601, 10887), (604, 10899), (606, 10908), (608, 10917), (615, 10950), (619, 10953), (626, 10977), (637, 11016), (641, 11046), (643, 11052), (645, 11061), (647, 11070), (658, 11112), (661, 11124), (672, 11160), (675, 11178), (676, 11181), (678, 11187), (685, 11256), (688, 11265), (689, 11274),

Gene: Khuang_14 Start: 9117, Stop: 13016, Start Num: 14

Candidate Starts for Khuang_14:

(Start: 14 @9117 has 2 MA's), (16, 9195), (32, 9378), (37, 9438), (97, 9750), (108, 9840), (119, 9945), (129, 10050), (130, 10056), (132, 10062), (141, 10113), (153, 10200), (155, 10245), (157, 10266), (167, 10347), (170, 10365), (201, 10530), (202, 10536), (216, 10590), (229, 10650), (260, 10692), (270, 10734), (275, 10761), (296, 10839), (316, 10911), (321, 10932), (328, 10962), (330, 10971), (332, 10983), (346, 11040), (349, 11052), (354, 11064), (357, 11070), (366, 11097), (368, 11103), (373, 11118), (376, 11127), (401, 11226), (405, 11247), (407, 11256), (408, 11259), (420, 11295), (427, 11313), (429, 11322), (430, 11325), (437, 11349), (440, 11358), (464, 11460), (465, 11466), (479, 11523), (484, 11535), (487, 11544), (499, 11601), (503, 11625), (512, 11667), (518, 11688), (522, 11712), (526, 11742), (531, 11766), (538, 11787), (547, 11841), (566, 11907), (569, 11916), (571, 11925), (655, 12234), (683, 12393), (716, 12567), (724, 12603), (733, 12678), (742, 12738), (746, 12753), (750, 12774), (761, 12807), (770, 12843), (802, 13002),

Gene: Kovu_65 Start: 36350, Stop: 40081, Start Num: 50

Candidate Starts for Kovu_65:

(Start: 50 @36350 has 2 MA's), (56, 36365), (57, 36368), (62, 36398), (63, 36401), (108, 36659), (116, 36734), (119, 36764), (130, 36875), (132, 36881), (153, 37019), (165, 37154), (169, 37181), (170, 37184), (186, 37262), (205, 37367), (216, 37412), (223, 37445), (229, 37472), (234, 37502), (246, 37556), (252, 37583), (270, 37667), (275, 37694), (281, 37736), (328, 37916), (349, 38006), (357, 38024), (366, 38051), (368, 38057), (371, 38063), (374, 38075), (379, 38090), (386, 38117), (390, 38129), (391, 38138), (396, 38159), (405, 38201), (406, 38204), (413, 38228), (415, 38234), (420, 38249), (424, 38258), (427, 38267), (437, 38303), (439, 38309), (441, 38315), (446, 38333), (454, 38366), (460, 38399), (484, 38489), (488, 38501), (499, 38555), (509, 38612), (518, 38642), (522,

38666), (526, 38696), (529, 38711), (531, 38720), (538, 38741), (539, 38744), (547, 38795), (559, 38837), (566, 38861), (660, 39167), (673, 39209), (675, 39230), (676, 39233), (677, 39236), (688, 39320), (690, 39332), (696, 39365), (703, 39410), (711, 39461), (712, 39464), (724, 39512), (728, 39542), (737, 39629), (752, 39695), (754, 39704), (765, 39743), (766, 39749), (768, 39758), (770, 39764), (773, 39770), (775, 39773), (799, 39905), (802, 39926), (803, 39932), (806, 39947), (810, 39989), (813, 40031), (817, 40070),

Gene: Kubed_14 Start: 8509, Stop: 11274, Start Num: 58

Candidate Starts for Kubed_14:

(Start: 58 @8509 has 46 MA's), (63, 8536), (66, 8542), (69, 8554), (71, 8563), (75, 8587), (80, 8599), (84, 8629), (87, 8644), (89, 8650), (94, 8671), (95, 8674), (104, 8722), (106, 8752), (108, 8779), (109, 8788), (113, 8821), (115, 8842), (117, 8863), (120, 8893), (122, 8908), (123, 8926), (124, 8935), (125, 8938), (127, 8956), (134, 9013), (136, 9028), (139, 9043), (140, 9046), (143, 9058), (144, 9067), (145, 9073), (146, 9076), (148, 9085), (151, 9118), (152, 9127), (153, 9130), (155, 9172), (156, 9184), (161, 9229), (170, 9274), (172, 9286), (174, 9295), (180, 9316), (183, 9325), (184, 9337), (186, 9349), (187, 9358), (189, 9370), (193, 9391), (194, 9394), (197, 9406), (202, 9424), (204, 9433), (205, 9436), (209, 9445), (214, 9457), (219, 9469), (221, 9478), (225, 9499), (230, 9520), (231, 9526), (233, 9535), (238, 9556), (241, 9568), (245, 9580), (257, 9622), (261, 9634), (266, 9652), (274, 9682), (278, 9715), (281, 9724), (285, 9736), (295, 9769), (296, 9772), (301, 9787), (304, 9802), (307, 9814), (312, 9832), (314, 9841), (318, 9856), (320, 9865), (323, 9874), (327, 9895), (330, 9907), (334, 9922), (337, 9928), (339, 9937), (345, 9961), (353, 9985), (360, 10003), (361, 10006), (362, 10009), (364, 10018), (366, 10021), (368, 10027), (369, 10030), (372, 10039), (373, 10042), (376, 10048), (382, 10069), (384, 10075), (385, 10081), (386, 10084), (389, 10093), (390, 10096), (392, 10102), (393, 10105), (399, 10129), (401, 10135), (402, 10138), (405, 10156), (411, 10177), (413, 10183), (416, 10192), (419, 10201), (420, 10204), (427, 10222), (428, 10225), (429, 10231), (439, 10264), (442, 10276), (446, 10288), (452, 10312), (463, 10342), (466, 10354), (470, 10366), (472, 10375), (473, 10378), (476, 10387), (481, 10408), (489, 10429), (492, 10438), (494, 10453), (524, 10585), (527, 10606), (528, 10615), (538, 10648), (550, 10702), (553, 10717), (557, 10726), (560, 10738), (564, 10750), (567, 10759), (568, 10762), (582, 10813), (584, 10825), (585, 10828), (592, 10849), (594, 10858), (601, 10882), (604, 10894), (608, 10912), (611, 10924), (615, 10945), (619, 10948), (626, 10972), (637, 11011), (641, 11041), (643, 11047), (645, 11056), (647, 11065), (658, 11107), (661, 11119), (672, 11155), (675, 11173), (676, 11176), (685, 11251), (688, 11260), (689, 11269),

Gene: Lauchelly_14 Start: 8512, Stop: 11277, Start Num: 58

Candidate Starts for Lauchelly_14:

(Start: 58 @8512 has 46 MA's), (63, 8539), (66, 8545), (69, 8557), (71, 8566), (78, 8599), (80, 8602), (87, 8647), (90, 8659), (94, 8674), (95, 8677), (104, 8725), (106, 8755), (108, 8782), (109, 8791), (113, 8824), (115, 8845), (117, 8866), (120, 8896), (123, 8929), (124, 8938), (125, 8941), (127, 8959), (134, 9016), (139, 9046), (140, 9049), (143, 9061), (145, 9076), (146, 9079), (148, 9088), (151, 9121), (152, 9130), (153, 9133), (155, 9175), (156, 9187), (161, 9232), (164, 9253), (170, 9277), (174, 9298), (180, 9319), (186, 9352), (187, 9361), (193, 9394), (194, 9397), (197, 9409), (202, 9427), (204, 9436), (209, 9448), (214, 9460), (219, 9472), (221, 9481), (225, 9502), (226, 9508), (230, 9523), (231, 9529), (233, 9538), (238, 9559), (254, 9613), (257, 9625), (259, 9634), (266, 9655), (274, 9685), (278, 9718), (281, 9727), (285, 9739), (295, 9772), (296, 9775), (298, 9784), (304, 9805), (307, 9817), (310, 9826), (314, 9844), (315, 9847), (318, 9859), (320, 9868), (323, 9877), (327, 9898), (330, 9910), (334, 9925), (337, 9931), (339, 9940), (345, 9964), (353, 9988), (360, 10006), (366, 10024), (368, 10030), (369, 10033), (376, 10051), (382, 10072), (384, 10078), (385, 10084), (389, 10096), (390, 10099), (392, 10105), (397, 10120), (399, 10132), (408, 10171), (409, 10174), (413, 10186), (416, 10195), (418, 10201), (427, 10225), (429, 10234), (430, 10237), (436, 10258), (437, 10261), (442, 10279), (449, 10303), (452, 10315), (470, 10369), (473, 10381), (476, 10390), (477, 10399), (502, 10489), (505, 10501), (516, 10543), (524, 10588), (527, 10609), (528, 10618), (538, 10651), (540, 10678), (553, 10720), (557, 10729), (560, 10741), (564, 10753), (567, 10762), (582, 10816), (583, 10825), (585, 10831), (590, 10849), (592, 10852), (601, 10885), (606, 10906), (608, 10915), (615, 10948), (619, 10951),

(626, 10975), (637, 11014), (641, 11044), (643, 11050), (645, 11059), (647, 11068), (658, 11110),
(661, 11122), (672, 11158), (675, 11176), (676, 11179), (685, 11254), (689, 11272),

Gene: Leviosa_14 Start: 8531, Stop: 11296, Start Num: 58

Candidate Starts for Leviosa_14:

(Start: 58 @8531 has 46 MA's), (63, 8558), (66, 8564), (69, 8576), (71, 8585), (80, 8621), (84, 8651),
(87, 8666), (89, 8672), (94, 8693), (95, 8696), (104, 8744), (106, 8774), (109, 8810), (113, 8843), (115,
8864), (120, 8915), (122, 8930), (123, 8948), (124, 8957), (125, 8960), (127, 8978), (134, 9035), (136,
9050), (139, 9065), (140, 9068), (143, 9080), (147, 9104), (151, 9140), (152, 9149), (153, 9152), (155,
9194), (156, 9206), (161, 9251), (170, 9296), (174, 9317), (180, 9338), (186, 9371), (187, 9380), (189,
9392), (193, 9413), (194, 9416), (197, 9428), (202, 9446), (204, 9455), (209, 9467), (214, 9479), (219,
9491), (221, 9500), (226, 9527), (230, 9542), (231, 9548), (233, 9557), (238, 9578), (245, 9602), (254,
9632), (255, 9638), (257, 9644), (259, 9653), (266, 9674), (274, 9704), (278, 9737), (281, 9746), (285,
9758), (296, 9794), (298, 9803), (307, 9836), (314, 9863), (318, 9878), (320, 9887), (323, 9896), (327,
9917), (328, 9920), (330, 9929), (334, 9944), (337, 9950), (339, 9959), (353, 10007), (360, 10025),
(366, 10043), (368, 10049), (369, 10052), (372, 10061), (373, 10064), (376, 10070), (382, 10091),
(384, 10097), (386, 10106), (389, 10115), (390, 10118), (392, 10124), (397, 10139), (398, 10148),
(399, 10151), (402, 10160), (405, 10178), (413, 10205), (416, 10214), (418, 10220), (420, 10226),
(427, 10244), (429, 10253), (436, 10277), (442, 10298), (452, 10334), (470, 10388), (472, 10397),
(473, 10400), (476, 10409), (477, 10418), (502, 10508), (505, 10520), (516, 10562), (524, 10607),
(526, 10625), (527, 10628), (528, 10637), (538, 10670), (553, 10739), (557, 10748), (560, 10760),
(567, 10781), (582, 10835), (584, 10847), (585, 10850), (590, 10868), (594, 10880), (601, 10904),
(603, 10913), (604, 10916), (606, 10925), (608, 10934), (611, 10946), (615, 10967), (619, 10970),
(626, 10994), (633, 11021), (641, 11063), (643, 11069), (645, 11078), (653, 11111), (658, 11129),
(672, 11177), (675, 11195), (676, 11198), (678, 11204), (685, 11273), (688, 11282),

Gene: LilBandit_14 Start: 8515, Stop: 11280, Start Num: 58

Candidate Starts for LilBandit_14:

(Start: 58 @8515 has 46 MA's), (63, 8542), (66, 8548), (69, 8560), (78, 8602), (80, 8605), (87, 8650),
(89, 8656), (94, 8677), (95, 8680), (104, 8728), (106, 8758), (109, 8794), (113, 8827), (115, 8848),
(117, 8869), (120, 8899), (122, 8914), (123, 8932), (124, 8941), (125, 8944), (127, 8962), (134, 9019),
(136, 9034), (139, 9049), (140, 9052), (143, 9064), (145, 9079), (146, 9082), (147, 9088), (148, 9091),
(151, 9124), (152, 9133), (153, 9136), (155, 9178), (156, 9190), (161, 9235), (170, 9280), (174, 9301),
(180, 9322), (186, 9355), (187, 9364), (193, 9397), (194, 9400), (197, 9412), (202, 9430), (204, 9439),
(209, 9451), (214, 9463), (219, 9475), (221, 9484), (225, 9505), (226, 9511), (230, 9526), (231, 9532),
(233, 9541), (238, 9562), (245, 9586), (255, 9622), (257, 9628), (266, 9658), (274, 9688), (278, 9721),
(281, 9730), (285, 9742), (296, 9778), (298, 9787), (301, 9793), (304, 9808), (307, 9820), (318, 9862),
(320, 9871), (323, 9880), (327, 9901), (330, 9913), (334, 9928), (337, 9934), (339, 9943), (343, 9961),
(345, 9967), (353, 9991), (360, 10009), (361, 10012), (362, 10015), (364, 10024), (366, 10027), (368,
10033), (369, 10036), (373, 10048), (376, 10054), (382, 10075), (384, 10081), (385, 10087), (386,
10090), (389, 10099), (390, 10102), (392, 10108), (397, 10123), (399, 10135), (413, 10189), (416,
10198), (418, 10204), (419, 10207), (420, 10210), (427, 10228), (428, 10231), (429, 10237), (430,
10240), (436, 10261), (437, 10264), (440, 10273), (442, 10282), (452, 10318), (470, 10372), (473,
10384), (476, 10393), (477, 10402), (502, 10492), (505, 10504), (516, 10546), (524, 10591), (527,
10612), (528, 10621), (538, 10654), (540, 10681), (553, 10723), (557, 10732), (560, 10744), (564,
10756), (567, 10765), (572, 10786), (582, 10819), (583, 10828), (584, 10831), (585, 10834), (590,
10852), (592, 10855), (594, 10864), (601, 10888), (604, 10900), (606, 10909), (608, 10918), (615,
10951), (619, 10954), (626, 10978), (637, 11017), (641, 11047), (643, 11053), (645, 11062), (647,
11071), (658, 11113), (661, 11125), (672, 11161), (675, 11179), (676, 11182), (678, 11188), (685,
11257), (688, 11266), (689, 11275),

Gene: Linus_22 Start: 15727, Stop: 19263, Start Num: 19

Candidate Starts for Linus_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548, 18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625, 18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: Lymara_22 Start: 15725, Stop: 19261, Start Num: 19

Candidate Starts for Lymara_22:

(Start: 18 @15719 has 12 MA's), (Start: 19 @15725 has 7 MA's), (20, 15746), (21, 15749), (31, 15830), (35, 15875), (39, 15908), (41, 15926), (43, 15950), (46, 15959), (52, 15989), (59, 16016), (61, 16028), (82, 16127), (86, 16145), (91, 16169), (99, 16220), (100, 16223), (111, 16328), (113, 16340), (121, 16415), (123, 16445), (126, 16466), (129, 16508), (135, 16544), (147, 16601), (150, 16616), (152, 16646), (155, 16691), (156, 16703), (161, 16748), (175, 16817), (184, 16856), (196, 16922), (216, 16988), (229, 17048), (231, 17057), (236, 17090), (239, 17099), (251, 17150), (254, 17162), (265, 17213), (268, 17228), (271, 17240), (286, 17321), (293, 17345), (297, 17363), (298, 17366), (303, 17384), (304, 17387), (306, 17396), (309, 17405), (311, 17411), (312, 17417), (316, 17432), (318, 17441), (319, 17444), (328, 17483), (345, 17546), (347, 17561), (367, 17618), (370, 17624), (379, 17651), (380, 17657), (391, 17693), (404, 17741), (410, 17771), (417, 17792), (437, 17861), (442, 17879), (447, 17894), (486, 17945), (497, 17996), (504, 18023), (524, 18113), (525, 18119), (527, 18134), (537, 18176), (548, 18233), (590, 18266), (592, 18269), (597, 18293), (622, 18398), (624, 18401), (625, 18404), (640, 18467), (647, 18503), (664, 18569), (700, 18767), (702, 18779), (712, 18845), (713, 18848), (715, 18854), (724, 18893), (728, 18923), (732, 18962), (735, 18983), (742, 19028), (753, 19091), (767, 19145), (781, 19196), (784, 19208),

Gene: MEAK_14 Start: 8501, Stop: 11266, Start Num: 58

Candidate Starts for MEAK_14:

(Start: 58 @8501 has 46 MA's), (63, 8528), (66, 8534), (69, 8546), (71, 8555), (78, 8588), (80, 8591), (87, 8636), (94, 8663), (95, 8666), (100, 8696), (104, 8714), (106, 8744), (108, 8771), (109, 8780), (113, 8813), (115, 8834), (117, 8855), (120, 8885), (122, 8900), (123, 8918), (124, 8927), (125, 8930), (127, 8948), (133, 9002), (134, 9005), (136, 9020), (139, 9035), (140, 9038), (143, 9050), (147, 9074), (151, 9110), (152, 9119), (153, 9122), (155, 9164), (156, 9176), (161, 9221), (170, 9266), (174, 9287), (180, 9308), (184, 9329), (186, 9341), (189, 9362), (193, 9383), (194, 9386), (197, 9398), (202, 9416), (204, 9425), (209, 9437), (214, 9449), (219, 9461), (221, 9470), (225, 9491), (226, 9497), (230, 9512), (231, 9518), (233, 9527), (238, 9548), (257, 9614), (261, 9626), (266, 9644), (274, 9674), (278, 9707), (281, 9716), (285, 9728), (295, 9761), (296, 9764), (298, 9773), (301, 9779), (304, 9794), (307, 9806), (314, 9833), (318, 9848), (320, 9857), (323, 9866), (327, 9887), (330, 9899), (334, 9914), (337, 9920), (339, 9929), (343, 9947), (345, 9953), (353, 9977), (360, 9995), (361, 9998), (362, 10001), (364, 10010), (366, 10013), (368, 10019), (369, 10022), (376, 10040), (382, 10061), (384, 10067), (386, 10076), (389, 10085), (390, 10088), (392, 10094), (397, 10109), (399, 10121), (411, 10169), (413, 10175), (416, 10184), (418, 10190), (419, 10193), (420, 10196), (427, 10214), (428, 10217), (429, 10223), (430, 10226), (436, 10247), (437, 10250), (440, 10259), (442, 10268), (452, 10304), (457, 10313), (460, 10322), (470, 10358), (473, 10370), (476, 10379), (477, 10388), (502, 10478), (505, 10490), (510, 10514), (524, 10577), (526, 10595), (527, 10598), (528, 10607), (538, 10640), (553,

10709), (557, 10718), (560, 10730), (564, 10742), (567, 10751), (572, 10772), (582, 10805), (584, 10817), (585, 10820), (590, 10838), (592, 10841), (601, 10874), (606, 10895), (608, 10904), (615, 10937), (619, 10940), (626, 10964), (637, 11003), (641, 11033), (643, 11039), (645, 11048), (647, 11057), (658, 11099), (661, 11111), (672, 11147), (675, 11165), (676, 11168), (678, 11174), (685, 11243), (688, 11252), (689, 11261),

Gene: Maruru_16 Start: 12620, Stop: 17245, Start Num: 1

Candidate Starts for Maruru_16:

(Start: 1 @12620 has 3 MA's), (2, 12641), (3, 12647), (4, 12656), (5, 12707), (Start: 14 @12872 has 2 MA's), (15, 12923), (17, 12953), (22, 13058), (23, 13064), (24, 13076), (60, 13322), (97, 13511), (108, 13601), (118, 13703), (119, 13706), (127, 13778), (129, 13811), (130, 13817), (132, 13823), (137, 13853), (147, 13910), (149, 13919), (153, 13961), (155, 14006), (167, 14108), (208, 14354), (216, 14480), (229, 14540), (234, 14570), (246, 14624), (252, 14651), (275, 14762), (295, 14858), (305, 14894), (316, 14933), (325, 14963), (328, 14984), (330, 14993), (331, 14999), (348, 15071), (349, 15074), (371, 15131), (394, 15224), (396, 15227), (397, 15230), (405, 15269), (406, 15272), (407, 15278), (423, 15323), (424, 15326), (427, 15335), (429, 15344), (437, 15371), (465, 15488), (473, 15521), (478, 15542), (496, 15611), (503, 15647), (518, 15710), (526, 15764), (531, 15788), (538, 15809), (547, 15863), (592, 16061), (610, 16136), (633, 16241), (664, 16379), (671, 16406), (675, 16430), (676, 16433), (684, 16508), (716, 16676), (728, 16742), (733, 16787), (749, 16868), (762, 16931), (808, 17165), (809, 17177),

Gene: Mordred_22 Start: 15727, Stop: 19263, Start Num: 19

Candidate Starts for Mordred_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548, 18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625, 18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: MoyaNatalis_22 Start: 15730, Stop: 19266, Start Num: 19

Candidate Starts for MoyaNatalis_22:

(Start: 18 @15724 has 12 MA's), (Start: 19 @15730 has 7 MA's), (20, 15751), (21, 15754), (31, 15835), (35, 15880), (39, 15913), (41, 15931), (46, 15964), (52, 15994), (59, 16021), (61, 16033), (86, 16150), (91, 16174), (99, 16225), (100, 16228), (111, 16333), (113, 16345), (121, 16420), (123, 16450), (126, 16471), (129, 16513), (150, 16621), (152, 16651), (155, 16696), (156, 16708), (161, 16753), (162, 16762), (175, 16822), (184, 16861), (226, 17041), (229, 17053), (231, 17062), (236, 17095), (238, 17101), (239, 17104), (251, 17155), (253, 17161), (254, 17167), (258, 17191), (265, 17218), (268, 17233), (271, 17245), (286, 17326), (287, 17329), (293, 17350), (297, 17368), (298, 17371), (304, 17392), (311, 17416), (316, 17437), (318, 17446), (319, 17449), (328, 17488), (334, 17512), (345, 17551), (347, 17566), (367, 17623), (376, 17647), (379, 17656), (380, 17662), (391, 17698), (404, 17746), (405, 17755), (417, 17797), (422, 17809), (437, 17866), (442, 17884), (447, 17899), (448, 17905), (497, 18001), (504, 18028), (508, 18049), (524, 18118), (527, 18139), (531, 18160), (548, 18238), (590, 18271), (592, 18274), (597, 18298), (614, 18367), (622, 18403), (624, 18406), (625,

18409), (629, 18424), (640, 18472), (647, 18508), (648, 18511), (664, 18574), (688, 18706), (700, 18772), (702, 18784), (713, 18853), (724, 18898), (732, 18967), (735, 18988), (742, 19033), (753, 19096), (764, 19135), (767, 19150), (781, 19201), (784, 19213),

Gene: Moyashi_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for Moyashi_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (80, 8633), (84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113, 8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127, 8990), (133, 9044), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151, 9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (170, 9308), (172, 9320), (180, 9350), (186, 9383), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202, 9458), (204, 9467), (209, 9479), (214, 9491), (219, 9503), (225, 9533), (226, 9539), (233, 9569), (238, 9590), (245, 9614), (255, 9650), (266, 9686), (274, 9716), (278, 9749), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (301, 9821), (304, 9836), (307, 9848), (310, 9857), (312, 9866), (317, 9887), (318, 9890), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (337, 9962), (339, 9971), (353, 10019), (360, 10037), (361, 10040), (362, 10043), (364, 10052), (366, 10055), (373, 10076), (376, 10082), (382, 10103), (384, 10109), (385, 10115), (386, 10118), (389, 10127), (390, 10130), (392, 10136), (397, 10151), (399, 10163), (401, 10169), (408, 10202), (413, 10217), (416, 10226), (418, 10232), (419, 10235), (427, 10256), (429, 10265), (430, 10268), (436, 10289), (439, 10298), (440, 10301), (442, 10310), (452, 10346), (457, 10355), (470, 10400), (472, 10409), (473, 10412), (476, 10421), (477, 10430), (502, 10520), (505, 10532), (512, 10562), (516, 10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557, 10760), (560, 10772), (564, 10784), (567, 10793), (582, 10847), (583, 10856), (584, 10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (606, 10937), (608, 10946), (611, 10958), (615, 10979), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645, 11090), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676, 11210), (678, 11216), (685, 11285), (688, 11294), (689, 11303),

Gene: MrAK_14 Start: 8555, Stop: 11320, Start Num: 58

Candidate Starts for MrAK_14:

(Start: 58 @8555 has 46 MA's), (63, 8582), (66, 8588), (69, 8600), (75, 8633), (78, 8642), (80, 8645), (84, 8675), (87, 8690), (89, 8696), (94, 8717), (95, 8720), (104, 8768), (106, 8798), (113, 8867), (115, 8888), (117, 8909), (122, 8954), (123, 8972), (124, 8981), (125, 8984), (127, 9002), (134, 9059), (136, 9074), (139, 9089), (140, 9092), (143, 9104), (145, 9119), (148, 9131), (151, 9164), (152, 9173), (153, 9176), (155, 9218), (156, 9230), (161, 9275), (170, 9320), (172, 9332), (180, 9362), (186, 9395), (187, 9404), (189, 9416), (193, 9437), (194, 9440), (197, 9452), (202, 9470), (204, 9479), (209, 9491), (214, 9503), (219, 9515), (221, 9524), (225, 9545), (226, 9551), (233, 9581), (238, 9602), (245, 9626), (254, 9656), (255, 9662), (257, 9668), (266, 9698), (274, 9728), (278, 9761), (285, 9782), (295, 9815), (296, 9818), (298, 9827), (301, 9833), (304, 9848), (307, 9860), (310, 9869), (312, 9878), (317, 9899), (318, 9902), (320, 9911), (323, 9920), (327, 9941), (334, 9968), (337, 9974), (339, 9983), (353, 10031), (360, 10049), (361, 10052), (364, 10064), (366, 10067), (376, 10094), (382, 10115), (384, 10121), (385, 10127), (386, 10130), (389, 10139), (390, 10142), (392, 10148), (397, 10163), (399, 10175), (401, 10181), (408, 10214), (413, 10229), (416, 10238), (418, 10244), (419, 10247), (427, 10268), (429, 10277), (430, 10280), (436, 10301), (439, 10310), (440, 10313), (442, 10322), (452, 10358), (457, 10367), (470, 10412), (472, 10421), (473, 10424), (476, 10433), (477, 10442), (480, 10451), (498, 10517), (502, 10532), (505, 10544), (512, 10574), (516, 10586), (524, 10631), (527, 10652), (528, 10661), (538, 10694), (553, 10763), (557, 10772), (560, 10784), (564, 10796), (579, 10850), (582, 10859), (584, 10871), (585, 10874), (590, 10892), (592, 10895), (594, 10904), (601, 10928), (604, 10940), (606, 10949), (608, 10958), (615, 10991), (619, 10994), (626, 11018), (637, 11057), (641, 11087), (643, 11093), (645, 11102), (653, 11135), (658, 11153), (661, 11165), (675, 11219), (676, 11222), (678, 11228), (685, 11297), (688, 11306), (689, 11315),

Gene: Ouroboros_14 Start: 8504, Stop: 11269, Start Num: 58

Candidate Starts for Ouroboros_14:

(Start: 58 @8504 has 46 MA's), (63, 8531), (66, 8537), (69, 8549), (71, 8558), (75, 8582), (78, 8591), (80, 8594), (84, 8624), (87, 8639), (89, 8645), (90, 8651), (94, 8666), (95, 8669), (104, 8717), (106, 8747), (108, 8774), (109, 8783), (113, 8816), (117, 8858), (120, 8888), (122, 8903), (123, 8921), (124, 8930), (125, 8933), (127, 8951), (133, 9005), (134, 9008), (136, 9023), (139, 9038), (140, 9041), (143, 9053), (145, 9068), (147, 9077), (148, 9080), (151, 9113), (152, 9122), (153, 9125), (155, 9167), (156, 9179), (161, 9224), (170, 9269), (178, 9305), (180, 9311), (186, 9344), (189, 9365), (193, 9386), (194, 9389), (202, 9419), (204, 9428), (209, 9440), (214, 9452), (221, 9473), (226, 9500), (230, 9515), (231, 9521), (233, 9530), (238, 9551), (245, 9575), (254, 9605), (257, 9617), (259, 9626), (266, 9647), (276, 9689), (278, 9710), (281, 9719), (285, 9731), (295, 9764), (298, 9776), (304, 9797), (307, 9809), (315, 9839), (318, 9851), (320, 9860), (323, 9869), (327, 9890), (330, 9902), (334, 9917), (337, 9923), (339, 9932), (345, 9956), (353, 9980), (360, 9998), (361, 10001), (362, 10004), (364, 10013), (366, 10016), (368, 10022), (369, 10025), (376, 10043), (384, 10070), (385, 10076), (386, 10079), (389, 10088), (390, 10091), (392, 10097), (397, 10112), (399, 10124), (405, 10151), (413, 10178), (416, 10187), (418, 10193), (419, 10196), (420, 10199), (427, 10217), (429, 10226), (430, 10229), (436, 10250), (437, 10253), (440, 10262), (442, 10271), (452, 10307), (470, 10361), (473, 10373), (476, 10382), (477, 10391), (516, 10535), (524, 10580), (528, 10610), (538, 10643), (540, 10670), (553, 10712), (557, 10721), (560, 10733), (564, 10745), (567, 10754), (572, 10775), (582, 10808), (583, 10817), (584, 10820), (585, 10823), (590, 10841), (592, 10844), (594, 10853), (601, 10877), (606, 10898), (608, 10907), (611, 10919), (615, 10940), (619, 10943), (626, 10967), (637, 11006), (641, 11036), (643, 11042), (645, 11051), (647, 11060), (650, 11072), (658, 11102), (661, 11114), (672, 11150), (675, 11168), (676, 11171), (685, 11246), (688, 11255), (689, 11264),

Gene: P1.1_14 Start: 8512, Stop: 11277, Start Num: 58

Candidate Starts for P1.1_14:

(Start: 58 @8512 has 46 MA's), (63, 8539), (66, 8545), (69, 8557), (71, 8566), (78, 8599), (80, 8602), (87, 8647), (89, 8653), (94, 8674), (95, 8677), (104, 8725), (106, 8755), (109, 8791), (113, 8824), (115, 8845), (117, 8866), (120, 8896), (122, 8911), (123, 8929), (124, 8938), (125, 8941), (127, 8959), (133, 9013), (134, 9016), (136, 9031), (139, 9046), (140, 9049), (143, 9061), (147, 9085), (151, 9121), (152, 9130), (153, 9133), (155, 9175), (156, 9187), (161, 9232), (170, 9277), (180, 9319), (186, 9352), (187, 9361), (193, 9394), (194, 9397), (197, 9409), (202, 9427), (204, 9436), (209, 9448), (214, 9460), (219, 9472), (221, 9481), (225, 9502), (230, 9523), (231, 9529), (233, 9538), (238, 9559), (245, 9583), (254, 9613), (255, 9619), (257, 9625), (261, 9637), (274, 9685), (278, 9718), (281, 9727), (285, 9739), (295, 9772), (296, 9775), (304, 9805), (307, 9817), (314, 9844), (320, 9868), (323, 9877), (327, 9898), (330, 9910), (334, 9925), (337, 9931), (339, 9940), (353, 9988), (357, 9997), (360, 10006), (361, 10009), (362, 10012), (366, 10024), (368, 10030), (373, 10045), (376, 10051), (382, 10072), (384, 10078), (385, 10084), (386, 10087), (389, 10096), (390, 10099), (392, 10105), (397, 10120), (399, 10132), (401, 10138), (408, 10171), (416, 10195), (418, 10201), (419, 10204), (420, 10207), (427, 10225), (429, 10234), (430, 10237), (436, 10258), (437, 10261), (440, 10270), (442, 10279), (452, 10315), (470, 10369), (473, 10381), (476, 10390), (477, 10399), (483, 10414), (498, 10474), (502, 10489), (505, 10501), (516, 10543), (524, 10588), (527, 10609), (528, 10618), (538, 10651), (540, 10678), (553, 10720), (557, 10729), (564, 10753), (567, 10762), (572, 10783), (582, 10816), (583, 10825), (584, 10828), (585, 10831), (590, 10849), (592, 10852), (594, 10861), (601, 10885), (604, 10897), (606, 10906), (608, 10915), (615, 10948), (619, 10951), (626, 10975), (637, 11014), (641, 11044), (643, 11050), (645, 11059), (647, 11068), (658, 11110), (661, 11122), (672, 11158), (675, 11176), (676, 11179), (685, 11254), (688, 11263), (689, 11272),

Gene: P100.1_14 Start: 8519, Stop: 11284, Start Num: 58

Candidate Starts for P100.1_14:

(Start: 58 @8519 has 46 MA's), (63, 8546), (66, 8552), (69, 8564), (75, 8597), (78, 8606), (80, 8609), (84, 8639), (87, 8654), (89, 8660), (94, 8681), (95, 8684), (104, 8732), (106, 8762), (109, 8798), (113, 8831), (115, 8852), (117, 8873), (120, 8903), (122, 8918), (123, 8936), (124, 8945), (125, 8948), (127, 8966), (134, 9023), (136, 9038), (139, 9053), (140, 9056), (143, 9068), (145, 9083), (148, 9095), (151,

9128), (152, 9137), (153, 9140), (155, 9182), (156, 9194), (161, 9239), (168, 9269), (170, 9284), (172, 9296), (180, 9326), (186, 9359), (187, 9368), (189, 9380), (193, 9401), (194, 9404), (197, 9416), (202, 9434), (204, 9443), (209, 9455), (214, 9467), (221, 9488), (226, 9515), (230, 9530), (231, 9536), (233, 9545), (238, 9566), (254, 9620), (255, 9626), (257, 9632), (261, 9644), (266, 9662), (274, 9692), (278, 9725), (281, 9734), (285, 9746), (295, 9779), (296, 9782), (298, 9791), (304, 9812), (307, 9824), (310, 9833), (317, 9863), (320, 9875), (323, 9884), (327, 9905), (330, 9917), (334, 9932), (339, 9947), (351, 9992), (360, 10013), (361, 10016), (362, 10019), (363, 10025), (366, 10031), (376, 10058), (382, 10079), (384, 10085), (385, 10091), (389, 10103), (390, 10106), (393, 10115), (397, 10127), (399, 10139), (402, 10148), (405, 10166), (411, 10187), (413, 10193), (416, 10202), (418, 10208), (419, 10211), (420, 10214), (427, 10232), (429, 10241), (430, 10244), (437, 10268), (442, 10286), (470, 10376), (473, 10388), (476, 10397), (477, 10406), (494, 10463), (505, 10508), (510, 10532), (516, 10550), (524, 10595), (527, 10616), (528, 10625), (538, 10658), (540, 10685), (553, 10727), (557, 10736), (560, 10748), (564, 10760), (567, 10769), (572, 10790), (579, 10814), (582, 10823), (584, 10835), (585, 10838), (590, 10856), (592, 10859), (594, 10868), (601, 10892), (606, 10913), (608, 10922), (615, 10955), (619, 10958), (626, 10982), (637, 11021), (641, 11051), (643, 11057), (645, 11066), (647, 11075), (652, 11096), (653, 11099), (658, 11117), (661, 11129), (675, 11183), (676, 11186), (685, 11261), (688, 11270), (689, 11279),

Gene: P100A_14 Start: 8513, Stop: 11278, Start Num: 58

Candidate Starts for P100A_14:

(Start: 58 @8513 has 46 MA's), (63, 8540), (66, 8546), (69, 8558), (71, 8567), (75, 8591), (80, 8603), (87, 8648), (89, 8654), (90, 8660), (94, 8675), (95, 8678), (104, 8726), (106, 8756), (108, 8783), (109, 8792), (113, 8825), (115, 8846), (120, 8897), (122, 8912), (123, 8930), (124, 8939), (125, 8942), (127, 8960), (134, 9017), (136, 9032), (139, 9047), (140, 9050), (143, 9062), (144, 9071), (147, 9086), (151, 9122), (152, 9131), (153, 9134), (155, 9176), (156, 9188), (161, 9233), (164, 9254), (170, 9278), (174, 9299), (180, 9320), (186, 9353), (189, 9374), (193, 9395), (194, 9398), (197, 9410), (202, 9428), (204, 9437), (209, 9449), (214, 9461), (221, 9482), (225, 9503), (226, 9509), (230, 9524), (231, 9530), (233, 9539), (238, 9560), (254, 9614), (257, 9626), (266, 9656), (274, 9686), (278, 9719), (281, 9728), (285, 9740), (296, 9776), (298, 9785), (304, 9806), (307, 9818), (314, 9845), (318, 9860), (320, 9869), (327, 9899), (328, 9902), (330, 9911), (334, 9926), (337, 9932), (339, 9941), (345, 9965), (353, 9989), (360, 10007), (361, 10010), (362, 10013), (364, 10022), (366, 10025), (373, 10046), (376, 10052), (383, 10076), (384, 10079), (386, 10088), (388, 10094), (389, 10097), (390, 10100), (393, 10109), (397, 10121), (399, 10133), (413, 10187), (416, 10196), (418, 10202), (419, 10205), (420, 10208), (427, 10226), (428, 10229), (430, 10238), (439, 10268), (440, 10271), (452, 10316), (470, 10370), (473, 10382), (476, 10391), (477, 10400), (502, 10490), (505, 10502), (524, 10589), (526, 10607), (527, 10610), (528, 10619), (538, 10652), (540, 10679), (553, 10721), (557, 10730), (560, 10742), (564, 10754), (567, 10763), (582, 10817), (584, 10829), (585, 10832), (590, 10850), (592, 10853), (594, 10862), (601, 10886), (606, 10907), (608, 10916), (611, 10928), (615, 10949), (619, 10952), (626, 10976), (637, 11015), (641, 11045), (643, 11051), (645, 11060), (647, 11069), (658, 11111), (661, 11123), (672, 11159), (675, 11177), (676, 11180), (685, 11255), (688, 11264), (689, 11273),

Gene: P100D_14 Start: 8515, Stop: 11280, Start Num: 58

Candidate Starts for P100D_14:

(Start: 58 @8515 has 46 MA's), (63, 8542), (66, 8548), (69, 8560), (71, 8569), (78, 8602), (80, 8605), (87, 8650), (89, 8656), (90, 8662), (94, 8677), (95, 8680), (104, 8728), (106, 8758), (109, 8794), (113, 8827), (115, 8848), (117, 8869), (120, 8899), (122, 8914), (123, 8932), (124, 8941), (125, 8944), (127, 8962), (133, 9016), (134, 9019), (136, 9034), (139, 9049), (140, 9052), (143, 9064), (145, 9079), (146, 9082), (147, 9088), (151, 9124), (152, 9133), (153, 9136), (155, 9178), (156, 9190), (161, 9235), (164, 9256), (168, 9265), (170, 9280), (174, 9301), (180, 9322), (186, 9355), (187, 9364), (193, 9397), (194, 9400), (197, 9412), (202, 9430), (204, 9439), (209, 9451), (214, 9463), (219, 9475), (221, 9484), (226, 9511), (230, 9526), (231, 9532), (233, 9541), (238, 9562), (245, 9586), (254, 9616), (257, 9628), (261, 9640), (266, 9658), (274, 9688), (276, 9700), (278, 9721), (281, 9730), (285, 9742), (296, 9778), (304, 9808), (307, 9820), (314, 9847), (318, 9862), (320, 9871), (327, 9901), (330, 9913), (339, 9943), (351,

9988), (360, 10009), (361, 10012), (362, 10015), (363, 10021), (366, 10027), (376, 10054), (383, 10078), (384, 10081), (386, 10090), (389, 10099), (390, 10102), (392, 10108), (397, 10123), (399, 10135), (401, 10141), (405, 10162), (408, 10174), (411, 10183), (413, 10189), (416, 10198), (418, 10204), (419, 10207), (420, 10210), (427, 10228), (428, 10231), (429, 10237), (430, 10240), (437, 10264), (442, 10282), (470, 10372), (473, 10384), (476, 10393), (477, 10402), (498, 10477), (502, 10492), (505, 10504), (516, 10546), (524, 10591), (527, 10612), (528, 10621), (538, 10654), (540, 10681), (553, 10723), (557, 10732), (560, 10744), (564, 10756), (567, 10765), (582, 10819), (584, 10831), (585, 10834), (590, 10852), (592, 10855), (594, 10864), (601, 10888), (606, 10909), (608, 10918), (615, 10951), (619, 10954), (626, 10978), (637, 11017), (641, 11047), (643, 11053), (645, 11062), (647, 11071), (658, 11113), (661, 11125), (672, 11161), (675, 11179), (676, 11182), (678, 11188), (685, 11257), (688, 11266), (689, 11275),

Gene: P101A_14 Start: 8527, Stop: 11292, Start Num: 58

Candidate Starts for P101A_14:

(Start: 58 @8527 has 46 MA's), (63, 8554), (66, 8560), (69, 8572), (75, 8605), (78, 8614), (80, 8617), (84, 8647), (87, 8662), (89, 8668), (94, 8689), (95, 8692), (104, 8740), (106, 8770), (109, 8806), (113, 8839), (115, 8860), (117, 8881), (120, 8911), (122, 8926), (123, 8944), (124, 8953), (125, 8956), (127, 8974), (134, 9031), (136, 9046), (139, 9061), (140, 9064), (143, 9076), (145, 9091), (148, 9103), (151, 9136), (152, 9145), (153, 9148), (155, 9190), (156, 9202), (161, 9247), (168, 9277), (170, 9292), (172, 9304), (180, 9334), (186, 9367), (187, 9376), (189, 9388), (193, 9409), (194, 9412), (197, 9424), (202, 9442), (204, 9451), (209, 9463), (214, 9475), (221, 9496), (226, 9523), (230, 9538), (231, 9544), (233, 9553), (238, 9574), (245, 9598), (254, 9628), (255, 9634), (257, 9640), (261, 9652), (266, 9670), (274, 9700), (278, 9733), (281, 9742), (285, 9754), (295, 9787), (296, 9790), (298, 9799), (304, 9820), (307, 9832), (310, 9841), (317, 9871), (320, 9883), (323, 9892), (327, 9913), (330, 9925), (334, 9940), (339, 9955), (351, 10000), (360, 10021), (361, 10024), (362, 10027), (363, 10033), (366, 10039), (376, 10066), (382, 10087), (384, 10093), (385, 10099), (389, 10111), (390, 10114), (393, 10123), (397, 10135), (399, 10147), (402, 10156), (405, 10174), (411, 10195), (413, 10201), (416, 10210), (418, 10216), (419, 10219), (420, 10222), (427, 10240), (429, 10249), (430, 10252), (437, 10276), (442, 10294), (470, 10384), (473, 10396), (476, 10405), (477, 10414), (494, 10471), (505, 10516), (510, 10540), (516, 10558), (524, 10603), (527, 10624), (528, 10633), (538, 10666), (540, 10693), (553, 10735), (557, 10744), (560, 10756), (564, 10768), (567, 10777), (572, 10798), (579, 10822), (582, 10831), (584, 10843), (585, 10846), (590, 10864), (592, 10867), (594, 10876), (601, 10900), (606, 10921), (608, 10930), (615, 10963), (619, 10966), (626, 10990), (637, 11029), (641, 11059), (643, 11065), (645, 11074), (647, 11083), (652, 11104), (653, 11107), (658, 11125), (661, 11137), (675, 11191), (676, 11194), (685, 11269), (688, 11278), (689, 11287),

Gene: P104A_14 Start: 8498, Stop: 11263, Start Num: 58

Candidate Starts for P104A_14:

(Start: 58 @8498 has 46 MA's), (63, 8525), (66, 8531), (69, 8543), (71, 8552), (78, 8585), (80, 8588), (87, 8633), (89, 8639), (94, 8660), (95, 8663), (100, 8693), (104, 8711), (106, 8741), (109, 8777), (113, 8810), (115, 8831), (117, 8852), (120, 8882), (122, 8897), (123, 8915), (124, 8924), (125, 8927), (127, 8945), (133, 8999), (134, 9002), (136, 9017), (139, 9032), (140, 9035), (143, 9047), (147, 9071), (151, 9107), (152, 9116), (153, 9119), (155, 9161), (156, 9173), (161, 9218), (170, 9263), (174, 9284), (180, 9305), (184, 9326), (186, 9338), (187, 9347), (193, 9380), (194, 9383), (197, 9395), (202, 9413), (204, 9422), (209, 9434), (214, 9446), (219, 9458), (221, 9467), (226, 9494), (230, 9509), (231, 9515), (233, 9524), (238, 9545), (243, 9563), (245, 9569), (254, 9599), (255, 9605), (257, 9611), (259, 9620), (261, 9623), (266, 9641), (274, 9671), (278, 9704), (281, 9713), (285, 9725), (296, 9761), (301, 9776), (304, 9791), (307, 9803), (310, 9812), (314, 9830), (318, 9845), (320, 9854), (327, 9884), (328, 9887), (330, 9896), (334, 9911), (337, 9917), (339, 9926), (345, 9950), (353, 9974), (360, 9992), (361, 9995), (362, 9998), (364, 10007), (366, 10010), (373, 10031), (376, 10037), (382, 10058), (384, 10064), (385, 10070), (386, 10073), (389, 10082), (390, 10085), (392, 10091), (397, 10106), (399, 10118), (401, 10124), (411, 10166), (413, 10172), (416, 10181), (418, 10187), (419, 10190), (420, 10193), (427, 10211), (429, 10220), (430, 10223), (437, 10247), (442, 10265), (470, 10355), (473, 10367), (476,

10376), (477, 10385), (498, 10460), (505, 10487), (510, 10511), (516, 10529), (524, 10574), (527, 10595), (528, 10604), (538, 10637), (540, 10664), (553, 10706), (557, 10715), (560, 10727), (564, 10739), (567, 10748), (582, 10802), (583, 10811), (584, 10814), (585, 10817), (590, 10835), (592, 10838), (594, 10847), (601, 10871), (604, 10883), (606, 10892), (608, 10901), (615, 10934), (619, 10937), (626, 10961), (637, 11000), (641, 11030), (643, 11036), (645, 11045), (647, 11054), (652, 11075), (658, 11096), (661, 11108), (672, 11144), (675, 11162), (676, 11165), (678, 11171), (685, 11240), (688, 11249), (689, 11258),

Gene: P104B_14 Start: 8515, Stop: 11280, Start Num: 58

Candidate Starts for P104B_14:

(Start: 58 @8515 has 46 MA's), (63, 8542), (66, 8548), (69, 8560), (71, 8569), (78, 8602), (80, 8605), (87, 8650), (89, 8656), (94, 8677), (95, 8680), (104, 8728), (106, 8758), (109, 8794), (113, 8827), (115, 8848), (117, 8869), (120, 8899), (122, 8914), (123, 8932), (124, 8941), (125, 8944), (127, 8962), (133, 9016), (134, 9019), (136, 9034), (139, 9049), (140, 9052), (143, 9064), (145, 9079), (147, 9088), (151, 9124), (152, 9133), (153, 9136), (155, 9178), (156, 9190), (161, 9235), (170, 9280), (174, 9301), (180, 9322), (186, 9355), (187, 9364), (193, 9397), (194, 9400), (197, 9412), (202, 9430), (204, 9439), (209, 9451), (214, 9463), (219, 9475), (221, 9484), (225, 9505), (226, 9511), (230, 9526), (231, 9532), (233, 9541), (238, 9562), (254, 9616), (255, 9622), (257, 9628), (261, 9640), (266, 9658), (274, 9688), (278, 9721), (281, 9730), (285, 9742), (295, 9775), (296, 9778), (298, 9787), (301, 9793), (307, 9820), (314, 9847), (318, 9862), (320, 9871), (323, 9880), (334, 9928), (337, 9934), (339, 9943), (345, 9967), (353, 9991), (357, 10000), (360, 10009), (361, 10012), (362, 10015), (363, 10021), (364, 10024), (366, 10027), (373, 10048), (376, 10054), (383, 10078), (384, 10081), (386, 10090), (388, 10096), (389, 10099), (390, 10102), (392, 10108), (397, 10123), (399, 10135), (413, 10189), (416, 10198), (418, 10204), (419, 10207), (420, 10210), (427, 10228), (429, 10237), (430, 10240), (436, 10261), (439, 10270), (440, 10273), (442, 10282), (443, 10285), (452, 10318), (470, 10372), (473, 10384), (476, 10393), (477, 10402), (494, 10459), (498, 10477), (502, 10492), (505, 10504), (516, 10546), (524, 10591), (526, 10609), (527, 10612), (538, 10654), (540, 10681), (553, 10723), (557, 10732), (560, 10744), (564, 10756), (567, 10765), (572, 10786), (579, 10810), (582, 10819), (583, 10828), (584, 10831), (585, 10834), (590, 10852), (592, 10855), (594, 10864), (601, 10888), (604, 10900), (606, 10909), (608, 10918), (615, 10951), (619, 10954), (626, 10978), (637, 11017), (641, 11047), (643, 11053), (645, 11062), (647, 11071), (652, 11092), (658, 11113), (661, 11125), (675, 11179), (676, 11182), (678, 11188), (685, 11257), (688, 11266), (689, 11275),

Gene: P105_14 Start: 8500, Stop: 11190, Start Num: 58

Candidate Starts for P105_14:

(Start: 58 @8500 has 46 MA's), (63, 8527), (66, 8533), (69, 8545), (78, 8587), (80, 8590), (84, 8620), (87, 8635), (89, 8641), (94, 8662), (95, 8665), (104, 8713), (106, 8743), (108, 8770), (109, 8779), (113, 8812), (115, 8833), (117, 8854), (120, 8884), (122, 8899), (123, 8917), (124, 8926), (125, 8929), (127, 8947), (133, 9001), (134, 9004), (136, 9019), (139, 9034), (140, 9037), (143, 9049), (145, 9064), (147, 9073), (151, 9109), (152, 9118), (153, 9121), (155, 9163), (156, 9175), (161, 9220), (170, 9265), (180, 9307), (184, 9328), (186, 9340), (187, 9349), (189, 9361), (193, 9382), (194, 9385), (197, 9397), (202, 9415), (204, 9424), (209, 9436), (214, 9448), (219, 9460), (221, 9469), (225, 9490), (226, 9496), (230, 9511), (231, 9517), (233, 9526), (238, 9547), (245, 9571), (254, 9601), (255, 9607), (257, 9613), (261, 9625), (266, 9643), (274, 9673), (278, 9706), (281, 9715), (285, 9727), (296, 9763), (298, 9772), (301, 9778), (318, 9793), (320, 9802), (323, 9811), (327, 9832), (330, 9844), (334, 9859), (337, 9865), (339, 9874), (345, 9898), (353, 9922), (360, 9940), (361, 9943), (362, 9946), (364, 9955), (366, 9958), (368, 9964), (369, 9967), (376, 9985), (382, 10006), (384, 10012), (385, 10018), (386, 10021), (389, 10030), (390, 10033), (392, 10039), (397, 10054), (399, 10066), (401, 10072), (408, 10105), (413, 10120), (416, 10129), (418, 10135), (419, 10138), (420, 10141), (427, 10159), (429, 10168), (436, 10192), (437, 10195), (440, 10204), (442, 10213), (452, 10249), (473, 10294), (476, 10303), (477, 10312), (480, 10321), (505, 10414), (510, 10438), (516, 10456), (524, 10501), (526, 10519), (527, 10522), (528, 10531), (538, 10564), (553, 10633), (557, 10642), (560, 10654), (564, 10666), (567, 10675), (582, 10729), (584, 10741), (585, 10744), (594, 10774), (601, 10798), (603, 10807), (604, 10810),

(606, 10819), (608, 10828), (626, 10888), (637, 10927), (641, 10957), (643, 10963), (645, 10972),
(658, 11023), (661, 11035), (675, 11089), (676, 11092), (678, 11098), (685, 11167), (688, 11176),
(689, 11185),

Gene: P106A_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for P106A_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (78, 8630), (80, 8633),
(84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113,
8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127,
8990), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151,
9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (168, 9293), (170, 9308), (172,
9320), (180, 9350), (186, 9383), (187, 9392), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202,
9458), (204, 9467), (209, 9479), (214, 9491), (221, 9512), (226, 9539), (230, 9554), (231, 9560), (233,
9569), (238, 9590), (254, 9644), (255, 9650), (257, 9656), (261, 9668), (266, 9686), (274, 9716), (278,
9749), (281, 9758), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (304, 9836), (307, 9848), (310,
9857), (317, 9887), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (339, 9971), (351,
10016), (360, 10037), (361, 10040), (362, 10043), (363, 10049), (366, 10055), (376, 10082), (382,
10103), (384, 10109), (385, 10115), (389, 10127), (390, 10130), (393, 10139), (397, 10151), (399,
10163), (402, 10172), (405, 10190), (411, 10211), (413, 10217), (416, 10226), (418, 10232), (419,
10235), (420, 10238), (427, 10256), (429, 10265), (430, 10268), (437, 10292), (442, 10310), (470,
10400), (473, 10412), (476, 10421), (477, 10430), (494, 10487), (505, 10532), (510, 10556), (516,
10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557,
10760), (560, 10772), (564, 10784), (567, 10793), (572, 10814), (579, 10838), (582, 10847), (584,
10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (604, 10928), (606,
10937), (608, 10946), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645,
11090), (647, 11099), (652, 11120), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676,
11210), (685, 11285), (688, 11294), (689, 11303),

Gene: P106C_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for P106C_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (78, 8630), (80, 8633),
(84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113,
8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127,
8990), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151,
9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (168, 9293), (170, 9308), (172,
9320), (180, 9350), (186, 9383), (187, 9392), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202,
9458), (204, 9467), (209, 9479), (214, 9491), (221, 9512), (226, 9539), (230, 9554), (231, 9560), (233,
9569), (238, 9590), (254, 9644), (255, 9650), (257, 9656), (261, 9668), (266, 9686), (274, 9716), (278,
9749), (281, 9758), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (304, 9836), (307, 9848), (310,
9857), (317, 9887), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (339, 9971), (351,
10016), (360, 10037), (361, 10040), (362, 10043), (363, 10049), (366, 10055), (376, 10082), (382,
10103), (384, 10109), (385, 10115), (389, 10127), (390, 10130), (393, 10139), (397, 10151), (399,
10163), (402, 10172), (405, 10190), (411, 10211), (413, 10217), (416, 10226), (418, 10232), (419,
10235), (420, 10238), (427, 10256), (429, 10265), (430, 10268), (437, 10292), (442, 10310), (470,
10400), (473, 10412), (476, 10421), (477, 10430), (494, 10487), (505, 10532), (510, 10556), (516,
10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557,
10760), (560, 10772), (564, 10784), (567, 10793), (572, 10814), (579, 10838), (582, 10847), (584,
10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (604, 10928), (606,
10937), (608, 10946), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645,
11090), (647, 11099), (652, 11120), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676,
11210), (685, 11285), (688, 11294), (689, 11303),

Gene: P106I_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for P106I_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (78, 8630), (80, 8633), (84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113, 8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127, 8990), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151, 9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (168, 9293), (170, 9308), (172, 9320), (180, 9350), (186, 9383), (187, 9392), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202, 9458), (204, 9467), (209, 9479), (214, 9491), (221, 9512), (226, 9539), (230, 9554), (231, 9560), (233, 9569), (238, 9590), (254, 9644), (255, 9650), (257, 9656), (261, 9668), (266, 9686), (274, 9716), (278, 9749), (281, 9758), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (304, 9836), (307, 9848), (310, 9857), (317, 9887), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (339, 9971), (351, 10016), (360, 10037), (361, 10040), (362, 10043), (363, 10049), (366, 10055), (376, 10082), (382, 10103), (384, 10109), (385, 10115), (389, 10127), (390, 10130), (393, 10139), (397, 10151), (399, 10163), (402, 10172), (405, 10190), (411, 10211), (413, 10217), (416, 10226), (418, 10232), (419, 10235), (420, 10238), (427, 10256), (429, 10265), (430, 10268), (437, 10292), (442, 10310), (470, 10400), (473, 10412), (476, 10421), (477, 10430), (494, 10487), (505, 10532), (510, 10556), (516, 10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557, 10760), (560, 10772), (564, 10784), (567, 10793), (572, 10814), (579, 10838), (582, 10847), (584, 10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (604, 10928), (606, 10937), (608, 10946), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645, 11090), (647, 11099), (652, 11120), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676, 11210), (685, 11285), (688, 11294), (689, 11303),

Gene: P106L_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for P106L_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (78, 8630), (80, 8633), (84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113, 8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127, 8990), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151, 9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (168, 9293), (170, 9308), (172, 9320), (180, 9350), (186, 9383), (187, 9392), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202, 9458), (204, 9467), (209, 9479), (214, 9491), (221, 9512), (226, 9539), (230, 9554), (231, 9560), (233, 9569), (238, 9590), (254, 9644), (255, 9650), (257, 9656), (261, 9668), (266, 9686), (274, 9716), (278, 9749), (281, 9758), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (304, 9836), (307, 9848), (310, 9857), (317, 9887), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (339, 9971), (351, 10016), (360, 10037), (361, 10040), (362, 10043), (363, 10049), (366, 10055), (376, 10082), (382, 10103), (384, 10109), (385, 10115), (389, 10127), (390, 10130), (393, 10139), (397, 10151), (399, 10163), (402, 10172), (405, 10190), (411, 10211), (413, 10217), (416, 10226), (418, 10232), (419, 10235), (420, 10238), (427, 10256), (429, 10265), (430, 10268), (437, 10292), (442, 10310), (470, 10400), (473, 10412), (476, 10421), (477, 10430), (494, 10487), (505, 10532), (510, 10556), (516, 10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557, 10760), (560, 10772), (564, 10784), (567, 10793), (572, 10814), (579, 10838), (582, 10847), (584, 10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (604, 10928), (606, 10937), (608, 10946), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645, 11090), (647, 11099), (652, 11120), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676, 11210), (685, 11285), (688, 11294), (689, 11303),

Gene: P106M_14 Start: 8543, Stop: 11308, Start Num: 58

Candidate Starts for P106M_14:

(Start: 58 @8543 has 46 MA's), (63, 8570), (66, 8576), (69, 8588), (75, 8621), (78, 8630), (80, 8633), (84, 8663), (87, 8678), (89, 8684), (94, 8705), (95, 8708), (104, 8756), (106, 8786), (109, 8822), (113, 8855), (115, 8876), (117, 8897), (120, 8927), (122, 8942), (123, 8960), (124, 8969), (125, 8972), (127, 8990), (134, 9047), (136, 9062), (139, 9077), (140, 9080), (143, 9092), (145, 9107), (148, 9119), (151,

9152), (152, 9161), (153, 9164), (155, 9206), (156, 9218), (161, 9263), (168, 9293), (170, 9308), (172, 9320), (180, 9350), (186, 9383), (187, 9392), (189, 9404), (193, 9425), (194, 9428), (197, 9440), (202, 9458), (204, 9467), (209, 9479), (214, 9491), (221, 9512), (226, 9539), (230, 9554), (231, 9560), (233, 9569), (238, 9590), (254, 9644), (255, 9650), (257, 9656), (261, 9668), (266, 9686), (274, 9716), (278, 9749), (281, 9758), (285, 9770), (295, 9803), (296, 9806), (298, 9815), (304, 9836), (307, 9848), (310, 9857), (317, 9887), (320, 9899), (323, 9908), (327, 9929), (330, 9941), (334, 9956), (339, 9971), (351, 10016), (360, 10037), (361, 10040), (362, 10043), (363, 10049), (366, 10055), (376, 10082), (382, 10103), (384, 10109), (385, 10115), (389, 10127), (390, 10130), (393, 10139), (397, 10151), (399, 10163), (402, 10172), (405, 10190), (411, 10211), (413, 10217), (416, 10226), (418, 10232), (419, 10235), (420, 10238), (427, 10256), (429, 10265), (430, 10268), (437, 10292), (442, 10310), (470, 10400), (473, 10412), (476, 10421), (477, 10430), (494, 10487), (505, 10532), (510, 10556), (516, 10574), (524, 10619), (527, 10640), (528, 10649), (538, 10682), (540, 10709), (553, 10751), (557, 10760), (560, 10772), (564, 10784), (567, 10793), (572, 10814), (579, 10838), (582, 10847), (584, 10859), (585, 10862), (590, 10880), (592, 10883), (594, 10892), (601, 10916), (604, 10928), (606, 10937), (608, 10946), (619, 10982), (626, 11006), (637, 11045), (641, 11075), (643, 11081), (645, 11090), (647, 11099), (652, 11120), (653, 11123), (658, 11141), (661, 11153), (675, 11207), (676, 11210), (685, 11285), (688, 11294), (689, 11303),

Gene: P107A_14 Start: 8520, Stop: 11285, Start Num: 58

Candidate Starts for P107A_14:

(Start: 58 @8520 has 46 MA's), (63, 8547), (66, 8553), (69, 8565), (71, 8574), (75, 8598), (78, 8607), (80, 8610), (87, 8655), (90, 8667), (94, 8682), (95, 8685), (104, 8733), (106, 8763), (109, 8799), (113, 8832), (115, 8853), (120, 8904), (122, 8919), (123, 8937), (124, 8946), (127, 8967), (134, 9024), (136, 9039), (139, 9054), (140, 9057), (143, 9069), (145, 9084), (147, 9093), (148, 9096), (151, 9129), (152, 9138), (153, 9141), (155, 9183), (156, 9195), (161, 9240), (164, 9261), (170, 9285), (174, 9306), (180, 9327), (186, 9360), (187, 9369), (193, 9402), (194, 9405), (197, 9417), (202, 9435), (204, 9444), (209, 9456), (214, 9468), (219, 9480), (221, 9489), (225, 9510), (226, 9516), (230, 9531), (231, 9537), (233, 9546), (238, 9567), (257, 9633), (259, 9642), (261, 9645), (266, 9663), (274, 9693), (278, 9726), (281, 9735), (285, 9747), (296, 9783), (298, 9792), (304, 9813), (307, 9825), (314, 9852), (318, 9867), (320, 9876), (323, 9885), (327, 9906), (330, 9918), (334, 9933), (337, 9939), (339, 9948), (345, 9972), (353, 9996), (360, 10014), (361, 10017), (362, 10020), (364, 10029), (366, 10032), (368, 10038), (369, 10041), (373, 10053), (376, 10059), (382, 10080), (384, 10086), (385, 10092), (386, 10095), (389, 10104), (390, 10107), (392, 10113), (397, 10128), (398, 10137), (399, 10140), (402, 10149), (405, 10167), (411, 10188), (413, 10194), (416, 10203), (418, 10209), (419, 10212), (427, 10233), (429, 10242), (430, 10245), (436, 10266), (437, 10269), (440, 10278), (442, 10287), (452, 10323), (470, 10377), (473, 10389), (476, 10398), (477, 10407), (505, 10509), (516, 10551), (524, 10596), (527, 10617), (528, 10626), (538, 10659), (540, 10686), (553, 10728), (557, 10737), (564, 10761), (567, 10770), (582, 10824), (584, 10836), (585, 10839), (590, 10857), (592, 10860), (594, 10869), (601, 10893), (606, 10914), (608, 10923), (615, 10956), (619, 10959), (626, 10983), (637, 11022), (641, 11052), (643, 11058), (645, 11067), (647, 11076), (658, 11118), (661, 11130), (672, 11166), (675, 11184), (676, 11187), (685, 11262), (688, 11271), (689, 11280),

Gene: P107C_14 Start: 8502, Stop: 11267, Start Num: 58

Candidate Starts for P107C_14:

(Start: 58 @8502 has 46 MA's), (63, 8529), (66, 8535), (69, 8547), (71, 8556), (78, 8589), (80, 8592), (84, 8622), (87, 8637), (89, 8643), (90, 8649), (94, 8664), (95, 8667), (104, 8715), (106, 8745), (108, 8772), (109, 8781), (113, 8814), (115, 8835), (117, 8856), (120, 8886), (122, 8901), (123, 8919), (124, 8928), (125, 8931), (127, 8949), (134, 9006), (136, 9021), (139, 9036), (140, 9039), (143, 9051), (145, 9066), (146, 9069), (147, 9075), (151, 9111), (152, 9120), (153, 9123), (155, 9165), (156, 9177), (161, 9222), (170, 9267), (174, 9288), (180, 9309), (184, 9330), (186, 9342), (187, 9351), (189, 9363), (193, 9384), (194, 9387), (197, 9399), (202, 9417), (204, 9426), (209, 9438), (214, 9450), (219, 9462), (221, 9471), (225, 9492), (226, 9498), (230, 9513), (231, 9519), (233, 9528), (238, 9549), (257, 9615), (266, 9645), (274, 9675), (278, 9708), (285, 9729), (296, 9765), (298, 9774), (301, 9780), (304, 9795), (307,

9807), (314, 9834), (318, 9849), (320, 9858), (327, 9888), (334, 9915), (337, 9921), (339, 9930), (353, 9978), (360, 9996), (361, 9999), (362, 10002), (366, 10014), (373, 10035), (376, 10041), (384, 10068), (385, 10074), (386, 10077), (389, 10086), (390, 10089), (392, 10095), (397, 10110), (399, 10122), (413, 10176), (416, 10185), (418, 10191), (419, 10194), (420, 10197), (427, 10215), (429, 10224), (430, 10227), (436, 10248), (437, 10251), (440, 10260), (442, 10269), (452, 10305), (470, 10359), (473, 10371), (476, 10380), (477, 10389), (483, 10404), (498, 10464), (502, 10479), (505, 10491), (516, 10533), (524, 10578), (527, 10599), (528, 10608), (538, 10641), (540, 10668), (553, 10710), (557, 10719), (560, 10731), (564, 10743), (567, 10752), (572, 10773), (582, 10806), (583, 10815), (584, 10818), (585, 10821), (590, 10839), (592, 10842), (594, 10851), (601, 10875), (603, 10884), (604, 10887), (606, 10896), (608, 10905), (615, 10938), (619, 10941), (626, 10965), (637, 11004), (641, 11034), (643, 11040), (645, 11049), (647, 11058), (658, 11100), (661, 11112), (672, 11148), (675, 11166), (676, 11169), (678, 11175), (685, 11244), (688, 11253), (689, 11262),

Gene: P108C_14 Start: 8510, Stop: 11275, Start Num: 58

Candidate Starts for P108C_14:

(Start: 58 @8510 has 46 MA's), (63, 8537), (66, 8543), (69, 8555), (71, 8564), (75, 8588), (80, 8600), (84, 8630), (87, 8645), (89, 8651), (94, 8672), (95, 8675), (104, 8723), (106, 8753), (109, 8789), (113, 8822), (115, 8843), (117, 8864), (120, 8894), (122, 8909), (123, 8927), (124, 8936), (125, 8939), (127, 8957), (134, 9014), (136, 9029), (139, 9044), (140, 9047), (143, 9059), (145, 9074), (148, 9086), (151, 9119), (152, 9128), (153, 9131), (155, 9173), (156, 9185), (161, 9230), (168, 9260), (170, 9275), (172, 9287), (180, 9317), (186, 9350), (187, 9359), (189, 9371), (193, 9392), (194, 9395), (197, 9407), (202, 9425), (204, 9434), (209, 9446), (214, 9458), (221, 9479), (226, 9506), (230, 9521), (231, 9527), (233, 9536), (238, 9557), (255, 9617), (257, 9623), (259, 9632), (266, 9653), (274, 9683), (278, 9716), (281, 9725), (285, 9737), (296, 9773), (301, 9788), (307, 9815), (312, 9833), (314, 9842), (318, 9857), (320, 9866), (323, 9875), (327, 9896), (330, 9908), (334, 9923), (339, 9938), (353, 9986), (360, 10004), (361, 10007), (362, 10010), (364, 10019), (366, 10022), (368, 10028), (376, 10049), (384, 10076), (385, 10082), (386, 10085), (389, 10094), (390, 10097), (392, 10103), (397, 10118), (399, 10130), (401, 10136), (413, 10184), (416, 10193), (418, 10199), (419, 10202), (420, 10205), (427, 10223), (430, 10235), (436, 10256), (437, 10259), (440, 10268), (442, 10277), (452, 10313), (470, 10367), (473, 10379), (476, 10388), (477, 10397), (483, 10412), (498, 10472), (505, 10499), (516, 10541), (524, 10586), (527, 10607), (528, 10616), (538, 10649), (540, 10676), (553, 10718), (557, 10727), (560, 10739), (564, 10751), (567, 10760), (572, 10781), (582, 10814), (584, 10826), (585, 10829), (590, 10847), (592, 10850), (601, 10883), (604, 10895), (606, 10904), (608, 10913), (615, 10946), (619, 10949), (626, 10973), (637, 11012), (641, 11042), (643, 11048), (645, 11057), (647, 11066), (658, 11108), (661, 11120), (672, 11156), (675, 11174), (676, 11177), (678, 11183), (685, 11252), (688, 11261), (689, 11270),

Gene: P14.4_14 Start: 8510, Stop: 11275, Start Num: 58

Candidate Starts for P14.4_14:

(Start: 58 @8510 has 46 MA's), (63, 8537), (66, 8543), (69, 8555), (71, 8564), (78, 8597), (80, 8600), (87, 8645), (89, 8651), (94, 8672), (95, 8675), (104, 8723), (106, 8753), (109, 8789), (113, 8822), (115, 8843), (117, 8864), (120, 8894), (122, 8909), (123, 8927), (124, 8936), (125, 8939), (127, 8957), (134, 9014), (136, 9029), (139, 9044), (140, 9047), (143, 9059), (145, 9074), (147, 9083), (151, 9119), (152, 9128), (153, 9131), (155, 9173), (156, 9185), (161, 9230), (170, 9275), (174, 9296), (180, 9317), (184, 9338), (186, 9350), (187, 9359), (193, 9392), (194, 9395), (197, 9407), (202, 9425), (204, 9434), (209, 9446), (214, 9458), (219, 9470), (221, 9479), (225, 9500), (226, 9506), (230, 9521), (231, 9527), (233, 9536), (238, 9557), (245, 9581), (254, 9611), (255, 9617), (257, 9623), (266, 9653), (274, 9683), (278, 9716), (281, 9725), (285, 9737), (295, 9770), (296, 9773), (298, 9782), (301, 9788), (307, 9815), (310, 9824), (313, 9836), (314, 9842), (318, 9857), (320, 9866), (323, 9875), (327, 9896), (330, 9908), (337, 9929), (339, 9938), (345, 9962), (353, 9986), (360, 10004), (361, 10007), (362, 10010), (364, 10019), (366, 10022), (368, 10028), (369, 10031), (373, 10043), (376, 10049), (383, 10073), (384, 10076), (386, 10085), (389, 10094), (390, 10097), (392, 10103), (397, 10118), (399, 10130), (401, 10136), (405, 10157), (408, 10169), (413, 10184), (416, 10193), (418, 10199), (419, 10202), (420, 10205),

(427, 10223), (428, 10226), (429, 10232), (430, 10235), (436, 10256), (437, 10259), (440, 10268),
(442, 10277), (452, 10313), (470, 10367), (473, 10379), (476, 10388), (477, 10397), (502, 10487),
(505, 10499), (516, 10541), (524, 10586), (527, 10607), (528, 10616), (538, 10649), (540, 10676),
(553, 10718), (557, 10727), (560, 10739), (564, 10751), (567, 10760), (572, 10781), (582, 10814),
(583, 10823), (584, 10826), (585, 10829), (590, 10847), (592, 10850), (594, 10859), (601, 10883),
(606, 10904), (608, 10913), (615, 10946), (619, 10949), (626, 10973), (637, 11012), (641, 11042),
(643, 11048), (645, 11057), (647, 11066), (658, 11108), (661, 11120), (675, 11174), (676, 11177),
(678, 11183), (685, 11252), (688, 11261), (689, 11270),

Gene: P9.1_14 Start: 8505, Stop: 11270, Start Num: 58

Candidate Starts for P9.1_14:

(Start: 58 @8505 has 46 MA's), (63, 8532), (66, 8538), (69, 8550), (71, 8559), (78, 8592), (80, 8595),
(84, 8625), (87, 8640), (89, 8646), (94, 8667), (95, 8670), (104, 8718), (106, 8748), (109, 8784), (113,
8817), (115, 8838), (117, 8859), (120, 8889), (122, 8904), (123, 8922), (124, 8931), (125, 8934), (127,
8952), (133, 9006), (134, 9009), (136, 9024), (139, 9039), (140, 9042), (143, 9054), (147, 9078), (151,
9114), (152, 9123), (153, 9126), (155, 9168), (156, 9180), (161, 9225), (170, 9270), (174, 9291), (180,
9312), (184, 9333), (186, 9345), (189, 9366), (194, 9390), (197, 9402), (202, 9420), (204, 9429), (209,
9441), (214, 9453), (219, 9465), (221, 9474), (225, 9495), (226, 9501), (230, 9516), (231, 9522), (233,
9531), (238, 9552), (245, 9576), (254, 9606), (255, 9612), (257, 9618), (261, 9630), (266, 9648), (274,
9678), (278, 9711), (281, 9720), (285, 9732), (296, 9768), (298, 9777), (304, 9798), (307, 9810), (310,
9819), (314, 9837), (318, 9852), (320, 9861), (323, 9870), (327, 9891), (328, 9894), (330, 9903), (334,
9918), (337, 9924), (339, 9933), (345, 9957), (351, 9978), (353, 9981), (360, 9999), (361, 10002), (364,
10014), (366, 10017), (368, 10023), (369, 10026), (376, 10044), (382, 10065), (384, 10071), (385,
10077), (386, 10080), (389, 10089), (390, 10092), (392, 10098), (397, 10113), (399, 10125), (413,
10179), (416, 10188), (418, 10194), (419, 10197), (420, 10200), (427, 10218), (428, 10221), (429,
10227), (430, 10230), (436, 10251), (437, 10254), (440, 10263), (442, 10272), (452, 10308), (470,
10362), (473, 10374), (476, 10383), (477, 10392), (483, 10407), (502, 10482), (505, 10494), (516,
10536), (524, 10581), (527, 10602), (528, 10611), (538, 10644), (553, 10713), (557, 10722), (564,
10746), (567, 10755), (572, 10776), (582, 10809), (583, 10818), (584, 10821), (585, 10824), (590,
10842), (592, 10845), (594, 10854), (601, 10878), (603, 10887), (604, 10890), (606, 10899), (608,
10908), (615, 10941), (619, 10944), (626, 10968), (637, 11007), (641, 11037), (643, 11043), (645,
11052), (658, 11103), (661, 11115), (675, 11169), (678, 11178), (685, 11247), (688, 11256), (689,
11265),

Gene: PA6_14 Start: 8532, Stop: 11297, Start Num: 58

Candidate Starts for PA6_14:

(Start: 58 @8532 has 46 MA's), (63, 8559), (66, 8565), (69, 8577), (71, 8586), (78, 8619), (80, 8622),
(84, 8652), (87, 8667), (89, 8673), (94, 8694), (95, 8697), (104, 8745), (106, 8775), (108, 8802), (109,
8811), (113, 8844), (117, 8886), (120, 8916), (122, 8931), (123, 8949), (124, 8958), (125, 8961), (127,
8979), (133, 9033), (134, 9036), (136, 9051), (139, 9066), (140, 9069), (143, 9081), (147, 9105), (151,
9141), (152, 9150), (153, 9153), (155, 9195), (156, 9207), (161, 9252), (170, 9297), (174, 9318), (180,
9339), (186, 9372), (187, 9381), (193, 9414), (194, 9417), (197, 9429), (202, 9447), (204, 9456), (209,
9468), (214, 9480), (219, 9492), (221, 9501), (225, 9522), (226, 9528), (230, 9543), (231, 9549), (233,
9558), (238, 9579), (254, 9633), (255, 9639), (257, 9645), (261, 9657), (266, 9675), (274, 9705), (276,
9717), (278, 9738), (281, 9747), (285, 9759), (296, 9795), (298, 9804), (301, 9810), (304, 9825), (307,
9837), (310, 9846), (312, 9855), (317, 9876), (320, 9888), (327, 9918), (330, 9930), (334, 9945), (339,
9960), (351, 10005), (360, 10026), (361, 10029), (362, 10032), (363, 10038), (366, 10044), (376,
10071), (382, 10092), (384, 10098), (385, 10104), (389, 10116), (390, 10119), (393, 10128), (397,
10140), (399, 10152), (402, 10161), (405, 10179), (411, 10200), (413, 10206), (416, 10215), (418,
10221), (419, 10224), (420, 10227), (427, 10245), (429, 10254), (430, 10257), (437, 10281), (442,
10299), (470, 10389), (473, 10401), (476, 10410), (477, 10419), (505, 10521), (510, 10545), (516,
10563), (524, 10608), (527, 10629), (528, 10638), (538, 10671), (540, 10698), (553, 10740), (557,
10749), (560, 10761), (564, 10773), (567, 10782), (572, 10803), (579, 10827), (582, 10836), (584,

10848), (585, 10851), (590, 10869), (592, 10872), (594, 10881), (601, 10905), (604, 10917), (606, 10926), (608, 10935), (626, 10995), (637, 11034), (641, 11064), (643, 11070), (645, 11079), (647, 11088), (653, 11112), (658, 11130), (661, 11142), (675, 11196), (676, 11199), (678, 11205), (685, 11274), (688, 11283), (689, 11292),

Gene: PAD20_14 Start: 8508, Stop: 11273, Start Num: 58

Candidate Starts for PAD20_14:

(Start: 58 @8508 has 46 MA's), (63, 8535), (66, 8541), (69, 8553), (71, 8562), (75, 8586), (77, 8592), (80, 8598), (87, 8643), (89, 8649), (94, 8670), (95, 8673), (104, 8721), (106, 8751), (108, 8778), (109, 8787), (113, 8820), (115, 8841), (117, 8862), (120, 8892), (122, 8907), (123, 8925), (124, 8934), (125, 8937), (127, 8955), (133, 9009), (134, 9012), (136, 9027), (139, 9042), (140, 9045), (143, 9057), (147, 9081), (151, 9117), (152, 9126), (153, 9129), (155, 9171), (156, 9183), (161, 9228), (170, 9273), (174, 9294), (180, 9315), (186, 9348), (187, 9357), (193, 9390), (194, 9393), (197, 9405), (202, 9423), (204, 9432), (209, 9444), (214, 9456), (219, 9468), (221, 9477), (225, 9498), (226, 9504), (230, 9519), (231, 9525), (233, 9534), (238, 9555), (254, 9609), (255, 9615), (257, 9621), (266, 9651), (274, 9681), (278, 9714), (281, 9723), (285, 9735), (296, 9771), (298, 9780), (301, 9786), (307, 9813), (310, 9822), (312, 9831), (314, 9840), (323, 9873), (327, 9894), (333, 9918), (334, 9921), (337, 9927), (339, 9936), (345, 9960), (353, 9984), (357, 9993), (360, 10002), (361, 10005), (364, 10017), (366, 10020), (368, 10026), (369, 10029), (376, 10047), (382, 10068), (384, 10074), (385, 10080), (386, 10083), (388, 10089), (389, 10092), (390, 10095), (392, 10101), (397, 10116), (399, 10128), (401, 10134), (405, 10155), (408, 10167), (409, 10170), (411, 10176), (416, 10191), (418, 10197), (419, 10200), (420, 10203), (427, 10221), (429, 10230), (430, 10233), (436, 10254), (439, 10263), (440, 10266), (442, 10275), (452, 10311), (473, 10377), (476, 10386), (477, 10395), (502, 10485), (505, 10497), (510, 10521), (516, 10539), (524, 10584), (527, 10605), (528, 10614), (538, 10647), (540, 10674), (553, 10716), (557, 10725), (560, 10737), (564, 10749), (567, 10758), (572, 10779), (582, 10812), (583, 10821), (584, 10824), (585, 10827), (590, 10845), (592, 10848), (594, 10857), (601, 10881), (604, 10893), (606, 10902), (608, 10911), (615, 10944), (619, 10947), (626, 10971), (637, 11010), (641, 11040), (643, 11046), (645, 11055), (647, 11064), (658, 11106), (661, 11118), (675, 11172), (676, 11175), (678, 11181), (685, 11250), (688, 11259), (689, 11268),

Gene: PAS50_14 Start: 8517, Stop: 11282, Start Num: 58

Candidate Starts for PAS50_14:

(26, 8298), (30, 8316), (34, 8373), (38, 8409), (42, 8448), (45, 8460), (47, 8466), (48, 8472), (Start: 58 @8517 has 46 MA's), (63, 8544), (66, 8550), (71, 8571), (80, 8607), (87, 8652), (89, 8658), (94, 8679), (95, 8682), (104, 8730), (106, 8760), (109, 8796), (113, 8829), (117, 8871), (120, 8901), (122, 8916), (123, 8934), (124, 8943), (125, 8946), (127, 8964), (134, 9021), (136, 9036), (139, 9051), (140, 9054), (143, 9066), (145, 9081), (147, 9090), (151, 9126), (152, 9135), (153, 9138), (155, 9180), (156, 9192), (161, 9237), (168, 9267), (170, 9282), (174, 9303), (180, 9324), (186, 9357), (187, 9366), (193, 9399), (194, 9402), (197, 9414), (202, 9432), (204, 9441), (209, 9453), (214, 9465), (221, 9486), (225, 9507), (226, 9513), (230, 9528), (231, 9534), (233, 9543), (238, 9564), (245, 9588), (254, 9618), (255, 9624), (257, 9630), (261, 9642), (266, 9660), (274, 9690), (276, 9702), (278, 9723), (281, 9732), (285, 9744), (296, 9780), (298, 9789), (304, 9810), (307, 9822), (317, 9861), (320, 9873), (323, 9882), (327, 9903), (330, 9915), (334, 9930), (339, 9945), (351, 9990), (360, 10011), (361, 10014), (363, 10023), (366, 10029), (376, 10056), (382, 10077), (384, 10083), (385, 10089), (386, 10092), (388, 10098), (389, 10101), (390, 10104), (393, 10113), (397, 10125), (399, 10137), (402, 10146), (405, 10164), (411, 10185), (413, 10191), (416, 10200), (418, 10206), (419, 10209), (420, 10212), (427, 10230), (429, 10239), (430, 10242), (437, 10266), (442, 10284), (470, 10374), (473, 10386), (476, 10395), (477, 10404), (502, 10494), (505, 10506), (510, 10530), (516, 10548), (524, 10593), (527, 10614), (528, 10623), (538, 10656), (540, 10683), (553, 10725), (557, 10734), (560, 10746), (564, 10758), (567, 10767), (582, 10821), (583, 10830), (584, 10833), (585, 10836), (590, 10854), (592, 10857), (594, 10866), (601, 10890), (604, 10902), (606, 10911), (608, 10920), (615, 10953), (619, 10956), (626, 10980), (637, 11019), (641, 11049), (643, 11055), (645, 11064), (647, 11073), (652, 11094), (653, 11097), (658, 11115), (661, 11127), (675, 11181), (676, 11184), (685, 11259), (688, 11268), (689,

11277),

Gene: PHL010M04_14 Start: 8505, Stop: 11270, Start Num: 58

Candidate Starts for PHL010M04_14:

(Start: 58 @8505 has 46 MA's), (63, 8532), (66, 8538), (69, 8550), (71, 8559), (75, 8583), (78, 8592), (80, 8595), (87, 8640), (89, 8646), (90, 8652), (94, 8667), (95, 8670), (104, 8718), (106, 8748), (109, 8784), (113, 8817), (120, 8889), (122, 8904), (123, 8922), (124, 8931), (125, 8934), (127, 8952), (134, 9009), (139, 9039), (140, 9042), (143, 9054), (145, 9069), (146, 9072), (147, 9078), (151, 9114), (152, 9123), (153, 9126), (155, 9168), (156, 9180), (161, 9225), (164, 9246), (170, 9270), (172, 9282), (174, 9291), (180, 9312), (186, 9345), (189, 9366), (193, 9387), (194, 9390), (197, 9402), (202, 9420), (204, 9429), (209, 9441), (214, 9453), (219, 9465), (221, 9474), (225, 9495), (226, 9501), (230, 9516), (231, 9522), (233, 9531), (238, 9552), (241, 9564), (245, 9576), (254, 9606), (255, 9612), (257, 9618), (259, 9627), (261, 9630), (266, 9648), (274, 9678), (278, 9711), (281, 9720), (285, 9732), (295, 9765), (296, 9768), (298, 9777), (304, 9798), (307, 9810), (310, 9819), (314, 9837), (318, 9852), (320, 9861), (323, 9870), (327, 9891), (328, 9894), (330, 9903), (334, 9918), (337, 9924), (339, 9933), (345, 9957), (353, 9981), (360, 9999), (366, 10017), (368, 10023), (369, 10026), (373, 10038), (376, 10044), (382, 10065), (384, 10071), (386, 10080), (389, 10089), (390, 10092), (392, 10098), (397, 10113), (398, 10122), (399, 10125), (405, 10152), (413, 10179), (416, 10188), (419, 10197), (420, 10200), (427, 10218), (429, 10227), (430, 10230), (436, 10251), (442, 10272), (452, 10308), (470, 10362), (473, 10374), (476, 10383), (477, 10392), (502, 10482), (505, 10494), (512, 10524), (524, 10581), (526, 10599), (527, 10602), (528, 10611), (538, 10644), (553, 10713), (557, 10722), (560, 10734), (564, 10746), (567, 10755), (568, 10758), (582, 10809), (583, 10818), (584, 10821), (585, 10824), (590, 10842), (601, 10878), (606, 10899), (608, 10908), (611, 10920), (615, 10941), (619, 10944), (626, 10968), (637, 11007), (641, 11037), (643, 11043), (645, 11052), (647, 11061), (653, 11085), (658, 11103), (661, 11115), (675, 11169), (676, 11172), (685, 11247), (688, 11256), (689, 11265),

Gene: PHL037M02_14 Start: 8521, Stop: 11286, Start Num: 58

Candidate Starts for PHL037M02_14:

(Start: 58 @8521 has 46 MA's), (63, 8548), (66, 8554), (69, 8566), (80, 8611), (87, 8656), (89, 8662), (94, 8683), (95, 8686), (104, 8734), (106, 8764), (109, 8800), (113, 8833), (115, 8854), (117, 8875), (120, 8905), (122, 8920), (123, 8938), (124, 8947), (125, 8950), (127, 8968), (133, 9022), (134, 9025), (136, 9040), (139, 9055), (140, 9058), (143, 9070), (145, 9085), (147, 9094), (151, 9130), (152, 9139), (153, 9142), (155, 9184), (156, 9196), (161, 9241), (164, 9262), (170, 9286), (174, 9307), (180, 9328), (186, 9361), (187, 9370), (193, 9403), (194, 9406), (197, 9418), (202, 9436), (204, 9445), (209, 9457), (214, 9469), (219, 9481), (225, 9511), (226, 9517), (230, 9532), (231, 9538), (233, 9547), (238, 9568), (241, 9580), (245, 9592), (254, 9622), (255, 9628), (257, 9634), (266, 9664), (274, 9694), (278, 9727), (281, 9736), (285, 9748), (295, 9781), (296, 9784), (298, 9793), (301, 9799), (302, 9802), (304, 9814), (307, 9826), (312, 9844), (315, 9856), (318, 9868), (320, 9877), (323, 9886), (327, 9907), (330, 9919), (334, 9934), (337, 9940), (339, 9949), (345, 9973), (353, 9997), (360, 10015), (361, 10018), (362, 10021), (364, 10030), (366, 10033), (368, 10039), (373, 10054), (376, 10060), (383, 10084), (384, 10087), (386, 10096), (388, 10102), (389, 10105), (390, 10108), (392, 10114), (397, 10129), (398, 10138), (399, 10141), (401, 10147), (402, 10150), (405, 10168), (413, 10195), (416, 10204), (419, 10213), (420, 10216), (427, 10234), (428, 10237), (429, 10243), (436, 10267), (437, 10270), (442, 10288), (449, 10312), (452, 10324), (470, 10378), (473, 10390), (476, 10399), (477, 10408), (502, 10498), (510, 10534), (516, 10552), (524, 10597), (526, 10615), (527, 10618), (528, 10627), (538, 10660), (540, 10687), (553, 10729), (557, 10738), (560, 10750), (564, 10762), (582, 10825), (584, 10837), (585, 10840), (590, 10858), (592, 10861), (594, 10870), (601, 10894), (606, 10915), (608, 10924), (611, 10936), (615, 10957), (619, 10960), (626, 10984), (637, 11023), (641, 11053), (643, 11059), (645, 11068), (653, 11101), (658, 11119), (661, 11131), (675, 11185), (676, 11188), (678, 11194), (685, 11263), (688, 11272), (689, 11281),

Gene: PHL060L00_14 Start: 8521, Stop: 11286, Start Num: 58

Candidate Starts for PHL060L00_14:

(Start: 58 @8521 has 46 MA's), (63, 8548), (66, 8554), (69, 8566), (75, 8599), (78, 8608), (80, 8611), (84, 8641), (87, 8656), (89, 8662), (94, 8683), (95, 8686), (104, 8734), (106, 8764), (109, 8800), (113, 8833), (115, 8854), (117, 8875), (120, 8905), (122, 8920), (123, 8938), (124, 8947), (125, 8950), (127, 8968), (134, 9025), (136, 9040), (139, 9055), (140, 9058), (143, 9070), (145, 9085), (148, 9097), (151, 9130), (152, 9139), (153, 9142), (155, 9184), (156, 9196), (161, 9241), (168, 9271), (170, 9286), (172, 9298), (180, 9328), (186, 9361), (187, 9370), (189, 9382), (193, 9403), (194, 9406), (197, 9418), (202, 9436), (204, 9445), (209, 9457), (214, 9469), (221, 9490), (226, 9517), (230, 9532), (231, 9538), (233, 9547), (238, 9568), (254, 9622), (255, 9628), (257, 9634), (261, 9646), (266, 9664), (274, 9694), (278, 9727), (281, 9736), (285, 9748), (295, 9781), (296, 9784), (298, 9793), (304, 9814), (307, 9826), (310, 9835), (317, 9865), (320, 9877), (323, 9886), (327, 9907), (330, 9919), (334, 9934), (339, 9949), (343, 9967), (351, 9994), (360, 10015), (361, 10018), (362, 10021), (363, 10027), (366, 10033), (376, 10060), (382, 10081), (384, 10087), (385, 10093), (389, 10105), (390, 10108), (393, 10117), (397, 10129), (399, 10141), (402, 10150), (405, 10168), (411, 10189), (413, 10195), (416, 10204), (418, 10210), (419, 10213), (420, 10216), (427, 10234), (429, 10243), (430, 10246), (437, 10270), (442, 10288), (470, 10378), (473, 10390), (476, 10399), (477, 10408), (494, 10465), (505, 10510), (510, 10534), (516, 10552), (524, 10597), (527, 10618), (528, 10627), (538, 10660), (540, 10687), (553, 10729), (557, 10738), (560, 10750), (564, 10762), (567, 10771), (572, 10792), (579, 10816), (582, 10825), (584, 10837), (585, 10840), (590, 10858), (592, 10861), (594, 10870), (601, 10894), (606, 10915), (608, 10924), (615, 10957), (619, 10960), (626, 10984), (637, 11023), (641, 11053), (643, 11059), (645, 11068), (647, 11077), (658, 11119), (661, 11131), (675, 11185), (676, 11188), (678, 11194), (685, 11263), (688, 11272), (689, 11281),

Gene: PHL067M10_14 Start: 8488, Stop: 11253, Start Num: 58

Candidate Starts for PHL067M10_14:

(Start: 58 @8488 has 46 MA's), (63, 8515), (66, 8521), (69, 8533), (71, 8542), (78, 8575), (80, 8578), (87, 8623), (90, 8635), (94, 8650), (95, 8653), (104, 8701), (106, 8731), (108, 8758), (109, 8767), (113, 8800), (115, 8821), (117, 8842), (120, 8872), (122, 8887), (123, 8905), (124, 8914), (125, 8917), (127, 8935), (133, 8989), (134, 8992), (136, 9007), (139, 9022), (140, 9025), (143, 9037), (147, 9061), (151, 9097), (152, 9106), (153, 9109), (155, 9151), (156, 9163), (161, 9208), (170, 9253), (180, 9295), (184, 9316), (186, 9328), (187, 9337), (193, 9370), (194, 9373), (197, 9385), (202, 9403), (204, 9412), (209, 9424), (214, 9436), (221, 9457), (225, 9478), (226, 9484), (230, 9499), (231, 9505), (233, 9514), (238, 9535), (254, 9589), (255, 9595), (257, 9601), (266, 9631), (274, 9661), (276, 9673), (278, 9694), (281, 9703), (285, 9715), (295, 9748), (296, 9751), (298, 9760), (301, 9766), (307, 9793), (310, 9802), (313, 9814), (314, 9820), (318, 9835), (320, 9844), (323, 9853), (327, 9874), (330, 9886), (334, 9901), (337, 9907), (339, 9916), (345, 9940), (353, 9964), (360, 9982), (361, 9985), (362, 9988), (364, 9997), (366, 10000), (368, 10006), (369, 10009), (373, 10021), (376, 10027), (382, 10048), (384, 10054), (385, 10060), (386, 10063), (389, 10072), (390, 10075), (397, 10096), (399, 10108), (413, 10162), (416, 10171), (418, 10177), (419, 10180), (429, 10210), (430, 10213), (436, 10234), (439, 10243), (440, 10246), (442, 10255), (452, 10291), (457, 10300), (470, 10345), (473, 10357), (476, 10366), (477, 10375), (494, 10432), (502, 10465), (510, 10501), (516, 10519), (524, 10564), (526, 10582), (527, 10585), (528, 10594), (538, 10627), (553, 10696), (557, 10705), (560, 10717), (567, 10738), (579, 10783), (582, 10792), (583, 10801), (584, 10804), (585, 10807), (590, 10825), (592, 10828), (594, 10837), (601, 10861), (604, 10873), (606, 10882), (608, 10891), (615, 10924), (619, 10927), (626, 10951), (637, 10990), (641, 11020), (643, 11026), (645, 11035), (658, 11086), (661, 11098), (675, 11152), (676, 11155), (678, 11161), (685, 11230), (688, 11239), (689, 11248),

Gene: PHL071N05_14 Start: 8516, Stop: 11281, Start Num: 58

Candidate Starts for PHL071N05_14:

(Start: 58 @8516 has 46 MA's), (63, 8543), (66, 8549), (69, 8561), (71, 8570), (75, 8594), (80, 8606), (87, 8651), (89, 8657), (94, 8678), (95, 8681), (104, 8729), (106, 8759), (109, 8795), (113, 8828), (115, 8849), (117, 8870), (120, 8900), (122, 8915), (123, 8933), (124, 8942), (125, 8945), (127, 8963), (133, 9017), (134, 9020), (136, 9035), (139, 9050), (140, 9053), (143, 9065), (145, 9080), (147, 9089), (151, 9125), (152, 9134), (153, 9137), (155, 9179), (156, 9191), (161, 9236), (164, 9257), (170, 9281), (180,

9323), (186, 9356), (187, 9365), (189, 9377), (193, 9398), (194, 9401), (197, 9413), (202, 9431), (204, 9440), (209, 9452), (214, 9464), (219, 9476), (221, 9485), (225, 9506), (226, 9512), (230, 9527), (231, 9533), (233, 9542), (238, 9563), (257, 9629), (266, 9659), (274, 9689), (278, 9722), (281, 9731), (285, 9743), (296, 9779), (298, 9788), (301, 9794), (304, 9809), (307, 9821), (310, 9830), (314, 9848), (318, 9863), (320, 9872), (327, 9902), (330, 9914), (334, 9929), (337, 9935), (339, 9944), (345, 9968), (353, 9992), (360, 10010), (361, 10013), (362, 10016), (364, 10025), (366, 10028), (376, 10055), (383, 10079), (384, 10082), (386, 10091), (389, 10100), (390, 10103), (392, 10109), (397, 10124), (399, 10136), (401, 10142), (408, 10175), (413, 10190), (416, 10199), (418, 10205), (419, 10208), (420, 10211), (427, 10229), (429, 10238), (430, 10241), (436, 10262), (437, 10265), (440, 10274), (442, 10283), (452, 10319), (470, 10373), (473, 10385), (476, 10394), (477, 10403), (498, 10478), (502, 10493), (505, 10505), (516, 10547), (524, 10592), (526, 10610), (527, 10613), (528, 10622), (538, 10655), (540, 10682), (553, 10724), (557, 10733), (560, 10745), (564, 10757), (567, 10766), (572, 10787), (582, 10820), (583, 10829), (584, 10832), (585, 10835), (590, 10853), (592, 10856), (594, 10865), (601, 10889), (603, 10898), (604, 10901), (606, 10910), (608, 10919), (615, 10952), (619, 10955), (626, 10979), (637, 11018), (641, 11048), (643, 11054), (645, 11063), (647, 11072), (653, 11096), (658, 11114), (661, 11126), (675, 11180), (676, 11183), (678, 11189), (685, 11258), (688, 11267), (689, 11276),

Gene: PHL111M01_14 Start: 8506, Stop: 11271, Start Num: 58

Candidate Starts for PHL111M01_14:

(Start: 58 @8506 has 46 MA's), (63, 8533), (66, 8539), (69, 8551), (71, 8560), (78, 8593), (80, 8596), (84, 8626), (87, 8641), (89, 8647), (94, 8668), (95, 8671), (104, 8719), (106, 8749), (109, 8785), (113, 8818), (115, 8839), (117, 8860), (120, 8890), (122, 8905), (123, 8923), (124, 8932), (125, 8935), (127, 8953), (133, 9007), (134, 9010), (136, 9025), (139, 9040), (140, 9043), (143, 9055), (147, 9079), (151, 9115), (152, 9124), (153, 9127), (155, 9169), (156, 9181), (161, 9226), (170, 9271), (174, 9292), (180, 9313), (186, 9346), (187, 9355), (193, 9388), (194, 9391), (197, 9403), (202, 9421), (204, 9430), (209, 9442), (214, 9454), (219, 9466), (221, 9475), (225, 9496), (226, 9502), (230, 9517), (231, 9523), (233, 9532), (238, 9553), (245, 9577), (254, 9607), (255, 9613), (257, 9619), (259, 9628), (261, 9631), (266, 9649), (274, 9679), (278, 9712), (285, 9733), (295, 9766), (296, 9769), (298, 9778), (301, 9784), (302, 9787), (304, 9799), (307, 9811), (318, 9853), (320, 9862), (327, 9892), (328, 9895), (330, 9904), (334, 9919), (337, 9925), (339, 9934), (345, 9958), (351, 9979), (353, 9982), (360, 10000), (361, 10003), (364, 10015), (366, 10018), (368, 10024), (369, 10027), (376, 10045), (382, 10066), (384, 10072), (385, 10078), (386, 10081), (389, 10090), (390, 10093), (392, 10099), (397, 10114), (399, 10126), (401, 10132), (411, 10174), (413, 10180), (416, 10189), (418, 10195), (419, 10198), (420, 10201), (427, 10219), (429, 10228), (430, 10231), (437, 10255), (442, 10273), (470, 10363), (473, 10375), (476, 10384), (477, 10393), (505, 10495), (510, 10519), (516, 10537), (524, 10582), (527, 10603), (528, 10612), (538, 10645), (540, 10672), (553, 10714), (557, 10723), (560, 10735), (564, 10747), (567, 10756), (572, 10777), (582, 10810), (584, 10822), (585, 10825), (590, 10843), (592, 10846), (594, 10855), (601, 10879), (603, 10888), (604, 10891), (606, 10900), (608, 10909), (615, 10942), (619, 10945), (626, 10969), (637, 11008), (641, 11038), (643, 11044), (647, 11062), (658, 11104), (661, 11116), (675, 11170), (676, 11173), (678, 11179), (685, 11248), (688, 11257), (689, 11266),

Gene: PHL112N00_14 Start: 8502, Stop: 11267, Start Num: 58

Candidate Starts for PHL112N00_14:

(Start: 58 @8502 has 46 MA's), (63, 8529), (66, 8535), (69, 8547), (71, 8556), (78, 8589), (80, 8592), (87, 8637), (89, 8643), (90, 8649), (94, 8664), (95, 8667), (104, 8715), (106, 8745), (108, 8772), (109, 8781), (113, 8814), (115, 8835), (117, 8856), (120, 8886), (122, 8901), (123, 8919), (124, 8928), (125, 8931), (127, 8949), (133, 9003), (134, 9006), (136, 9021), (139, 9036), (140, 9039), (143, 9051), (145, 9066), (147, 9075), (151, 9111), (152, 9120), (153, 9123), (155, 9165), (156, 9177), (161, 9222), (170, 9267), (180, 9309), (184, 9330), (186, 9342), (187, 9351), (193, 9384), (194, 9387), (197, 9399), (202, 9417), (204, 9426), (209, 9438), (214, 9450), (219, 9462), (221, 9471), (226, 9498), (230, 9513), (231, 9519), (233, 9528), (238, 9549), (243, 9567), (245, 9573), (254, 9603), (255, 9609), (257, 9615), (261, 9627), (266, 9645), (274, 9675), (278, 9708), (281, 9717), (285, 9729), (295, 9762), (296, 9765), (298,

9774), (304, 9795), (307, 9807), (317, 9846), (320, 9858), (327, 9888), (330, 9900), (334, 9915), (339, 9930), (351, 9975), (360, 9996), (361, 9999), (362, 10002), (363, 10008), (366, 10014), (376, 10041), (382, 10062), (384, 10068), (385, 10074), (386, 10077), (389, 10086), (390, 10089), (392, 10095), (397, 10110), (399, 10122), (402, 10131), (405, 10149), (411, 10170), (413, 10176), (416, 10185), (418, 10191), (419, 10194), (420, 10197), (427, 10215), (429, 10224), (430, 10227), (437, 10251), (442, 10269), (470, 10359), (473, 10371), (476, 10380), (477, 10389), (502, 10479), (505, 10491), (516, 10533), (524, 10578), (527, 10599), (528, 10608), (538, 10641), (540, 10668), (553, 10710), (557, 10719), (560, 10731), (564, 10743), (567, 10752), (572, 10773), (582, 10806), (583, 10815), (584, 10818), (585, 10821), (590, 10839), (592, 10842), (594, 10851), (601, 10875), (604, 10887), (606, 10896), (608, 10905), (619, 10941), (626, 10965), (637, 11004), (641, 11034), (643, 11040), (645, 11049), (647, 11058), (658, 11100), (661, 11112), (675, 11166), (676, 11169), (678, 11175), (685, 11244), (688, 11253), (689, 11262),

Gene: PHL113M01_14 Start: 8530, Stop: 11295, Start Num: 58

Candidate Starts for PHL113M01_14:

(Start: 58 @8530 has 46 MA's), (63, 8557), (66, 8563), (69, 8575), (71, 8584), (78, 8617), (80, 8620), (87, 8665), (89, 8671), (94, 8692), (95, 8695), (104, 8743), (106, 8773), (108, 8800), (109, 8809), (113, 8842), (115, 8863), (117, 8884), (122, 8929), (123, 8947), (124, 8956), (125, 8959), (127, 8977), (133, 9031), (134, 9034), (136, 9049), (139, 9064), (140, 9067), (143, 9079), (147, 9103), (151, 9139), (152, 9148), (153, 9151), (155, 9193), (156, 9205), (161, 9250), (164, 9271), (170, 9295), (174, 9316), (180, 9337), (186, 9370), (187, 9379), (193, 9412), (194, 9415), (197, 9427), (202, 9445), (204, 9454), (209, 9466), (214, 9478), (219, 9490), (221, 9499), (225, 9520), (226, 9526), (230, 9541), (231, 9547), (233, 9556), (238, 9577), (254, 9631), (255, 9637), (257, 9643), (259, 9652), (261, 9655), (266, 9673), (274, 9703), (276, 9715), (278, 9736), (281, 9745), (285, 9757), (295, 9790), (296, 9793), (298, 9802), (304, 9823), (307, 9835), (317, 9874), (320, 9886), (323, 9895), (327, 9916), (330, 9928), (334, 9943), (339, 9958), (351, 10003), (360, 10024), (361, 10027), (362, 10030), (363, 10036), (366, 10042), (376, 10069), (384, 10096), (385, 10102), (389, 10114), (390, 10117), (393, 10126), (397, 10138), (399, 10150), (402, 10159), (405, 10177), (411, 10198), (413, 10204), (416, 10213), (418, 10219), (419, 10222), (420, 10225), (427, 10243), (429, 10252), (430, 10255), (437, 10279), (442, 10297), (470, 10387), (473, 10399), (476, 10408), (477, 10417), (505, 10519), (510, 10543), (516, 10561), (524, 10606), (527, 10627), (528, 10636), (538, 10669), (540, 10696), (553, 10738), (557, 10747), (560, 10759), (564, 10771), (567, 10780), (582, 10834), (583, 10843), (584, 10846), (585, 10849), (590, 10867), (592, 10870), (594, 10879), (601, 10903), (606, 10924), (608, 10933), (619, 10969), (626, 10993), (637, 11032), (641, 11062), (643, 11068), (645, 11077), (647, 11086), (653, 11110), (658, 11128), (661, 11140), (675, 11194), (676, 11197), (685, 11272), (688, 11281), (689, 11290),

Gene: PHL114L00_14 Start: 8508, Stop: 11273, Start Num: 58

Candidate Starts for PHL114L00_14:

(Start: 58 @8508 has 46 MA's), (63, 8535), (66, 8541), (69, 8553), (71, 8562), (80, 8598), (84, 8628), (87, 8643), (89, 8649), (94, 8670), (95, 8673), (104, 8721), (106, 8751), (109, 8787), (113, 8820), (115, 8841), (117, 8862), (120, 8892), (122, 8907), (123, 8925), (124, 8934), (125, 8937), (127, 8955), (134, 9012), (136, 9027), (139, 9042), (140, 9045), (143, 9057), (144, 9066), (145, 9072), (146, 9075), (148, 9084), (151, 9117), (152, 9126), (153, 9129), (155, 9171), (156, 9183), (161, 9228), (170, 9273), (174, 9294), (180, 9315), (186, 9348), (187, 9357), (189, 9369), (193, 9390), (194, 9393), (197, 9405), (202, 9423), (204, 9432), (209, 9444), (214, 9456), (221, 9477), (225, 9498), (230, 9519), (231, 9525), (233, 9534), (238, 9555), (245, 9579), (254, 9609), (255, 9615), (257, 9621), (261, 9633), (266, 9651), (274, 9681), (278, 9714), (281, 9723), (285, 9735), (296, 9771), (298, 9780), (307, 9813), (310, 9822), (314, 9840), (318, 9855), (320, 9864), (327, 9894), (330, 9906), (334, 9921), (337, 9927), (339, 9936), (345, 9960), (353, 9984), (360, 10002), (366, 10020), (368, 10026), (369, 10029), (372, 10038), (373, 10041), (376, 10047), (382, 10068), (384, 10074), (386, 10083), (388, 10089), (389, 10092), (390, 10095), (392, 10101), (397, 10116), (399, 10128), (405, 10155), (411, 10176), (413, 10182), (416, 10191), (420, 10203), (427, 10221), (428, 10224), (429, 10230), (430, 10233), (434, 10245), (436, 10254), (437, 10257), (440, 10266), (442, 10275), (452, 10311), (470, 10365), (472, 10374), (473,

10377), (476, 10386), (477, 10395), (505, 10497), (516, 10539), (524, 10584), (526, 10602), (527, 10605), (528, 10614), (538, 10647), (550, 10701), (553, 10716), (557, 10725), (560, 10737), (564, 10749), (567, 10758), (582, 10812), (584, 10824), (585, 10827), (590, 10845), (592, 10848), (594, 10857), (601, 10881), (603, 10890), (604, 10893), (606, 10902), (608, 10911), (611, 10923), (615, 10944), (619, 10947), (626, 10971), (637, 11010), (641, 11040), (643, 11046), (645, 11055), (647, 11064), (658, 11106), (661, 11118), (672, 11154), (675, 11172), (676, 11175), (678, 11181), (685, 11250), (688, 11259), (689, 11268),

Gene: Pirate_14 Start: 8499, Stop: 11264, Start Num: 58

Candidate Starts for Pirate_14:

(Start: 58 @8499 has 46 MA's), (63, 8526), (66, 8532), (69, 8544), (71, 8553), (80, 8589), (87, 8634), (89, 8640), (94, 8661), (95, 8664), (104, 8712), (106, 8742), (109, 8778), (113, 8811), (115, 8832), (117, 8853), (120, 8883), (122, 8898), (123, 8916), (124, 8925), (125, 8928), (127, 8946), (134, 9003), (136, 9018), (139, 9033), (140, 9036), (143, 9048), (145, 9063), (147, 9072), (151, 9108), (152, 9117), (153, 9120), (155, 9162), (156, 9174), (161, 9219), (170, 9264), (174, 9285), (180, 9306), (186, 9339), (187, 9348), (193, 9381), (194, 9384), (197, 9396), (202, 9414), (204, 9423), (209, 9435), (214, 9447), (219, 9459), (225, 9489), (226, 9495), (230, 9510), (231, 9516), (233, 9525), (238, 9546), (254, 9600), (255, 9606), (257, 9612), (266, 9642), (274, 9672), (278, 9705), (281, 9714), (285, 9726), (295, 9759), (296, 9762), (298, 9771), (301, 9777), (302, 9780), (304, 9792), (307, 9804), (312, 9822), (315, 9834), (318, 9846), (320, 9855), (323, 9864), (327, 9885), (330, 9897), (334, 9912), (337, 9918), (339, 9927), (343, 9945), (345, 9951), (353, 9975), (360, 9993), (361, 9996), (362, 9999), (364, 10008), (366, 10011), (368, 10017), (373, 10032), (376, 10038), (383, 10062), (384, 10065), (386, 10074), (388, 10080), (389, 10083), (390, 10086), (392, 10092), (397, 10107), (399, 10119), (402, 10128), (413, 10173), (416, 10182), (418, 10188), (419, 10191), (420, 10194), (427, 10212), (428, 10215), (429, 10221), (430, 10224), (436, 10245), (437, 10248), (442, 10266), (452, 10302), (470, 10356), (473, 10368), (476, 10377), (477, 10386), (502, 10476), (505, 10488), (510, 10512), (512, 10518), (524, 10575), (527, 10596), (528, 10605), (538, 10638), (540, 10665), (553, 10707), (557, 10716), (560, 10728), (564, 10740), (567, 10749), (582, 10803), (583, 10812), (584, 10815), (585, 10818), (590, 10836), (592, 10839), (594, 10848), (601, 10872), (606, 10893), (608, 10902), (611, 10914), (615, 10935), (619, 10938), (626, 10962), (633, 10989), (637, 11001), (641, 11031), (643, 11037), (645, 11046), (647, 11055), (653, 11079), (658, 11097), (661, 11109), (672, 11145), (675, 11163), (676, 11166), (685, 11241), (688, 11250), (689, 11259),

Gene: PrincessTrina_22 Start: 15724, Stop: 19266, Start Num: 18

Candidate Starts for PrincessTrina_22:

(Start: 18 @15724 has 12 MA's), (Start: 19 @15730 has 7 MA's), (20, 15751), (21, 15754), (31, 15835), (35, 15880), (39, 15913), (41, 15931), (46, 15964), (52, 15994), (59, 16021), (61, 16033), (86, 16150), (91, 16174), (99, 16225), (100, 16228), (111, 16333), (113, 16345), (121, 16420), (123, 16450), (126, 16471), (129, 16513), (150, 16621), (152, 16651), (155, 16696), (156, 16708), (161, 16753), (162, 16762), (175, 16822), (184, 16861), (226, 17041), (229, 17053), (231, 17062), (236, 17095), (238, 17101), (239, 17104), (251, 17155), (253, 17161), (254, 17167), (258, 17191), (265, 17218), (268, 17233), (271, 17245), (286, 17326), (287, 17329), (293, 17350), (297, 17368), (298, 17371), (304, 17392), (311, 17416), (316, 17437), (318, 17446), (319, 17449), (328, 17488), (334, 17512), (345, 17551), (347, 17566), (367, 17623), (376, 17647), (379, 17656), (380, 17662), (391, 17698), (404, 17746), (405, 17755), (417, 17797), (422, 17809), (437, 17866), (442, 17884), (447, 17899), (448, 17905), (497, 18001), (504, 18028), (508, 18049), (524, 18118), (527, 18139), (531, 18160), (548, 18238), (590, 18271), (592, 18274), (597, 18298), (614, 18367), (622, 18403), (624, 18406), (625, 18409), (629, 18424), (640, 18472), (647, 18508), (648, 18511), (664, 18574), (688, 18706), (700, 18772), (706, 18814), (713, 18853), (724, 18898), (732, 18967), (735, 18988), (742, 19033), (753, 19096), (764, 19135), (767, 19150), (781, 19201), (784, 19213),

Gene: Procrass1_14 Start: 8513, Stop: 11278, Start Num: 58

Candidate Starts for Procrass1_14:

(Start: 58 @8513 has 46 MA's), (63, 8540), (66, 8546), (69, 8558), (71, 8567), (78, 8600), (80, 8603), (87, 8648), (89, 8654), (90, 8660), (94, 8675), (95, 8678), (104, 8726), (106, 8756), (108, 8783), (109, 8792), (113, 8825), (115, 8846), (117, 8867), (120, 8897), (122, 8912), (123, 8930), (124, 8939), (125, 8942), (127, 8960), (133, 9014), (134, 9017), (136, 9032), (139, 9047), (140, 9050), (143, 9062), (147, 9086), (151, 9122), (152, 9131), (153, 9134), (155, 9176), (156, 9188), (161, 9233), (164, 9254), (170, 9278), (174, 9299), (180, 9320), (184, 9341), (186, 9353), (187, 9362), (189, 9374), (193, 9395), (194, 9398), (197, 9410), (202, 9428), (204, 9437), (209, 9449), (214, 9461), (219, 9473), (225, 9503), (226, 9509), (230, 9524), (231, 9530), (233, 9539), (238, 9560), (245, 9584), (254, 9614), (255, 9620), (257, 9626), (261, 9638), (266, 9656), (274, 9686), (278, 9719), (281, 9728), (285, 9740), (296, 9776), (298, 9785), (304, 9806), (307, 9818), (317, 9857), (320, 9869), (327, 9899), (330, 9911), (334, 9926), (339, 9941), (351, 9986), (360, 10007), (361, 10010), (362, 10013), (363, 10019), (366, 10025), (376, 10052), (382, 10073), (384, 10079), (385, 10085), (389, 10097), (390, 10100), (393, 10109), (397, 10121), (399, 10133), (402, 10142), (405, 10160), (408, 10172), (411, 10181), (413, 10187), (416, 10196), (418, 10202), (419, 10205), (420, 10208), (427, 10226), (429, 10235), (430, 10238), (437, 10262), (442, 10280), (470, 10370), (473, 10382), (476, 10391), (477, 10400), (502, 10490), (505, 10502), (516, 10544), (524, 10589), (527, 10610), (528, 10619), (538, 10652), (540, 10679), (553, 10721), (557, 10730), (560, 10742), (564, 10754), (567, 10763), (572, 10784), (582, 10817), (583, 10826), (584, 10829), (585, 10832), (590, 10850), (592, 10853), (594, 10862), (601, 10886), (604, 10898), (606, 10907), (608, 10916), (615, 10949), (619, 10952), (626, 10976), (637, 11015), (641, 11045), (643, 11051), (645, 11060), (647, 11069), (658, 11111), (661, 11123), (675, 11177), (676, 11180), (678, 11186), (685, 11255), (688, 11264), (689, 11273),

Gene: QueenBey_14 Start: 8507, Stop: 11272, Start Num: 58

Candidate Starts for QueenBey_14:

(Start: 58 @8507 has 46 MA's), (63, 8534), (66, 8540), (69, 8552), (71, 8561), (80, 8597), (87, 8642), (89, 8648), (90, 8654), (94, 8669), (95, 8672), (104, 8720), (106, 8750), (108, 8777), (109, 8786), (113, 8819), (115, 8840), (117, 8861), (120, 8891), (122, 8906), (123, 8924), (124, 8933), (125, 8936), (127, 8954), (134, 9011), (136, 9026), (139, 9041), (140, 9044), (143, 9056), (147, 9080), (151, 9116), (152, 9125), (153, 9128), (155, 9170), (156, 9182), (161, 9227), (170, 9272), (180, 9314), (187, 9356), (189, 9368), (193, 9389), (194, 9392), (197, 9404), (202, 9422), (204, 9431), (209, 9443), (214, 9455), (219, 9467), (221, 9476), (225, 9497), (226, 9503), (230, 9518), (231, 9524), (233, 9533), (238, 9554), (245, 9578), (254, 9608), (257, 9620), (259, 9629), (261, 9632), (266, 9650), (274, 9680), (278, 9713), (281, 9722), (285, 9734), (296, 9770), (298, 9779), (301, 9785), (304, 9800), (307, 9812), (314, 9839), (315, 9842), (318, 9854), (320, 9863), (327, 9893), (328, 9896), (330, 9905), (334, 9920), (337, 9926), (339, 9935), (345, 9959), (353, 9983), (360, 10001), (366, 10019), (376, 10046), (383, 10070), (385, 10079), (386, 10082), (389, 10091), (390, 10094), (392, 10100), (397, 10115), (398, 10124), (399, 10127), (402, 10136), (405, 10154), (413, 10181), (416, 10190), (418, 10196), (419, 10199), (429, 10229), (430, 10232), (436, 10253), (439, 10262), (440, 10265), (452, 10310), (470, 10364), (473, 10376), (476, 10385), (477, 10394), (502, 10484), (516, 10538), (524, 10583), (526, 10601), (527, 10604), (528, 10613), (538, 10646), (540, 10673), (553, 10715), (557, 10724), (560, 10736), (564, 10748), (567, 10757), (582, 10811), (583, 10820), (584, 10823), (585, 10826), (590, 10844), (592, 10847), (594, 10856), (601, 10880), (603, 10889), (604, 10892), (606, 10901), (608, 10910), (615, 10943), (619, 10946), (626, 10970), (637, 11009), (641, 11039), (643, 11045), (645, 11054), (653, 11087), (658, 11105), (661, 11117), (672, 11153), (675, 11171), (676, 11174), (685, 11249), (688, 11258), (689, 11267),

Gene: Rileysaurus_14 Start: 8502, Stop: 11267, Start Num: 58

Candidate Starts for Rileysaurus_14:

(Start: 58 @8502 has 46 MA's), (63, 8529), (66, 8535), (69, 8547), (71, 8556), (75, 8580), (78, 8589), (80, 8592), (87, 8637), (94, 8664), (95, 8667), (104, 8715), (106, 8745), (108, 8772), (109, 8781), (113, 8814), (115, 8835), (117, 8856), (120, 8886), (122, 8901), (123, 8919), (124, 8928), (125, 8931), (127, 8949), (133, 9003), (134, 9006), (136, 9021), (139, 9036), (140, 9039), (143, 9051), (145, 9066), (147, 9075), (151, 9111), (152, 9120), (153, 9123), (155, 9165), (156, 9177), (161, 9222), (164, 9243), (170,

9267), (180, 9309), (186, 9342), (187, 9351), (189, 9363), (193, 9384), (194, 9387), (197, 9399), (202, 9417), (204, 9426), (209, 9438), (214, 9450), (219, 9462), (221, 9471), (225, 9492), (226, 9498), (230, 9513), (231, 9519), (233, 9528), (238, 9549), (245, 9573), (254, 9603), (255, 9609), (257, 9615), (259, 9624), (266, 9645), (274, 9675), (278, 9708), (281, 9717), (285, 9729), (295, 9762), (296, 9765), (298, 9774), (307, 9807), (310, 9816), (315, 9837), (318, 9849), (320, 9858), (323, 9867), (327, 9888), (330, 9900), (334, 9915), (337, 9921), (339, 9930), (345, 9954), (353, 9978), (360, 9996), (361, 9999), (362, 10002), (366, 10014), (368, 10020), (369, 10023), (373, 10035), (376, 10041), (383, 10065), (384, 10068), (385, 10074), (386, 10077), (388, 10083), (389, 10086), (390, 10089), (392, 10095), (397, 10110), (398, 10119), (399, 10122), (405, 10149), (408, 10161), (413, 10176), (416, 10185), (420, 10197), (427, 10215), (428, 10218), (429, 10224), (436, 10248), (437, 10251), (440, 10260), (442, 10269), (452, 10305), (470, 10359), (473, 10371), (476, 10380), (477, 10389), (502, 10479), (505, 10491), (510, 10515), (516, 10533), (522, 10566), (524, 10578), (526, 10596), (527, 10599), (528, 10608), (538, 10641), (540, 10668), (553, 10710), (557, 10719), (560, 10731), (564, 10743), (567, 10752), (572, 10773), (582, 10806), (583, 10815), (584, 10818), (585, 10821), (590, 10839), (592, 10842), (594, 10851), (601, 10875), (606, 10896), (608, 10905), (611, 10917), (615, 10938), (619, 10941), (626, 10965), (637, 11004), (641, 11034), (643, 11040), (645, 11049), (647, 11058), (658, 11100), (661, 11112), (672, 11148), (675, 11166), (676, 11169), (678, 11175), (685, 11244), (688, 11253), (689, 11262),

Gene: RootBeer_15 Start: 9305, Stop: 13243, Start Num: 13

Candidate Starts for RootBeer_15:

(11, 9296), (12, 9299), (Start: 13 @9305 has 1 MA's), (23, 9497), (25, 9518), (97, 9938), (108, 10028), (119, 10133), (127, 10205), (130, 10244), (132, 10250), (141, 10301), (147, 10337), (153, 10388), (155, 10433), (157, 10454), (167, 10535), (170, 10553), (196, 10697), (229, 10838), (238, 10889), (252, 10949), (260, 10991), (275, 11060), (296, 11138), (312, 11195), (328, 11261), (330, 11270), (331, 11276), (332, 11282), (346, 11339), (350, 11354), (354, 11363), (357, 11369), (366, 11396), (368, 11402), (376, 11426), (405, 11546), (407, 11555), (420, 11594), (427, 11612), (429, 11621), (430, 11624), (437, 11648), (440, 11657), (466, 11768), (471, 11789), (496, 11888), (518, 11987), (523, 12020), (526, 12041), (538, 12086), (547, 12140), (566, 12206), (633, 12362), (637, 12374), (673, 12530), (681, 12605), (716, 12797), (733, 12908), (739, 12959), (742, 12968), (746, 12983), (750, 13004), (761, 13037), (765, 13058), (769, 13067), (791, 13148),

Gene: RosiePosie_22 Start: 15724, Stop: 19266, Start Num: 18

Candidate Starts for RosiePosie_22:

(Start: 18 @15724 has 12 MA's), (Start: 19 @15730 has 7 MA's), (20, 15751), (21, 15754), (31, 15835), (35, 15880), (39, 15913), (41, 15931), (46, 15964), (52, 15994), (59, 16021), (61, 16033), (86, 16150), (91, 16174), (99, 16225), (100, 16228), (111, 16333), (113, 16345), (121, 16420), (123, 16450), (126, 16471), (129, 16513), (150, 16621), (152, 16651), (155, 16696), (156, 16708), (161, 16753), (162, 16762), (175, 16822), (184, 16861), (226, 17041), (229, 17053), (231, 17062), (236, 17095), (238, 17101), (239, 17104), (251, 17155), (253, 17161), (254, 17167), (258, 17191), (265, 17218), (268, 17233), (271, 17245), (286, 17326), (287, 17329), (293, 17350), (297, 17368), (298, 17371), (304, 17392), (311, 17416), (316, 17437), (318, 17446), (319, 17449), (328, 17488), (334, 17512), (345, 17551), (347, 17566), (367, 17623), (376, 17647), (379, 17656), (380, 17662), (391, 17698), (404, 17746), (405, 17755), (417, 17797), (422, 17809), (437, 17866), (442, 17884), (447, 17899), (448, 17905), (497, 18001), (504, 18028), (508, 18049), (524, 18118), (527, 18139), (531, 18160), (548, 18238), (590, 18271), (592, 18274), (597, 18298), (614, 18367), (622, 18403), (624, 18406), (625, 18409), (629, 18424), (640, 18472), (647, 18508), (648, 18511), (664, 18574), (688, 18706), (700, 18772), (706, 18814), (713, 18853), (724, 18898), (732, 18967), (735, 18988), (742, 19033), (753, 19096), (764, 19135), (767, 19150), (781, 19201), (784, 19213),

Gene: SKKY_14 Start: 8549, Stop: 11314, Start Num: 58

Candidate Starts for SKKY_14:

(Start: 58 @8549 has 46 MA's), (63, 8576), (66, 8582), (69, 8594), (75, 8627), (78, 8636), (80, 8639), (87, 8684), (89, 8690), (94, 8711), (95, 8714), (104, 8762), (106, 8792), (109, 8828), (113, 8861), (115, 8882), (117, 8903), (120, 8933), (122, 8948), (123, 8966), (124, 8975), (125, 8978), (127, 8996), (133, 9050), (134, 9053), (136, 9068), (139, 9083), (140, 9086), (143, 9098), (145, 9113), (147, 9122), (151, 9158), (152, 9167), (153, 9170), (155, 9212), (156, 9224), (161, 9269), (170, 9314), (172, 9326), (180, 9356), (186, 9389), (187, 9398), (189, 9410), (193, 9431), (194, 9434), (197, 9446), (202, 9464), (204, 9473), (209, 9485), (214, 9497), (221, 9518), (226, 9545), (230, 9560), (233, 9575), (238, 9596), (241, 9608), (245, 9620), (255, 9656), (266, 9692), (274, 9722), (276, 9734), (278, 9755), (285, 9776), (295, 9809), (296, 9812), (298, 9821), (301, 9827), (304, 9842), (307, 9854), (310, 9863), (312, 9872), (317, 9893), (318, 9896), (320, 9905), (327, 9935), (330, 9947), (334, 9962), (337, 9968), (339, 9977), (343, 9995), (353, 10025), (360, 10043), (361, 10046), (362, 10049), (364, 10058), (366, 10061), (368, 10067), (369, 10070), (376, 10088), (382, 10109), (384, 10115), (385, 10121), (386, 10124), (389, 10133), (390, 10136), (392, 10142), (397, 10157), (399, 10169), (401, 10175), (408, 10208), (409, 10211), (411, 10217), (416, 10232), (418, 10238), (419, 10241), (427, 10262), (429, 10271), (430, 10274), (436, 10295), (439, 10304), (440, 10307), (442, 10316), (452, 10352), (457, 10361), (473, 10418), (476, 10427), (477, 10436), (480, 10445), (498, 10511), (502, 10526), (505, 10538), (516, 10580), (524, 10625), (527, 10646), (528, 10655), (538, 10688), (540, 10715), (553, 10757), (557, 10766), (560, 10778), (564, 10790), (567, 10799), (579, 10844), (582, 10853), (583, 10862), (584, 10865), (585, 10868), (590, 10886), (592, 10889), (594, 10898), (601, 10922), (606, 10943), (608, 10952), (615, 10985), (619, 10988), (626, 11012), (637, 11051), (641, 11081), (643, 11087), (645, 11096), (647, 11105), (653, 11129), (658, 11147), (661, 11159), (675, 11213), (676, 11216), (678, 11222), (685, 11291), (688, 11300), (689, 11309),

Gene: Scavito_22 Start: 15721, Stop: 19263, Start Num: 18

Candidate Starts for Scavito_22:

(Start: 18 @15721 has 12 MA's), (Start: 19 @15727 has 7 MA's), (20, 15748), (21, 15751), (31, 15832), (35, 15877), (39, 15910), (41, 15928), (46, 15961), (52, 15991), (59, 16018), (61, 16030), (86, 16147), (91, 16171), (99, 16222), (100, 16225), (111, 16330), (113, 16342), (121, 16417), (123, 16447), (126, 16468), (129, 16510), (150, 16618), (152, 16648), (155, 16693), (156, 16705), (161, 16750), (162, 16759), (175, 16819), (184, 16858), (226, 17038), (229, 17050), (231, 17059), (236, 17092), (238, 17098), (239, 17101), (251, 17152), (253, 17158), (254, 17164), (258, 17188), (265, 17215), (268, 17230), (271, 17242), (286, 17323), (287, 17326), (293, 17347), (297, 17365), (298, 17368), (304, 17389), (311, 17413), (316, 17434), (318, 17443), (319, 17446), (328, 17485), (334, 17509), (345, 17548), (347, 17563), (367, 17620), (376, 17644), (379, 17653), (380, 17659), (391, 17695), (404, 17743), (405, 17752), (417, 17794), (422, 17806), (437, 17863), (442, 17881), (447, 17896), (448, 17902), (497, 17998), (504, 18025), (508, 18046), (524, 18115), (527, 18136), (531, 18157), (548, 18235), (590, 18268), (592, 18271), (597, 18295), (614, 18364), (622, 18400), (624, 18403), (625, 18406), (629, 18421), (640, 18469), (647, 18505), (648, 18508), (664, 18571), (688, 18703), (700, 18769), (706, 18811), (713, 18850), (724, 18895), (732, 18964), (735, 18985), (742, 19030), (753, 19093), (764, 19132), (767, 19147), (781, 19198), (784, 19210),

Gene: Shrooms_65 Start: 34492, Stop: 37881, Start Num: 51

Candidate Starts for Shrooms_65:

(49, 34486), (Start: 51 @34492 has 1 MA's), (56, 34510), (57, 34513), (62, 34543), (63, 34546), (79, 34621), (98, 34723), (101, 34735), (108, 34804), (130, 35020), (131, 35023), (132, 35026), (147, 35113), (153, 35164), (155, 35209), (158, 35236), (167, 35311), (170, 35329), (177, 35362), (190, 35431), (200, 35491), (201, 35494), (223, 35560), (224, 35566), (229, 35587), (232, 35602), (267, 35644), (277, 35698), (290, 35722), (292, 35728), (296, 35743), (299, 35752), (320, 35833), (328, 35866), (337, 35902), (344, 35935), (359, 35986), (369, 36016), (387, 36076), (388, 36079), (408, 36166), (412, 36178), (415, 36187), (427, 36223), (430, 36235), (435, 36253), (443, 36280), (455, 36331), (463, 36364), (473, 36409), (477, 36427), (479, 36433), (484, 36445), (488, 36463), (491, 36472), (499, 36517), (513, 36586), (522, 36631), (525, 36649), (528, 36673), (529, 36676), (531, 36685), (535, 36697), (538, 36709), (542, 36751), (563, 36817), (592, 36907), (613, 36940), (618,

36958), (634, 37012), (636, 37015), (644, 37066), (645, 37069), (649, 37090), (652, 37102), (657, 37126), (660, 37135), (666, 37156), (682, 37246), (687, 37267), (695, 37309), (699, 37327), (709, 37399), (716, 37420), (721, 37444), (723, 37453), (727, 37474), (730, 37507), (748, 37609), (757, 37654), (776, 37720), (790, 37777),

Gene: Solid_14 Start: 8502, Stop: 11267, Start Num: 58

Candidate Starts for Solid_14:

(Start: 58 @8502 has 46 MA's), (63, 8529), (66, 8535), (69, 8547), (71, 8556), (80, 8592), (87, 8637), (89, 8643), (90, 8649), (94, 8664), (95, 8667), (104, 8715), (106, 8745), (108, 8772), (109, 8781), (113, 8814), (115, 8835), (117, 8856), (120, 8886), (122, 8901), (123, 8919), (124, 8928), (125, 8931), (127, 8949), (133, 9003), (134, 9006), (136, 9021), (139, 9036), (140, 9039), (143, 9051), (145, 9066), (147, 9075), (151, 9111), (152, 9120), (153, 9123), (155, 9165), (156, 9177), (161, 9222), (170, 9267), (174, 9288), (180, 9309), (184, 9330), (186, 9342), (187, 9351), (193, 9384), (194, 9387), (197, 9399), (202, 9417), (204, 9426), (209, 9438), (214, 9450), (219, 9462), (225, 9492), (226, 9498), (230, 9513), (231, 9519), (233, 9528), (238, 9549), (245, 9573), (254, 9603), (255, 9609), (257, 9615), (266, 9645), (274, 9675), (278, 9708), (281, 9717), (285, 9729), (296, 9765), (304, 9795), (307, 9807), (310, 9816), (312, 9825), (314, 9834), (318, 9849), (320, 9858), (323, 9867), (327, 9888), (333, 9912), (334, 9915), (337, 9921), (339, 9930), (340, 9933), (345, 9954), (353, 9978), (360, 9996), (361, 9999), (366, 10014), (368, 10020), (369, 10023), (376, 10041), (384, 10068), (385, 10074), (386, 10077), (389, 10086), (390, 10089), (392, 10095), (397, 10110), (399, 10122), (401, 10128), (408, 10161), (413, 10176), (416, 10185), (418, 10191), (419, 10194), (420, 10197), (427, 10215), (429, 10224), (430, 10227), (437, 10251), (442, 10269), (470, 10359), (473, 10371), (476, 10380), (477, 10389), (505, 10491), (510, 10515), (516, 10533), (524, 10578), (527, 10599), (528, 10608), (538, 10641), (540, 10668), (553, 10710), (557, 10719), (560, 10731), (564, 10743), (567, 10752), (572, 10773), (582, 10806), (583, 10815), (584, 10818), (585, 10821), (590, 10839), (592, 10842), (594, 10851), (601, 10875), (604, 10887), (606, 10896), (608, 10905), (615, 10938), (619, 10941), (626, 10965), (633, 10992), (637, 11004), (641, 11034), (643, 11040), (645, 11049), (647, 11058), (658, 11100), (661, 11112), (672, 11148), (675, 11166), (676, 11169), (678, 11175), (685, 11244), (688, 11253), (689, 11262),

Gene: Sonali_16 Start: 13198, Stop: 17811, Start Num: 1

Candidate Starts for Sonali_16:

(Start: 1 @13198 has 3 MA's), (2, 13219), (3, 13225), (4, 13234), (5, 13285), (Start: 14 @13450 has 2 MA's), (15, 13501), (17, 13531), (22, 13636), (23, 13642), (24, 13654), (108, 14179), (118, 14281), (119, 14284), (127, 14356), (129, 14389), (130, 14395), (132, 14401), (137, 14431), (147, 14488), (149, 14497), (153, 14539), (155, 14584), (167, 14686), (206, 14896), (208, 14920), (211, 14983), (216, 15046), (229, 15106), (234, 15136), (252, 15217), (275, 15328), (295, 15424), (305, 15460), (316, 15499), (325, 15529), (328, 15550), (330, 15559), (331, 15565), (349, 15640), (371, 15697), (394, 15790), (396, 15793), (397, 15796), (405, 15835), (420, 15883), (423, 15889), (424, 15892), (427, 15901), (429, 15910), (437, 15937), (465, 16054), (478, 16108), (496, 16177), (509, 16246), (518, 16276), (526, 16330), (531, 16354), (538, 16375), (547, 16429), (592, 16627), (610, 16702), (633, 16807), (664, 16945), (671, 16972), (675, 16996), (676, 16999), (684, 17074), (716, 17242), (728, 17308), (733, 17353), (749, 17434), (762, 17497), (808, 17731), (809, 17743),

Gene: Spartoi_14 Start: 8472, Stop: 11996, Start Num: 58

Candidate Starts for Spartoi_14:

(Start: 58 @8472 has 46 MA's), (67, 8511), (107, 8736), (113, 8793), (128, 8952), (129, 8961), (133, 8982), (138, 9012), (152, 9099), (155, 9144), (160, 9177), (164, 9222), (181, 9300), (203, 9432), (289, 9825), (308, 9897), (337, 10011), (414, 10299), (421, 10320), (454, 10440), (463, 10458), (467, 10473), (482, 10518), (491, 10545), (495, 10566), (501, 10599), (507, 10623), (511, 10638), (515, 10653), (517, 10656), (520, 10674), (536, 10758), (555, 10848), (562, 10869), (565, 10875), (566, 10881), (573, 10908), (578, 10929), (593, 10980), (598, 11001), (607, 11037), (609, 11046), (617, 11082), (622, 11115), (639, 11175), (642, 11196), (652, 11241), (675, 11331), (686, 11409), (693, 11454), (707, 11544), (709, 11553), (719, 11586), (726, 11625), (734, 11691), (738, 11730), (753,

11799), (780, 11901), (787, 11925), (794, 11976), (797, 11991),

Gene: Stormborn_14 Start: 8516, Stop: 11281, Start Num: 58

Candidate Starts for Stormborn_14:

(Start: 58 @8516 has 46 MA's), (63, 8543), (66, 8549), (69, 8561), (78, 8603), (80, 8606), (87, 8651), (89, 8657), (90, 8663), (94, 8678), (95, 8681), (104, 8729), (106, 8759), (108, 8786), (109, 8795), (113, 8828), (115, 8849), (117, 8870), (120, 8900), (122, 8915), (123, 8933), (124, 8942), (125, 8945), (127, 8963), (134, 9020), (136, 9035), (139, 9050), (140, 9053), (143, 9065), (145, 9080), (146, 9083), (147, 9089), (151, 9125), (152, 9134), (153, 9137), (155, 9179), (156, 9191), (161, 9236), (170, 9281), (174, 9302), (180, 9323), (184, 9344), (186, 9356), (187, 9365), (189, 9377), (193, 9398), (194, 9401), (197, 9413), (202, 9431), (204, 9440), (209, 9452), (214, 9464), (219, 9476), (221, 9485), (225, 9506), (226, 9512), (230, 9527), (231, 9533), (233, 9542), (238, 9563), (245, 9587), (247, 9599), (254, 9617), (257, 9629), (259, 9638), (261, 9641), (266, 9659), (274, 9689), (278, 9722), (281, 9731), (285, 9743), (296, 9779), (304, 9809), (307, 9821), (312, 9839), (314, 9848), (318, 9863), (320, 9872), (323, 9881), (327, 9902), (330, 9914), (334, 9929), (337, 9935), (339, 9944), (345, 9968), (353, 9992), (360, 10010), (366, 10028), (368, 10034), (369, 10037), (372, 10046), (373, 10049), (376, 10055), (382, 10076), (384, 10082), (386, 10091), (389, 10100), (390, 10103), (392, 10109), (398, 10133), (399, 10136), (402, 10145), (411, 10184), (413, 10190), (416, 10199), (418, 10205), (419, 10208), (427, 10229), (428, 10232), (429, 10238), (436, 10262), (437, 10265), (440, 10274), (442, 10283), (452, 10319), (470, 10373), (473, 10385), (476, 10394), (477, 10403), (483, 10418), (502, 10493), (505, 10505), (516, 10547), (524, 10592), (527, 10613), (528, 10622), (538, 10655), (540, 10682), (553, 10724), (557, 10733), (560, 10745), (564, 10757), (567, 10766), (572, 10787), (582, 10820), (584, 10832), (585, 10835), (590, 10853), (592, 10856), (594, 10865), (601, 10889), (604, 10901), (606, 10910), (608, 10919), (611, 10931), (615, 10952), (619, 10955), (626, 10979), (637, 11018), (641, 11048), (643, 11054), (645, 11063), (647, 11072), (658, 11114), (661, 11126), (672, 11162), (675, 11180), (676, 11183), (685, 11258), (689, 11276),

Gene: Sunshine23_17 Start: 13210, Stop: 17823, Start Num: 1

Candidate Starts for Sunshine23_17:

(Start: 1 @13210 has 3 MA's), (2, 13231), (3, 13237), (4, 13246), (5, 13297), (Start: 14 @13462 has 2 MA's), (17, 13543), (22, 13648), (23, 13654), (24, 13666), (60, 13912), (97, 14101), (108, 14191), (118, 14293), (119, 14296), (127, 14368), (129, 14401), (130, 14407), (132, 14413), (137, 14443), (147, 14500), (149, 14509), (153, 14551), (155, 14596), (167, 14698), (206, 14908), (208, 14932), (211, 14995), (216, 15058), (229, 15118), (234, 15148), (246, 15202), (252, 15229), (275, 15340), (295, 15436), (305, 15472), (325, 15541), (328, 15562), (330, 15571), (331, 15577), (348, 15649), (349, 15652), (371, 15709), (394, 15802), (396, 15805), (397, 15808), (405, 15847), (420, 15895), (424, 15904), (427, 15913), (429, 15922), (437, 15949), (465, 16066), (496, 16189), (509, 16258), (518, 16288), (521, 16309), (526, 16342), (529, 16357), (538, 16387), (547, 16441), (592, 16639), (610, 16714), (633, 16819), (664, 16957), (671, 16984), (675, 17008), (676, 17011), (716, 17254), (728, 17320), (733, 17365), (739, 17416), (749, 17446), (762, 17509), (808, 17743), (809, 17755),

Gene: Supernova_14 Start: 8521, Stop: 11286, Start Num: 58

Candidate Starts for Supernova_14:

(Start: 58 @8521 has 46 MA's), (63, 8548), (66, 8554), (69, 8566), (78, 8608), (80, 8611), (87, 8656), (89, 8662), (94, 8683), (95, 8686), (104, 8734), (106, 8764), (108, 8791), (109, 8800), (113, 8833), (115, 8854), (117, 8875), (120, 8905), (122, 8920), (123, 8938), (124, 8947), (125, 8950), (127, 8968), (133, 9022), (134, 9025), (136, 9040), (139, 9055), (140, 9058), (143, 9070), (145, 9085), (147, 9094), (151, 9130), (152, 9139), (153, 9142), (155, 9184), (156, 9196), (161, 9241), (168, 9271), (170, 9286), (172, 9298), (180, 9328), (186, 9361), (189, 9382), (193, 9403), (194, 9406), (197, 9418), (202, 9436), (204, 9445), (209, 9457), (214, 9469), (219, 9481), (221, 9490), (225, 9511), (226, 9517), (230, 9532), (231, 9538), (233, 9547), (238, 9568), (245, 9592), (254, 9622), (255, 9628), (257, 9634), (261, 9646), (266, 9664), (274, 9694), (276, 9706), (278, 9727), (281, 9736), (285, 9748), (295, 9781), (296, 9784), (298, 9793), (301, 9799), (304, 9814), (307, 9826), (310, 9835), (313, 9847), (314, 9853), (317, 9865),

(318, 9868), (320, 9877), (327, 9907), (330, 9919), (334, 9934), (337, 9940), (339, 9949), (353, 9997),
(360, 10015), (361, 10018), (362, 10021), (364, 10030), (366, 10033), (368, 10039), (369, 10042),
(376, 10060), (382, 10081), (384, 10087), (385, 10093), (386, 10096), (389, 10105), (390, 10108),
(392, 10114), (397, 10129), (399, 10141), (401, 10147), (402, 10150), (408, 10180), (411, 10189),
(413, 10195), (416, 10204), (418, 10210), (419, 10213), (427, 10234), (429, 10243), (430, 10246),
(436, 10267), (439, 10276), (440, 10279), (442, 10288), (452, 10324), (457, 10333), (472, 10387),
(473, 10390), (476, 10399), (477, 10408), (480, 10417), (502, 10498), (505, 10510), (516, 10552),
(524, 10597), (527, 10618), (528, 10627), (538, 10660), (540, 10687), (553, 10729), (557, 10738),
(560, 10750), (564, 10762), (567, 10771), (579, 10816), (582, 10825), (584, 10837), (585, 10840),
(590, 10858), (592, 10861), (594, 10870), (601, 10894), (604, 10906), (606, 10915), (608, 10924),
(626, 10984), (637, 11023), (641, 11053), (643, 11059), (645, 11068), (653, 11101), (658, 11119),
(661, 11131), (675, 11185), (676, 11188), (678, 11194), (685, 11263), (688, 11272), (689, 11281),

Gene: Tophat_22 Start: 15729, Stop: 19265, Start Num: 19

Candidate Starts for Tophat_22:

(Start: 18 @15723 has 12 MA's), (Start: 19 @15729 has 7 MA's), (20, 15750), (21, 15753), (31, 15834),
(35, 15879), (39, 15912), (41, 15930), (46, 15963), (52, 15993), (59, 16020), (61, 16032), (86, 16149),
(91, 16173), (99, 16224), (100, 16227), (111, 16332), (113, 16344), (121, 16419), (123, 16449), (126,
16470), (129, 16512), (150, 16620), (152, 16650), (155, 16695), (156, 16707), (161, 16752), (162,
16761), (175, 16821), (184, 16860), (226, 17040), (229, 17052), (231, 17061), (236, 17094), (238,
17100), (239, 17103), (251, 17154), (253, 17160), (254, 17166), (258, 17190), (265, 17217), (268,
17232), (271, 17244), (286, 17325), (287, 17328), (293, 17349), (297, 17367), (298, 17370), (304,
17391), (311, 17415), (316, 17436), (318, 17445), (319, 17448), (328, 17487), (334, 17511), (345,
17550), (347, 17565), (367, 17622), (376, 17646), (379, 17655), (380, 17661), (391, 17697), (404,
17745), (405, 17754), (417, 17796), (422, 17808), (437, 17865), (442, 17883), (447, 17898), (448,
17904), (497, 18000), (504, 18027), (508, 18048), (524, 18117), (527, 18138), (531, 18159), (548,
18237), (590, 18270), (592, 18273), (597, 18297), (614, 18366), (622, 18402), (624, 18405), (625,
18408), (629, 18423), (640, 18471), (647, 18507), (648, 18510), (664, 18573), (688, 18705), (700,
18771), (706, 18813), (713, 18852), (724, 18897), (732, 18966), (735, 18987), (742, 19032), (753,
19095), (764, 19134), (767, 19149), (781, 19200), (784, 19212),

Gene: Wizzo_14 Start: 8534, Stop: 11299, Start Num: 58

Candidate Starts for Wizzo_14:

(Start: 58 @8534 has 46 MA's), (63, 8561), (66, 8567), (69, 8579), (71, 8588), (78, 8621), (80, 8624),
(87, 8669), (89, 8675), (90, 8681), (94, 8696), (95, 8699), (104, 8747), (106, 8777), (113, 8846), (117,
8888), (120, 8918), (122, 8933), (123, 8951), (124, 8960), (125, 8963), (127, 8981), (133, 9035), (134,
9038), (136, 9053), (139, 9068), (140, 9071), (143, 9083), (147, 9107), (151, 9143), (152, 9152), (155,
9197), (156, 9209), (161, 9254), (170, 9299), (174, 9320), (180, 9341), (186, 9374), (187, 9383), (193,
9416), (194, 9419), (197, 9431), (202, 9449), (204, 9458), (209, 9470), (214, 9482), (219, 9494), (221,
9503), (225, 9524), (226, 9530), (230, 9545), (231, 9551), (233, 9560), (238, 9581), (245, 9605), (254,
9635), (255, 9641), (257, 9647), (261, 9659), (266, 9677), (274, 9707), (276, 9719), (278, 9740), (281,
9749), (285, 9761), (296, 9797), (304, 9827), (307, 9839), (310, 9848), (314, 9866), (318, 9881), (320,
9890), (327, 9920), (334, 9947), (337, 9953), (339, 9962), (353, 10010), (357, 10019), (360, 10028),
(361, 10031), (362, 10034), (366, 10046), (368, 10052), (373, 10067), (376, 10073), (384, 10100),
(385, 10106), (386, 10109), (390, 10121), (392, 10127), (397, 10142), (399, 10154), (408, 10193),
(413, 10208), (416, 10217), (418, 10223), (419, 10226), (420, 10229), (427, 10247), (428, 10250),
(429, 10256), (430, 10259), (436, 10280), (437, 10283), (440, 10292), (442, 10301), (452, 10337),
(470, 10391), (473, 10403), (476, 10412), (477, 10421), (483, 10436), (498, 10496), (502, 10511),
(505, 10523), (516, 10565), (524, 10610), (527, 10631), (528, 10640), (538, 10673), (540, 10700),
(553, 10742), (557, 10751), (560, 10763), (564, 10775), (567, 10784), (572, 10805), (582, 10838),
(583, 10847), (584, 10850), (585, 10853), (590, 10871), (592, 10874), (594, 10883), (601, 10907),
(604, 10919), (606, 10928), (608, 10937), (615, 10970), (619, 10973), (626, 10997), (641, 11066),
(643, 11072), (645, 11081), (647, 11090), (658, 11132), (661, 11144), (675, 11198), (676, 11201),

(678, 11207), (685, 11276), (688, 11285), (689, 11294),

Gene: Yakult_17 Start: 9496, Stop: 14358, Start Num: 6

Candidate Starts for Yakult_17:

(Start: 6 @9496 has 1 MA's), (7, 9523), (8, 9556), (9, 9562), (10, 9583), (28, 9829), (31, 9859), (40, 9940), (54, 10024), (60, 10054), (65, 10072), (68, 10087), (72, 10111), (74, 10120), (76, 10129), (83, 10162), (85, 10171), (88, 10189), (92, 10207), (105, 10282), (108, 10336), (112, 10372), (114, 10381), (126, 10504), (128, 10537), (149, 10654), (154, 10714), (159, 10777), (163, 10819), (166, 10834), (171, 10861), (177, 10894), (179, 10903), (182, 10912), (186, 10942), (188, 10966), (192, 10984), (207, 11062), (210, 11137), (212, 11164), (213, 11197), (218, 11224), (222, 11245), (225, 11257), (233, 11296), (250, 11377), (256, 11410), (282, 11539), (283, 11542), (294, 11584), (313, 11653), (358, 11836), (370, 11869), (378, 11899), (380, 11908), (382, 11914), (389, 11938), (397, 11974), (398, 11983), (409, 12028), (419, 12058), (420, 12061), (430, 12097), (437, 12124), (468, 12256), (490, 12340), (563, 12703), (569, 12721), (581, 12769), (587, 12799), (599, 12874), (610, 12919), (616, 12949), (621, 12976), (622, 12988), (628, 13006), (631, 13018), (647, 13096), (655, 13126), (682, 13279), (725, 13519), (740, 13633), (744, 13648), (747, 13663), (756, 13708), (760, 13714), (771, 13768), (776, 13786), (779, 13804), (783, 13816), (789, 13840), (792, 13852), (796, 13894), (804, 13936), (805, 13942), (812, 14005), (814, 14038), (816, 14071), (818, 14092), (821, 14119), (822, 14122), (824, 14179), (826, 14215), (827, 14227),