

Zoomed Pham 210255

51: DiLupo_35
52: Patience_34
53: Labelle_33
54: Madruga_32

Blank musical staves for rehearsal or practice.

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 210255 Report

This analysis was run 02/22/25 on database version 588.

Pham number 210255 has 63 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Madi_22, Sienna_22
- Track 2 : Beyoncage_22, Djokovic_22, Terapin_22, BiteSize_22
- Track 3 : Suzy_22
- Track 4 : LilyPad_23
- Track 5 : LittleFella_24
- Track 6 : LuckyLeo_26, Apeppi_24
- Track 7 : Gibbin_28
- Track 8 : DumpTruck_26
- Track 9 : Erutan_27
- Track 10 : GretelLyn_27, Sadboi_27
- Track 11 : Mima20_27
- Track 12 : Zany_26
- Track 13 : Alyssamiracle_27
- Track 14 : MoiGyank_29
- Track 15 : Stormer_26
- Track 16 : Alephilan_24
- Track 17 : Avian_25
- Track 18 : Wojtek_26
- Track 19 : Lila22_26
- Track 20 : Xenia2_27
- Track 21 : Tillicus_27
- Track 22 : Genamy16_27
- Track 23 : Sampudon_27, Jalebi_26
- Track 24 : Yikes_28
- Track 25 : BirthdayBoy_28
- Track 26 : NovaSharks_26
- Track 27 : Rumi_26
- Track 28 : Patos_28, NorManre_28
- Track 29 : ParvusTarda_27
- Track 30 : Jamemuya19_25
- Track 31 : Lambo_27
- Track 32 : OtterstedtS21_27
- Track 33 : Ranch_27
- Track 34 : Astralis_25
- Track 35 : Fulcrum_28, GOATification_28
- Track 36 : RazorC_25
- Track 37 : LavAbarElk_25

- Track 38 : DoobyDoo_26
- Track 39 : DaviePasture_27
- Track 40 : Predator_30
- Track 41 : Puissant_25
- Track 42 : Damien_26
- Track 43 : Megatron06_28
- Track 44 : Thumb_26
- Track 45 : Phreeze_26
- Track 46 : Cborch11_27
- Track 47 : Oaker_26
- Track 48 : Beckerton_26
- Track 49 : Konstantine_31
- Track 50 : Barnyard_33
- Track 51 : DrLupo_35
- Track 52 : Patience_34
- Track 53 : Labelle_33
- Track 54 : Madruga_32

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

The start number called the most often in the published annotations is 2, it was called in 29 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alyssamiracle_27, Apeppi_24, Avian_25, BirthdayBoy_28, DaviePasture_27, DoobyDoo_26, DumpTruck_26, Erutan_27, Fulcrum_28, GOATification_28, Genamy16_27, Gibbin_28, GretelLyn_27, Jalebi_26, Lambo_27, LavAbarElk_25, Lila22_26, LuckyLeo_26, MoiGyank_29, NorManre_28, NovaSharks_26, OtterstedtS21_27, ParvusTarda_27, Patos_28, Ranch_27, RazorC_25, Rumi_26, Sadboi_27, Sampudon_27, Tillicus_27, Wojtek_26, Xenia2_27, Yikes_28,

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

- Alephilan_24, Astralis_25, Jamemuya19_25, Mima20_27, Stormer_26,

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

- Barnyard_33, Beckerton_26, Beyoncage_22, BiteSize_22, Cborch11_27, Damien_26, Djokovic_22, DrLupo_35, Konstantine_31, Labelle_33, LilyPad_23, LittleFella_24, Madi_22, Madruga_32, Megatron06_28, Oaker_26, Patience_34, Phreeze_26, Predator_30, Puissant_25, Sienna_22, Suzy_22, Terapin_22, Thumb_26, Zany_26,

Summary by start number:

Start 2:

- Found in 38 of 63 (60.3%) of genes in pham
- Manual Annotations of this start: 29 of 53
- Called 86.8% of time when present
- Phage (with cluster) where this start called: Alyssamiracle_27 (DV), Apeppi_24 (DV), Avian_25 (DV), BirthdayBoy_28 (DV), DaviePasture_27 (DV), DoobyDoo_26 (DV), DumpTruck_26 (DV), Erutan_27 (DV), Fulcrum_28 (DV), GOATification_28 (DV),

Genamy16_27 (DV), Gibbin_28 (DV), GretelLyn_27 (DV), Jalebi_26 (DV), Lambo_27 (DV), LavAbarElk_25 (DV), Lila22_26 (DV), LuckyLeo_26 (DV), MoiGyank_29 (DV), NorManre_28 (DV), NovaSharks_26 (DV), OtterstedtS21_27 (DV), ParvusTarda_27 (DV), Patos_28 (DV), Ranch_27 (DV), RazorC_25 (DV), Rumi_26 (DV), Sadboi_27 (DV), Sampudon_27 (DV), Tillicus_27 (DV), Wojtek_26 (DV), Xenia2_27 (DV), Yikes_28 (DV),

Start 3:

- Found in 1 of 63 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zany_26 (DV),

Start 9:

- Found in 34 of 63 (54.0%) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Alephilan_24 (DV), Mima20_27 (DV),

Start 11:

- Found in 34 of 63 (54.0%) of genes in pham
- No Manual Annotations of this start.
- Called 8.8% of time when present
- Phage (with cluster) where this start called: Astralis_25 (DV), Jamemuya19_25 (DV), Stormer_26 (DV),

Start 19:

- Found in 10 of 63 (15.9%) of genes in pham
- Manual Annotations of this start: 9 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beckerton_26 (H1), Cborch11_27 (H1), Damien_26 (H1), Konstantine_31 (H1), Megatron06_28 (H1), Oaker_26 (H1), Phreeze_26 (H1), Predator_30 (H1), Puissant_25 (H1), Thumb_26 (H1),

Start 20:

- Found in 5 of 63 (7.9%) of genes in pham
- Manual Annotations of this start: 5 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard_33 (H2), DrLupo_35 (H2), Labelle_33 (U), Madruga_32 (U), Patience_34 (U),

Start 47:

- Found in 9 of 63 (14.3%) of genes in pham
- Manual Annotations of this start: 9 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_22 (DG1), BiteSize_22 (DG1), Djokovic_22 (DG1), LilyPad_23 (DG1), LittleFella_24 (DG2), Madi_22 (DG1), Sienna_22 (DG1), Suzy_22 (DG1), Terapin_22 (DG1),

Summary by clusters:

There are 6 clusters represented in this pham: H2, H1, DG2, DG1, U, DV,

Info for manual annotations of cluster DG1:

- Start number 47 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 47 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:

- Start number 2 was manually annotated 29 times for cluster DV.
- Start number 3 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster H1:

- Start number 19 was manually annotated 9 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 20 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:

- Start number 20 was manually annotated 3 times for cluster U.

Gene Information:

Gene: Alephilan_24 Start: 17000, Stop: 23944, Start Num: 9

Candidate Starts for Alephilan_24:

(1, 16718), (Start: 2 @16739 has 29 MA's), (9, 17000), (11, 17099), (13, 17135), (15, 17147), (24, 17246), (41, 17378), (45, 17405), (50, 17465), (52, 17474), (58, 17516), (63, 17528), (69, 17552), (71, 17558), (81, 17621), (87, 17675), (88, 17678), (105, 17831), (106, 17834), (120, 17936), (123, 17954), (127, 17981), (137, 18029), (138, 18038), (148, 18107), (153, 18143), (156, 18164), (157, 18176), (159, 18188), (160, 18203), (170, 18239), (182, 18314), (183, 18320), (199, 18419), (208, 18500), (210, 18509), (243, 18800), (248, 18842), (250, 18863), (251, 18872), (254, 18896), (255, 18902), (257, 18923), (274, 19103), (277, 19130), (281, 19163), (285, 19184), (298, 19286), (301, 19313), (308, 19364), (309, 19367), (313, 19391), (317, 19403), (321, 19418), (323, 19442), (330, 19520), (331, 19532), (344, 19607), (356, 19700), (359, 19757), (363, 19787), (377, 19976), (378, 19982), (383, 20054), (384, 20084), (388, 20129), (389, 20138), (394, 20180), (396, 20234), (401, 20276), (406, 20360), (412, 20483), (421, 20603), (427, 20654), (436, 20813), (452, 21104), (455, 21191), (466, 21332), (469, 21344), (478, 21428), (482, 21461), (494, 21590), (534, 22247), (536, 22280), (544, 22370), (566, 22658), (568, 22667), (571, 22676), (601, 23171), (611, 23243), (621, 23333), (623, 23351), (626, 23390), (629, 23432), (632, 23456), (637, 23486), (638, 23495), (643, 23525), (646, 23561), (651, 23579), (658, 23618), (661, 23642), (675, 23807), (676, 23831), (682, 23897), (684, 23909),

Gene: Alyssamiracle_27 Start: 15546, Stop: 22754, Start Num: 2

Candidate Starts for Alyssamiracle_27:

(Start: 2 @15546 has 29 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (50, 16272), (52, 16281), (58, 16323), (63, 16335), (69, 16359), (71, 16365), (75, 16386), (81, 16428), (87, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (137, 16836), (138, 16845), (153, 16950), (156, 16971), (157, 16983), (159, 16995), (160, 17010), (170, 17046), (176, 17091), (182, 17121), (184, 17148), (199, 17226), (207, 17295), (208, 17307), (210, 17316), (241, 17595), (243, 17607), (248, 17649), (250, 17670), (251, 17679), (254, 17703), (255, 17709), (257, 17730), (267, 17814), (274, 17910), (277, 17937), (281, 17970), (292, 18063), (298, 18093), (308, 18171), (309, 18174), (313, 18198), (317, 18210), (321, 18225), (323, 18249), (330, 18327), (331, 18339), (344, 18414), (346, 18417),

(359, 18564), (361, 18579), (363, 18594), (373, 18693), (375, 18741), (377, 18789), (378, 18795), (380, 18840), (383, 18867), (394, 18993), (396, 19047), (401, 19089), (406, 19173), (410, 19260), (412, 19296), (421, 19416), (427, 19467), (436, 19626), (441, 19740), (452, 19917), (455, 20004), (466, 20145), (469, 20157), (478, 20241), (534, 21060), (536, 21093), (539, 21105), (544, 21183), (565, 21459), (567, 21471), (582, 21714), (587, 21765), (592, 21807), (611, 22053), (623, 22161), (626, 22200), (627, 22203), (629, 22242), (632, 22266), (637, 22296), (638, 22305), (639, 22317), (649, 22380), (651, 22389), (658, 22428), (661, 22452), (675, 22617), (676, 22641), (682, 22707), (684, 22719),

Gene: Apeppi_24 Start: 16873, Stop: 24093, Start Num: 2

Candidate Starts for Apeppi_24:

(1, 16852), (Start: 2 @16873 has 29 MA's), (7, 17068), (10, 17143), (12, 17248), (13, 17269), (14, 17272), (17, 17302), (18, 17311), (22, 17365), (28, 17428), (30, 17434), (44, 17530), (48, 17581), (52, 17608), (63, 17662), (64, 17671), (69, 17686), (83, 17764), (86, 17800), (90, 17824), (111, 18019), (116, 18049), (134, 18154), (148, 18244), (152, 18268), (153, 18280), (156, 18301), (157, 18313), (160, 18340), (173, 18409), (180, 18445), (182, 18451), (185, 18481), (193, 18526), (197, 18547), (199, 18556), (202, 18580), (208, 18637), (220, 18757), (241, 18925), (248, 18979), (250, 19000), (252, 19018), (254, 19033), (257, 19060), (267, 19144), (277, 19267), (298, 19423), (301, 19450), (304, 19471), (308, 19501), (315, 19534), (321, 19555), (323, 19579), (324, 19582), (325, 19585), (327, 19606), (328, 19618), (330, 19657), (334, 19693), (344, 19744), (355, 19804), (356, 19837), (362, 19915), (363, 19924), (377, 20113), (378, 20119), (383, 20191), (384, 20221), (389, 20275), (394, 20317), (401, 20413), (406, 20497), (412, 20620), (421, 20740), (427, 20791), (452, 21244), (453, 21274), (455, 21331), (460, 21406), (466, 21472), (469, 21484), (478, 21568), (482, 21601), (485, 21622), (490, 21691), (534, 22387), (544, 22507), (545, 22510), (566, 22807), (571, 22825), (587, 23104), (591, 23131), (601, 23320), (611, 23392), (620, 23479), (623, 23500), (626, 23539), (629, 23581), (637, 23635), (638, 23644), (639, 23656), (649, 23719), (651, 23728), (658, 23767), (661, 23791), (666, 23893), (675, 23956), (676, 23980), (681, 24037), (682, 24046), (684, 24058),

Gene: Astralis_25 Start: 15496, Stop: 22344, Start Num: 11

Candidate Starts for Astralis_25:

(1, 15115), (Start: 2 @15136 has 29 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (50, 15862), (52, 15871), (58, 15913), (63, 15925), (69, 15949), (71, 15955), (75, 15976), (81, 16018), (87, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (137, 16426), (138, 16435), (153, 16540), (156, 16561), (157, 16573), (159, 16585), (160, 16600), (170, 16636), (182, 16711), (184, 16738), (199, 16816), (207, 16885), (208, 16897), (210, 16906), (241, 17185), (243, 17197), (246, 17221), (248, 17239), (250, 17260), (251, 17269), (254, 17293), (255, 17299), (257, 17320), (267, 17404), (274, 17500), (277, 17527), (281, 17560), (292, 17653), (298, 17683), (308, 17761), (309, 17764), (313, 17788), (317, 17800), (321, 17815), (323, 17839), (330, 17917), (331, 17929), (344, 18004), (346, 18007), (359, 18154), (361, 18169), (363, 18184), (373, 18283), (375, 18331), (377, 18379), (378, 18385), (380, 18430), (383, 18457), (394, 18583), (396, 18637), (401, 18679), (406, 18763), (410, 18850), (412, 18886), (421, 19006), (427, 19057), (436, 19216), (441, 19330), (452, 19507), (455, 19594), (466, 19735), (469, 19747), (478, 19831), (534, 20650), (536, 20683), (539, 20695), (544, 20773), (565, 21049), (567, 21061), (587, 21355), (592, 21397), (611, 21643), (623, 21751), (626, 21790), (627, 21793), (629, 21832), (632, 21856), (637, 21886), (638, 21895), (639, 21907), (649, 21970), (651, 21979), (658, 22018), (661, 22042), (675, 22207), (676, 22231), (682, 22297), (684, 22309),

Gene: Avian_25 Start: 15528, Stop: 22736, Start Num: 2

Candidate Starts for Avian_25:

(Start: 2 @15528 has 29 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (50, 16254), (52, 16263), (58, 16305), (63, 16317), (69, 16341), (71, 16347), (75, 16368), (81, 16410), (87, 16464), (88, 16467), (106, 16623), (120, 16725), (123, 16743), (127, 16770), (137, 16818), (138, 16827), (153, 16932), (156, 16953), (157, 16965),

(159, 16977), (160, 16992), (170, 17028), (176, 17073), (182, 17103), (184, 17130), (199, 17208), (207, 17277), (208, 17289), (210, 17298), (241, 17577), (243, 17589), (248, 17631), (250, 17652), (251, 17661), (254, 17685), (255, 17691), (257, 17712), (267, 17796), (274, 17892), (277, 17919), (281, 17952), (292, 18045), (298, 18075), (308, 18153), (309, 18156), (313, 18180), (317, 18192), (321, 18207), (323, 18231), (330, 18309), (331, 18321), (344, 18396), (346, 18399), (359, 18546), (361, 18561), (363, 18576), (373, 18675), (375, 18723), (377, 18771), (378, 18777), (380, 18822), (383, 18849), (394, 18975), (396, 19029), (401, 19071), (406, 19155), (410, 19242), (412, 19278), (421, 19398), (427, 19449), (436, 19608), (441, 19722), (452, 19899), (455, 19986), (466, 20127), (469, 20139), (478, 20223), (534, 21042), (536, 21075), (539, 21087), (544, 21165), (565, 21441), (567, 21453), (582, 21696), (587, 21747), (592, 21789), (611, 22035), (623, 22143), (626, 22182), (627, 22185), (629, 22224), (631, 22236), (637, 22278), (638, 22287), (639, 22299), (643, 22317), (651, 22371), (658, 22410), (661, 22434), (675, 22599), (676, 22623), (682, 22689), (684, 22701),

Gene: Barnyard_33 Start: 18111, Stop: 24254, Start Num: 20

Candidate Starts for Barnyard_33:

(Start: 20 @18111 has 5 MA's), (21, 18126), (26, 18180), (33, 18216), (35, 18237), (38, 18258), (40, 18267), (60, 18384), (69, 18405), (80, 18453), (92, 18555), (98, 18579), (103, 18600), (119, 18714), (121, 18723), (133, 18777), (138, 18807), (140, 18819), (144, 18843), (146, 18849), (150, 18870), (154, 18903), (155, 18909), (165, 18951), (168, 18963), (169, 18966), (174, 19005), (177, 19020), (178, 19023), (181, 19041), (192, 19113), (204, 19203), (205, 19206), (215, 19299), (216, 19302), (218, 19335), (220, 19356), (226, 19383), (228, 19389), (235, 19461), (239, 19491), (243, 19536), (245, 19551), (249, 19590), (259, 19653), (260, 19662), (262, 19692), (264, 19707), (269, 19743), (270, 19773), (271, 19794), (275, 19839), (279, 19863), (280, 19872), (282, 19887), (285, 19905), (286, 19908), (295, 19989), (296, 19995), (299, 20016), (307, 20076), (332, 20253), (347, 20328), (357, 20448), (358, 20463), (362, 20487), (363, 20496), (364, 20499), (368, 20550), (374, 20646), (385, 20814), (386, 20823), (387, 20844), (398, 20976), (408, 21150), (410, 21174), (412, 21210), (413, 21222), (414, 21234), (415, 21276), (416, 21285), (425, 21366), (428, 21387), (430, 21423), (432, 21429), (434, 21447), (439, 21549), (444, 21630), (447, 21681), (452, 21711), (458, 21804), (461, 21843), (480, 21984), (483, 22005), (491, 22095), (492, 22107), (497, 22188), (506, 22275), (510, 22302), (513, 22341), (517, 22359), (522, 22413), (523, 22425), (528, 22566), (530, 22614), (532, 22638), (538, 22728), (546, 22830), (553, 22944), (555, 22956), (557, 22989), (562, 23043), (564, 23073), (576, 23172), (577, 23184), (578, 23232), (593, 23337), (598, 23367), (599, 23388), (604, 23487), (613, 23565), (615, 23586), (616, 23592), (618, 23604), (620, 23637), (625, 23688), (626, 23697), (628, 23733), (629, 23739), (641, 23823), (642, 23826), (649, 23880), (651, 23889), (653, 23901), (656, 23922), (658, 23931), (662, 23988), (665, 24036), (666, 24057), (668, 24078), (674, 24114), (678, 24153), (682, 24204), (683, 24207), (684, 24216),

Gene: Beckerton_26 Start: 16772, Stop: 23095, Start Num: 19

Candidate Starts for Beckerton_26:

(Start: 19 @16772 has 9 MA's), (25, 16835), (36, 16916), (38, 16934), (57, 17081), (61, 17090), (65, 17102), (70, 17120), (77, 17165), (84, 17207), (87, 17237), (89, 17249), (112, 17435), (115, 17444), (147, 17654), (157, 17729), (174, 17831), (177, 17846), (183, 17876), (186, 17909), (189, 17927), (195, 17957), (200, 17981), (201, 17990), (207, 18053), (210, 18074), (211, 18080), (213, 18104), (227, 18215), (229, 18233), (231, 18254), (233, 18281), (246, 18389), (259, 18482), (260, 18491), (264, 18536), (271, 18623), (279, 18692), (299, 18845), (312, 18932), (331, 19079), (337, 19121), (340, 19130), (342, 19142), (345, 19151), (374, 19475), (377, 19532), (385, 19643), (392, 19718), (399, 19808), (413, 20051), (418, 20135), (419, 20147), (433, 20267), (436, 20327), (439, 20375), (440, 20396), (444, 20456), (452, 20537), (463, 20687), (483, 20846), (487, 20867), (489, 20912), (496, 20966), (499, 21074), (514, 21170), (516, 21179), (519, 21209), (520, 21212), (535, 21527), (561, 21800), (562, 21809), (572, 21884), (574, 21917), (575, 21929), (576, 21938), (581, 22061), (596, 22181), (600, 22265), (606, 22331), (612, 22376), (614, 22403), (629, 22565), (630, 22568), (635, 22607), (637, 22619), (638, 22628), (662, 22835), (673, 22949), (678, 22994), (682, 23045), (683, 23048), (684, 23057), (685, 23072),

Gene: Beyoncage_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Beyoncage_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665, 19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: BirthdayBoy_28 Start: 17583, Stop: 24797, Start Num: 2

Candidate Starts for BirthdayBoy_28:

(1, 17562), (Start: 2 @17583 has 29 MA's), (6, 17730), (9, 17844), (11, 17943), (13, 17979), (15, 17991), (24, 18090), (41, 18222), (52, 18318), (58, 18360), (63, 18372), (69, 18396), (71, 18402), (81, 18465), (87, 18519), (88, 18522), (105, 18675), (106, 18678), (120, 18780), (123, 18798), (127, 18825), (137, 18873), (138, 18882), (148, 18951), (153, 18987), (156, 19008), (157, 19020), (159, 19032), (160, 19047), (170, 19083), (182, 19158), (199, 19263), (207, 19332), (208, 19344), (210, 19353), (241, 19632), (243, 19644), (248, 19686), (250, 19707), (251, 19716), (254, 19740), (255, 19746), (257, 19767), (263, 19830), (267, 19851), (274, 19947), (277, 19974), (281, 20007), (308, 20208), (309, 20211), (313, 20235), (317, 20247), (321, 20262), (323, 20286), (330, 20364), (331, 20376), (344, 20451), (346, 20454), (359, 20601), (361, 20616), (363, 20631), (373, 20730), (375, 20778), (377, 20826), (378, 20832), (382, 20898), (383, 20904), (389, 20988), (394, 21030), (396, 21084), (401, 21126), (406, 21210), (412, 21333), (421, 21453), (427, 21504), (436, 21663), (441, 21777), (452, 21957), (454, 22017), (455, 22044), (460, 22119), (466, 22185), (469, 22197), (478, 22281), (482, 22314), (534, 23100), (536, 23133), (539, 23145), (544, 23223), (566, 23511), (571, 23529), (587, 23808), (611, 24096), (623, 24204), (626, 24243), (627, 24246), (629, 24285), (637, 24339), (638, 24348), (639, 24360), (643, 24378), (644, 24402), (651, 24432), (658, 24471), (661, 24495), (675, 24660), (676, 24684), (682, 24750), (684, 24762),

Gene: BiteSize_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for BiteSize_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665,

19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: Cborch11_27 Start: 16234, Stop: 22557, Start Num: 19

Candidate Starts for Cborch11_27:

(Start: 19 @16234 has 9 MA's), (25, 16297), (36, 16378), (38, 16396), (57, 16543), (61, 16552), (65, 16564), (77, 16627), (89, 16711), (112, 16897), (115, 16906), (121, 16963), (147, 17116), (157, 17191), (174, 17293), (177, 17308), (183, 17338), (186, 17371), (189, 17389), (195, 17419), (200, 17443), (201, 17452), (207, 17515), (210, 17536), (211, 17542), (213, 17566), (227, 17677), (229, 17695), (231, 17716), (233, 17743), (246, 17851), (259, 17944), (260, 17953), (264, 17998), (271, 18085), (279, 18154), (299, 18307), (312, 18394), (331, 18541), (337, 18583), (340, 18592), (342, 18604), (345, 18613), (374, 18937), (377, 18994), (385, 19105), (392, 19180), (399, 19270), (413, 19513), (419, 19609), (433, 19729), (436, 19789), (439, 19837), (440, 19858), (444, 19918), (452, 19999), (463, 20149), (483, 20308), (487, 20329), (489, 20374), (496, 20428), (499, 20536), (514, 20632), (516, 20641), (519, 20671), (520, 20674), (535, 20989), (561, 21262), (562, 21271), (572, 21346), (574, 21379), (575, 21391), (576, 21400), (581, 21523), (596, 21643), (600, 21727), (606, 21793), (612, 21838), (614, 21865), (629, 22027), (630, 22030), (635, 22069), (637, 22081), (638, 22090), (662, 22297), (673, 22411), (678, 22456), (682, 22507), (683, 22510), (684, 22519), (685, 22534),

Gene: Damien_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Damien_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (57, 16544), (61, 16553), (65, 16565), (77, 16628), (89, 16712), (112, 16898), (115, 16907), (147, 17117), (157, 17192), (174, 17294), (177, 17309), (183, 17339), (186, 17372), (189, 17390), (195, 17420), (200, 17444), (201, 17453), (207, 17516), (210, 17537), (211, 17543), (213, 17567), (227, 17678), (229, 17696), (231, 17717), (233, 17744), (246, 17852), (259, 17945), (260, 17954), (264, 17999), (271, 18086), (279, 18155), (297, 18293), (299, 18308), (312, 18395), (331, 18542), (337, 18584), (340, 18593), (342, 18605), (345, 18614), (374, 18938), (377, 18995), (385, 19106), (392, 19181), (399, 19271), (413, 19514), (418, 19598), (419, 19610), (433, 19730), (436, 19790), (439, 19838), (440, 19859), (444, 19919), (452, 20000), (463, 20150), (483, 20309), (487, 20330), (489, 20375), (496, 20429), (499, 20537), (514, 20633), (516, 20642), (519, 20672), (520, 20675), (535, 20990), (561, 21263), (562, 21272), (572, 21347), (574, 21380), (575, 21392), (576, 21401), (581, 21524), (596, 21644), (600, 21728), (606, 21794), (612, 21839), (614, 21866), (629, 22028), (630, 22031), (635, 22070), (637, 22082), (638, 22091), (662, 22298), (673, 22412), (678, 22457), (682, 22508), (683, 22511), (684, 22520), (685, 22535),

Gene: DaviePasture_27 Start: 17352, Stop: 24563, Start Num: 2

Candidate Starts for DaviePasture_27:

(1, 17331), (Start: 2 @17352 has 29 MA's), (6, 17499), (9, 17613), (11, 17712), (13, 17748), (15, 17760), (24, 17859), (41, 17991), (45, 18018), (46, 18021), (50, 18078), (52, 18087), (58, 18129), (63, 18141), (69, 18165), (71, 18171), (81, 18234), (87, 18288), (88, 18291), (105, 18444), (106, 18447), (120, 18549), (123, 18567), (127, 18594), (137, 18642), (138, 18651), (148, 18720), (153, 18756), (156, 18777), (157, 18789), (159, 18801), (160, 18816), (170, 18852), (176, 18897), (182, 18927), (199, 19032), (207, 19101), (208, 19113), (210, 19122), (243, 19413), (246, 19437), (248, 19455), (250, 19476), (251, 19485), (254, 19509), (255, 19515), (257, 19536), (267, 19620), (274, 19716), (277, 19743), (281, 19776), (285, 19797), (298, 19899), (308, 19977), (309, 19980), (313, 20004), (317, 20016), (321, 20031), (323, 20055), (330, 20133), (331, 20145), (344, 20220), (346, 20223), (359, 20370), (361, 20385), (363, 20400), (373, 20499), (375, 20547), (377, 20595), (378, 20601), (383, 20673), (389, 20757), (394, 20799), (396, 20853), (401, 20895), (406, 20979), (412, 21102), (421, 21222), (422, 21228), (427, 21273), (436, 21432), (441, 21546), (446, 21660), (452, 21714), (455, 21801), (456, 21810), (464, 21933), (466, 21942), (469, 21954), (478, 22038), (503, 22347), (534, 22857), (539, 22902), (544, 22977), (566, 23277), (571, 23295), (587, 23574), (592, 23616),

(611, 23862), (623, 23970), (626, 24009), (627, 24012), (629, 24051), (637, 24105), (638, 24114), (639, 24126), (643, 24144), (644, 24168), (651, 24198), (658, 24237), (661, 24261), (675, 24426), (676, 24450), (682, 24516), (684, 24528),

Gene: Djokovic_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Djokovic_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665, 19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: DoobyDoo_26 Start: 16517, Stop: 23719, Start Num: 2

Candidate Starts for DoobyDoo_26:

(1, 16496), (Start: 2 @16517 has 29 MA's), (6, 16664), (9, 16778), (11, 16877), (13, 16913), (15, 16925), (24, 17024), (41, 17156), (45, 17183), (46, 17186), (52, 17252), (58, 17294), (63, 17306), (69, 17330), (71, 17336), (81, 17399), (87, 17453), (88, 17456), (105, 17609), (106, 17612), (120, 17714), (123, 17732), (127, 17759), (137, 17807), (138, 17816), (148, 17885), (153, 17921), (156, 17942), (157, 17954), (159, 17966), (160, 17981), (170, 18017), (182, 18092), (183, 18098), (199, 18197), (207, 18266), (208, 18278), (210, 18287), (243, 18578), (248, 18620), (250, 18641), (251, 18650), (254, 18674), (255, 18680), (257, 18701), (263, 18764), (267, 18785), (274, 18881), (277, 18908), (281, 18941), (308, 19142), (309, 19145), (313, 19169), (317, 19181), (321, 19196), (323, 19220), (330, 19298), (331, 19310), (346, 19388), (359, 19535), (361, 19550), (363, 19565), (373, 19664), (375, 19712), (377, 19760), (378, 19766), (380, 19811), (383, 19838), (389, 19922), (394, 19964), (396, 20018), (401, 20060), (406, 20144), (412, 20267), (421, 20387), (427, 20438), (436, 20597), (441, 20711), (452, 20879), (455, 20966), (456, 20975), (466, 21107), (469, 21119), (478, 21203), (482, 21236), (503, 21512), (534, 22022), (536, 22055), (539, 22067), (544, 22145), (566, 22433), (568, 22442), (571, 22451), (587, 22730), (592, 22772), (611, 23018), (623, 23126), (626, 23165), (627, 23168), (629, 23207), (637, 23261), (638, 23270), (639, 23282), (643, 23300), (644, 23324), (651, 23354), (658, 23393), (661, 23417), (675, 23582), (676, 23606), (682, 23672), (684, 23684),

Gene: DrLupo_35 Start: 18517, Stop: 24654, Start Num: 20

Candidate Starts for DrLupo_35:

(Start: 20 @18517 has 5 MA's), (26, 18586), (33, 18622), (35, 18643), (38, 18664), (40, 18673), (51, 18748), (60, 18790), (69, 18811), (80, 18859), (92, 18961), (98, 18985), (103, 19006), (113, 19078), (119, 19120), (121, 19129), (133, 19183), (137, 19204), (139, 19216), (140, 19225), (143, 19240), (150, 19276), (153, 19297), (155, 19315), (174, 19411), (178, 19429), (179, 19435), (181, 19447), (204, 19609), (205, 19612), (207, 19630), (215, 19705), (216, 19708), (222, 19774), (228, 19795), (238, 19882), (243, 19942), (244, 19951), (247, 19975), (248, 19984), (259, 20059), (260, 20068), (262, 20098), (264, 20113), (269, 20149), (270, 20179), (271, 20200), (276, 20248), (280, 20278), (287, 20323), (291, 20365), (295, 20395), (296, 20401), (307, 20482), (308, 20488), (319, 20530), (328, 20605), (341, 20713), (347, 20734), (349, 20740), (355, 20782), (357, 20854), (358, 20869), (362, 20893), (363, 20902), (364, 20905), (374, 21052), (381, 21178), (385, 21220), (386, 21229),

(387, 21250), (390, 21289), (396, 21367), (397, 21376), (408, 21556), (410, 21580), (412, 21616), (413, 21628), (414, 21640), (416, 21691), (427, 21787), (428, 21793), (438, 21925), (439, 21955), (441, 21997), (443, 22030), (452, 22117), (483, 22411), (489, 22477), (495, 22522), (500, 22642), (501, 22657), (518, 22762), (519, 22780), (522, 22813), (528, 22966), (532, 23038), (541, 23167), (549, 23272), (554, 23347), (555, 23356), (557, 23389), (558, 23401), (561, 23434), (562, 23443), (564, 23473), (574, 23551), (576, 23572), (577, 23584), (598, 23767), (608, 23917), (609, 23926), (613, 23965), (619, 24007), (620, 24037), (625, 24088), (626, 24097), (628, 24133), (629, 24139), (641, 24223), (651, 24289), (652, 24292), (653, 24301), (656, 24322), (662, 24388), (663, 24412), (665, 24436), (666, 24457), (668, 24478), (674, 24514), (679, 24559), (682, 24604), (683, 24607), (684, 24616),

Gene: DumpTruck_26 Start: 16770, Stop: 24029, Start Num: 2

Candidate Starts for DumpTruck_26:

(1, 16749), (Start: 2 @16770 has 29 MA's), (5, 16914), (6, 16917), (8, 16989), (13, 17166), (14, 17169), (15, 17178), (16, 17193), (17, 17199), (22, 17262), (23, 17271), (25, 17283), (28, 17325), (48, 17478), (50, 17496), (54, 17517), (58, 17547), (67, 17577), (69, 17583), (73, 17598), (78, 17640), (81, 17652), (83, 17661), (85, 17685), (87, 17706), (90, 17721), (91, 17739), (95, 17775), (99, 17802), (105, 17862), (117, 17964), (118, 17967), (120, 17988), (123, 18006), (126, 18021), (129, 18042), (130, 18051), (136, 18087), (138, 18099), (145, 18153), (152, 18192), (153, 18204), (156, 18225), (160, 18264), (161, 18267), (164, 18279), (169, 18297), (171, 18321), (182, 18375), (196, 18465), (199, 18480), (208, 18561), (217, 18636), (223, 18699), (241, 18849), (248, 18903), (250, 18924), (251, 18933), (256, 18972), (259, 18990), (267, 19065), (281, 19221), (282, 19224), (308, 19431), (323, 19509), (330, 19587), (336, 19641), (348, 19683), (355, 19734), (362, 19845), (363, 19854), (367, 19896), (371, 19929), (373, 19953), (377, 20043), (378, 20049), (383, 20121), (384, 20151), (394, 20247), (401, 20343), (405, 20415), (406, 20427), (412, 20550), (421, 20670), (456, 21288), (465, 21414), (467, 21423), (468, 21429), (469, 21432), (471, 21462), (474, 21486), (476, 21495), (478, 21516), (485, 21570), (488, 21612), (504, 21831), (506, 21849), (525, 22125), (527, 22173), (529, 22224), (534, 22335), (536, 22368), (539, 22380), (544, 22458), (570, 22758), (571, 22761), (595, 23145), (611, 23328), (621, 23418), (637, 23571), (649, 23655), (655, 23685), (675, 23892), (676, 23916), (681, 23973),

Gene: Erutan_27 Start: 17030, Stop: 24241, Start Num: 2

Candidate Starts for Erutan_27:

(1, 17009), (Start: 2 @17030 has 29 MA's), (6, 17177), (9, 17291), (11, 17390), (13, 17426), (15, 17438), (24, 17537), (41, 17669), (45, 17696), (50, 17756), (52, 17765), (58, 17807), (63, 17819), (69, 17843), (71, 17849), (81, 17912), (83, 17921), (87, 17966), (88, 17969), (105, 18122), (106, 18125), (120, 18227), (123, 18245), (127, 18272), (137, 18320), (138, 18329), (148, 18398), (153, 18434), (156, 18455), (157, 18467), (159, 18479), (160, 18494), (170, 18530), (182, 18605), (199, 18710), (207, 18779), (208, 18791), (210, 18800), (243, 19091), (248, 19133), (250, 19154), (251, 19163), (254, 19187), (255, 19193), (257, 19214), (263, 19277), (267, 19298), (274, 19394), (277, 19421), (281, 19454), (292, 19547), (298, 19577), (308, 19655), (309, 19658), (313, 19682), (317, 19694), (321, 19709), (323, 19733), (330, 19811), (331, 19823), (346, 19901), (359, 20048), (361, 20063), (363, 20078), (373, 20177), (375, 20225), (377, 20273), (378, 20279), (383, 20351), (389, 20435), (394, 20477), (396, 20531), (401, 20573), (406, 20657), (412, 20780), (421, 20900), (427, 20951), (436, 21110), (441, 21224), (452, 21404), (455, 21491), (460, 21566), (466, 21632), (469, 21644), (478, 21728), (482, 21761), (485, 21782), (534, 22547), (536, 22580), (539, 22592), (544, 22670), (565, 22946), (567, 22958), (574, 23024), (591, 23279), (607, 23516), (611, 23540), (623, 23648), (626, 23687), (629, 23729), (636, 23774), (637, 23783), (638, 23792), (639, 23804), (649, 23867), (651, 23876), (658, 23915), (661, 23939), (675, 24104), (676, 24128), (681, 24185), (682, 24194), (684, 24206),

Gene: Fulcrum_28 Start: 17563, Stop: 24765, Start Num: 2

Candidate Starts for Fulcrum_28:

(1, 17542), (Start: 2 @17563 has 29 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (52, 18298), (58, 18340), (63, 18352), (69, 18376), (71, 18382), (81, 18445), (87, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (138, 18862), (148, 18931), (153, 18967), (156, 18988), (157, 19000), (159, 19012), (160, 19027), (170, 19063), (182, 19138), (183, 19144), (199, 19243), (207, 19312), (208, 19324), (210, 19333), (243, 19624), (248, 19666), (250, 19687), (251, 19696), (254, 19720), (255, 19726), (257, 19747), (263, 19810), (267, 19831), (274, 19927), (277, 19954), (281, 19987), (292, 20080), (298, 20110), (301, 20137), (308, 20188), (309, 20191), (310, 20197), (313, 20215), (317, 20227), (321, 20242), (323, 20266), (330, 20344), (331, 20356), (344, 20431), (346, 20434), (359, 20581), (361, 20596), (363, 20611), (373, 20710), (375, 20758), (377, 20806), (378, 20812), (383, 20884), (389, 20968), (394, 21010), (396, 21064), (401, 21106), (406, 21190), (412, 21313), (421, 21433), (427, 21484), (436, 21643), (441, 21757), (452, 21925), (454, 21985), (455, 22012), (456, 22021), (466, 22153), (469, 22165), (478, 22249), (503, 22558), (505, 22570), (534, 23068), (536, 23101), (539, 23113), (544, 23191), (566, 23479), (571, 23497), (587, 23776), (611, 24064), (623, 24172), (626, 24211), (627, 24214), (629, 24253), (637, 24307), (638, 24316), (639, 24328), (643, 24346), (644, 24370), (651, 24400), (658, 24439), (661, 24463), (675, 24628), (676, 24652), (682, 24718), (684, 24730),

Gene: GOATification_28 Start: 17563, Stop: 24765, Start Num: 2

Candidate Starts for GOATification_28:

(1, 17542), (Start: 2 @17563 has 29 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (52, 18298), (58, 18340), (63, 18352), (69, 18376), (71, 18382), (81, 18445), (87, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (138, 18862), (148, 18931), (153, 18967), (156, 18988), (157, 19000), (159, 19012), (160, 19027), (170, 19063), (182, 19138), (183, 19144), (199, 19243), (207, 19312), (208, 19324), (210, 19333), (243, 19624), (248, 19666), (250, 19687), (251, 19696), (254, 19720), (255, 19726), (257, 19747), (263, 19810), (267, 19831), (274, 19927), (277, 19954), (281, 19987), (292, 20080), (298, 20110), (301, 20137), (308, 20188), (309, 20191), (310, 20197), (313, 20215), (317, 20227), (321, 20242), (323, 20266), (330, 20344), (331, 20356), (344, 20431), (346, 20434), (359, 20581), (361, 20596), (363, 20611), (373, 20710), (375, 20758), (377, 20806), (378, 20812), (383, 20884), (389, 20968), (394, 21010), (396, 21064), (401, 21106), (406, 21190), (412, 21313), (421, 21433), (427, 21484), (436, 21643), (441, 21757), (452, 21925), (454, 21985), (455, 22012), (456, 22021), (466, 22153), (469, 22165), (478, 22249), (503, 22558), (505, 22570), (534, 23068), (536, 23101), (539, 23113), (544, 23191), (566, 23479), (571, 23497), (587, 23776), (611, 24064), (623, 24172), (626, 24211), (627, 24214), (629, 24253), (637, 24307), (638, 24316), (639, 24328), (643, 24346), (644, 24370), (651, 24400), (658, 24439), (661, 24463), (675, 24628), (676, 24652), (682, 24718), (684, 24730),

Gene: Genamy16_27 Start: 15546, Stop: 22754, Start Num: 2

Candidate Starts for Genamy16_27:

(Start: 2 @15546 has 29 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (50, 16272), (52, 16281), (58, 16323), (63, 16335), (69, 16359), (71, 16365), (75, 16386), (81, 16428), (87, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (137, 16836), (138, 16845), (153, 16950), (156, 16971), (157, 16983), (159, 16995), (160, 17010), (170, 17046), (182, 17121), (184, 17148), (199, 17226), (207, 17295), (208, 17307), (210, 17316), (241, 17595), (243, 17607), (248, 17649), (250, 17670), (251, 17679), (254, 17703), (255, 17709), (257, 17730), (267, 17814), (274, 17910), (277, 17937), (281, 17970), (292, 18063), (298, 18093), (308, 18171), (309, 18174), (313, 18198), (317, 18210), (321, 18225), (323, 18249), (330, 18327), (331, 18339), (344, 18414), (346, 18417), (359, 18564), (361, 18579), (363, 18594), (373, 18693), (375, 18741), (377, 18789), (378, 18795), (380, 18840), (383, 18867), (394, 18993), (396, 19047), (401, 19089), (406, 19173), (410, 19260), (412, 19296), (421, 19416), (427, 19467), (436, 19626), (441, 19740), (452, 19917), (455, 20004), (466, 20145), (469, 20157), (478, 20241), (534, 21060), (536, 21093), (539, 21105), (544, 21183), (565, 21459), (567, 21471), (582, 21714), (587, 21765), (592, 21807), (611, 22053), (623, 22161), (626, 22200), (627, 22203), (629, 22242), (632, 22266), (637, 22296), (638, 22305), (639, 22317), (649, 22380),

(651, 22389), (658, 22428), (661, 22452), (675, 22617), (676, 22641), (682, 22707), (684, 22719),

Gene: Gibbin_28 Start: 17635, Stop: 24846, Start Num: 2

Candidate Starts for Gibbin_28:

(1, 17614), (Start: 2 @17635 has 29 MA's), (6, 17782), (9, 17896), (11, 17995), (13, 18031), (15, 18043), (24, 18142), (41, 18274), (45, 18301), (46, 18304), (52, 18370), (58, 18412), (63, 18424), (69, 18448), (71, 18454), (81, 18517), (87, 18571), (88, 18574), (105, 18727), (106, 18730), (123, 18850), (127, 18877), (138, 18934), (148, 19003), (153, 19039), (156, 19060), (157, 19072), (159, 19084), (160, 19099), (170, 19135), (182, 19210), (199, 19315), (207, 19384), (208, 19396), (210, 19405), (243, 19696), (248, 19738), (250, 19759), (251, 19768), (254, 19792), (255, 19798), (257, 19819), (267, 19903), (274, 19999), (277, 20026), (281, 20059), (292, 20152), (298, 20182), (301, 20209), (308, 20260), (309, 20263), (313, 20287), (314, 20290), (317, 20299), (321, 20314), (323, 20338), (330, 20416), (331, 20428), (344, 20503), (346, 20506), (359, 20653), (361, 20668), (363, 20683), (373, 20782), (375, 20830), (377, 20878), (378, 20884), (383, 20956), (389, 21040), (394, 21082), (396, 21136), (401, 21178), (406, 21262), (412, 21385), (421, 21505), (427, 21556), (436, 21715), (441, 21829), (452, 21997), (455, 22084), (456, 22093), (466, 22225), (469, 22237), (478, 22321), (482, 22354), (503, 22630), (534, 23140), (539, 23185), (544, 23260), (566, 23560), (571, 23578), (587, 23857), (592, 23899), (611, 24145), (623, 24253), (626, 24292), (627, 24295), (629, 24334), (637, 24388), (638, 24397), (639, 24409), (643, 24427), (644, 24451), (649, 24472), (651, 24481), (658, 24520), (661, 24544), (675, 24709), (676, 24733), (682, 24799), (684, 24811),

Gene: Gretellyn_27 Start: 17897, Stop: 25108, Start Num: 2

Candidate Starts for Gretellyn_27:

(1, 17876), (Start: 2 @17897 has 29 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (52, 18632), (58, 18674), (63, 18686), (69, 18710), (71, 18716), (81, 18779), (87, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (137, 19187), (138, 19196), (148, 19265), (153, 19301), (156, 19322), (157, 19334), (159, 19346), (160, 19361), (170, 19397), (173, 19430), (176, 19442), (182, 19472), (199, 19577), (207, 19646), (208, 19658), (210, 19667), (243, 19958), (246, 19982), (248, 20000), (250, 20021), (251, 20030), (254, 20054), (255, 20060), (257, 20081), (267, 20165), (274, 20261), (277, 20288), (281, 20321), (285, 20342), (292, 20414), (298, 20444), (301, 20471), (308, 20522), (309, 20525), (313, 20549), (317, 20561), (321, 20576), (323, 20600), (330, 20678), (331, 20690), (344, 20765), (346, 20768), (359, 20915), (361, 20930), (363, 20945), (373, 21044), (375, 21092), (377, 21140), (378, 21146), (383, 21218), (389, 21302), (394, 21344), (396, 21398), (401, 21440), (406, 21524), (412, 21647), (421, 21767), (427, 21818), (436, 21977), (441, 22091), (452, 22259), (455, 22346), (456, 22355), (466, 22487), (469, 22499), (478, 22583), (503, 22892), (534, 23402), (539, 23447), (544, 23522), (566, 23822), (571, 23840), (587, 24119), (611, 24407), (623, 24515), (626, 24554), (627, 24557), (629, 24596), (637, 24650), (638, 24659), (639, 24671), (643, 24689), (644, 24713), (651, 24743), (658, 24782), (661, 24806), (675, 24971), (676, 24995), (682, 25061), (684, 25073),

Gene: Jalebi_26 Start: 18073, Stop: 25275, Start Num: 2

Candidate Starts for Jalebi_26:

(1, 18052), (Start: 2 @18073 has 29 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (50, 18799), (52, 18808), (58, 18850), (63, 18862), (69, 18886), (71, 18892), (75, 18913), (81, 18955), (87, 19009), (88, 19012), (105, 19165), (106, 19168), (120, 19270), (123, 19288), (127, 19315), (137, 19363), (138, 19372), (148, 19441), (153, 19477), (156, 19498), (157, 19510), (159, 19522), (160, 19537), (170, 19573), (182, 19648), (199, 19753), (207, 19822), (208, 19834), (210, 19843), (243, 20134), (246, 20158), (248, 20176), (250, 20197), (251, 20206), (254, 20230), (255, 20236), (257, 20257), (267, 20341), (274, 20437), (277, 20464), (281, 20497), (292, 20590), (298, 20620), (301, 20647), (308, 20698), (309, 20701), (313, 20725), (317, 20737), (321, 20752), (323, 20776), (330, 20854), (331, 20866), (344, 20941), (346, 20944), (359, 21091), (361, 21106), (363, 21121), (373, 21220), (375, 21268), (377, 21316),

(378, 21322), (383, 21394), (389, 21478), (394, 21520), (396, 21574), (401, 21616), (406, 21700), (412, 21823), (421, 21943), (427, 21994), (436, 22153), (441, 22267), (452, 22435), (455, 22522), (456, 22531), (466, 22663), (469, 22675), (478, 22759), (482, 22792), (503, 23068), (534, 23578), (536, 23611), (539, 23623), (544, 23701), (566, 23989), (571, 24007), (587, 24286), (592, 24328), (611, 24574), (623, 24682), (626, 24721), (627, 24724), (629, 24763), (637, 24817), (638, 24826), (639, 24838), (643, 24856), (644, 24880), (651, 24910), (658, 24949), (661, 24973), (675, 25138), (676, 25162), (682, 25228), (684, 25240),

Gene: Jamemuya19_25 Start: 15496, Stop: 22344, Start Num: 11

Candidate Starts for Jamemuya19_25:

(1, 15115), (Start: 2 @15136 has 29 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (50, 15862), (52, 15871), (58, 15913), (63, 15925), (69, 15949), (71, 15955), (75, 15976), (81, 16018), (87, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (137, 16426), (138, 16435), (153, 16540), (156, 16561), (157, 16573), (159, 16585), (160, 16600), (170, 16636), (176, 16681), (182, 16711), (184, 16738), (199, 16816), (207, 16885), (208, 16897), (210, 16906), (241, 17185), (243, 17197), (248, 17239), (250, 17260), (251, 17269), (254, 17293), (255, 17299), (257, 17320), (267, 17404), (274, 17500), (277, 17527), (281, 17560), (292, 17653), (298, 17683), (308, 17761), (309, 17764), (313, 17788), (317, 17800), (321, 17815), (323, 17839), (330, 17917), (331, 17929), (344, 18004), (346, 18007), (359, 18154), (361, 18169), (363, 18184), (373, 18283), (375, 18331), (377, 18379), (378, 18385), (380, 18430), (383, 18457), (394, 18583), (396, 18637), (401, 18679), (406, 18763), (410, 18850), (412, 18886), (421, 19006), (427, 19057), (436, 19216), (441, 19330), (452, 19507), (455, 19594), (466, 19735), (469, 19747), (478, 19831), (534, 20650), (536, 20683), (539, 20695), (544, 20773), (565, 21049), (567, 21061), (587, 21355), (592, 21397), (611, 21643), (623, 21751), (626, 21790), (627, 21793), (629, 21832), (632, 21856), (637, 21886), (638, 21895), (639, 21907), (649, 21970), (651, 21979), (658, 22018), (661, 22042), (675, 22207), (676, 22231), (682, 22297), (684, 22309),

Gene: Konstantine_31 Start: 17436, Stop: 23759, Start Num: 19

Candidate Starts for Konstantine_31:

(Start: 19 @17436 has 9 MA's), (25, 17499), (36, 17580), (38, 17598), (57, 17745), (61, 17754), (65, 17766), (77, 17829), (89, 17913), (112, 18099), (115, 18108), (147, 18318), (157, 18393), (174, 18495), (177, 18510), (183, 18540), (186, 18573), (189, 18591), (195, 18621), (196, 18624), (200, 18645), (201, 18654), (207, 18717), (210, 18738), (211, 18744), (213, 18768), (227, 18879), (229, 18897), (231, 18918), (233, 18945), (246, 19053), (259, 19146), (260, 19155), (264, 19200), (271, 19287), (279, 19356), (297, 19494), (299, 19509), (312, 19596), (331, 19743), (337, 19785), (340, 19794), (342, 19806), (345, 19815), (374, 20139), (377, 20196), (385, 20307), (392, 20382), (399, 20472), (413, 20715), (419, 20811), (433, 20931), (436, 20991), (439, 21039), (440, 21060), (444, 21120), (452, 21201), (463, 21351), (483, 21510), (487, 21531), (489, 21576), (496, 21630), (499, 21738), (514, 21834), (516, 21843), (519, 21873), (520, 21876), (535, 22191), (561, 22464), (562, 22473), (572, 22548), (574, 22581), (575, 22593), (576, 22602), (581, 22725), (596, 22845), (600, 22929), (606, 22995), (612, 23040), (614, 23067), (629, 23229), (630, 23232), (635, 23271), (637, 23283), (638, 23292), (662, 23499), (673, 23613), (678, 23658), (682, 23709), (683, 23712), (684, 23721), (685, 23736),

Gene: Labelle_33 Start: 19567, Stop: 26214, Start Num: 20

Candidate Starts for Labelle_33:

(Start: 20 @19567 has 5 MA's), (29, 19660), (31, 19672), (32, 19681), (37, 19714), (42, 19756), (55, 19861), (66, 19918), (68, 19924), (70, 19930), (79, 19987), (80, 19993), (82, 19999), (104, 20197), (108, 20227), (109, 20239), (114, 20275), (135, 20416), (149, 20512), (155, 20560), (170, 20638), (171, 20662), (177, 20695), (184, 20746), (190, 20779), (198, 20818), (208, 20908), (213, 20947), (214, 20959), (218, 21007), (222, 21040), (232, 21106), (240, 21175), (242, 21199), (244, 21217), (247, 21241), (258, 21322), (260, 21334), (271, 21469), (272, 21478), (282, 21562), (288, 21604), (298, 21682), (304, 21727), (327, 21883), (329, 21904), (331, 21946), (341, 22009), (357, 22165),

(360, 22192), (363, 22213), (364, 22216), (366, 22255), (368, 22267), (376, 22402), (379, 22459), (388, 22585), (393, 22627), (395, 22678), (403, 22762), (412, 22933), (413, 22945), (420, 23053), (426, 23107), (428, 23119), (437, 23257), (459, 23620), (473, 23755), (484, 23839), (511, 24169), (512, 24202), (515, 24211), (548, 24721), (550, 24748), (553, 24796), (559, 24853), (570, 24952), (580, 25138), (599, 25324), (617, 25534), (629, 25675), (633, 25705), (647, 25807), (651, 25846), (654, 25861), (665, 25993), (667, 26017), (669, 26041), (677, 26101), (679, 26119), (680, 26152), (682, 26164), (683, 26167), (685, 26191),

Gene: Lambo_27 Start: 17575, Stop: 24783, Start Num: 2

Candidate Starts for Lambo_27:

(1, 17554), (Start: 2 @17575 has 29 MA's), (6, 17722), (9, 17836), (11, 17935), (13, 17971), (15, 17983), (24, 18082), (41, 18214), (50, 18301), (52, 18310), (58, 18352), (63, 18364), (69, 18388), (71, 18394), (81, 18457), (83, 18466), (87, 18511), (88, 18514), (105, 18667), (106, 18670), (120, 18772), (123, 18790), (127, 18817), (137, 18865), (138, 18874), (148, 18943), (153, 18979), (156, 19000), (157, 19012), (159, 19024), (160, 19039), (170, 19075), (182, 19150), (199, 19255), (207, 19324), (208, 19336), (210, 19345), (243, 19636), (248, 19678), (250, 19699), (251, 19708), (254, 19732), (255, 19738), (257, 19759), (267, 19843), (274, 19939), (277, 19966), (281, 19999), (292, 20092), (298, 20122), (301, 20149), (308, 20200), (309, 20203), (313, 20227), (317, 20239), (321, 20254), (323, 20278), (330, 20356), (331, 20368), (344, 20443), (359, 20593), (361, 20608), (363, 20623), (373, 20722), (375, 20770), (377, 20818), (378, 20824), (383, 20896), (389, 20980), (394, 21022), (396, 21076), (401, 21118), (406, 21202), (412, 21325), (421, 21445), (427, 21496), (441, 21769), (452, 21946), (455, 22033), (460, 22108), (466, 22174), (469, 22186), (478, 22270), (482, 22303), (485, 22324), (534, 23089), (536, 23122), (539, 23134), (544, 23212), (563, 23476), (565, 23488), (567, 23500), (592, 23836), (611, 24082), (620, 24169), (623, 24190), (626, 24229), (629, 24271), (636, 24316), (637, 24325), (638, 24334), (639, 24346), (649, 24409), (651, 24418), (658, 24457), (661, 24481), (675, 24646), (676, 24670), (681, 24727), (682, 24736), (684, 24748),

Gene: LavAbarElk_25 Start: 16012, Stop: 23214, Start Num: 2

Candidate Starts for LavAbarElk_25:

(1, 15991), (Start: 2 @16012 has 29 MA's), (6, 16159), (9, 16273), (11, 16372), (13, 16408), (15, 16420), (24, 16519), (41, 16651), (45, 16678), (46, 16681), (52, 16747), (58, 16789), (63, 16801), (69, 16825), (71, 16831), (81, 16894), (87, 16948), (88, 16951), (105, 17104), (106, 17107), (120, 17209), (123, 17227), (127, 17254), (137, 17302), (138, 17311), (148, 17380), (153, 17416), (156, 17437), (157, 17449), (159, 17461), (160, 17476), (170, 17512), (182, 17587), (183, 17593), (199, 17692), (207, 17761), (208, 17773), (210, 17782), (243, 18073), (248, 18115), (250, 18136), (251, 18145), (254, 18169), (255, 18175), (257, 18196), (267, 18280), (274, 18376), (277, 18403), (281, 18436), (292, 18529), (298, 18559), (301, 18586), (308, 18637), (309, 18640), (313, 18664), (317, 18676), (321, 18691), (323, 18715), (330, 18793), (331, 18805), (344, 18880), (346, 18883), (359, 19030), (361, 19045), (363, 19060), (373, 19159), (375, 19207), (377, 19255), (378, 19261), (383, 19333), (389, 19417), (394, 19459), (396, 19513), (401, 19555), (406, 19639), (412, 19762), (421, 19882), (427, 19933), (436, 20092), (441, 20206), (452, 20374), (454, 20434), (455, 20461), (456, 20470), (466, 20602), (469, 20614), (478, 20698), (482, 20731), (503, 21007), (534, 21517), (536, 21550), (539, 21562), (544, 21640), (566, 21928), (571, 21946), (587, 22225), (592, 22267), (611, 22513), (623, 22621), (626, 22660), (627, 22663), (629, 22702), (637, 22756), (638, 22765), (639, 22777), (643, 22795), (644, 22819), (651, 22849), (658, 22888), (661, 22912), (675, 23077), (676, 23101), (682, 23167), (684, 23179),

Gene: Lila22_26 Start: 17521, Stop: 24735, Start Num: 2

Candidate Starts for Lila22_26:

(1, 17500), (Start: 2 @17521 has 29 MA's), (6, 17668), (9, 17782), (11, 17881), (13, 17917), (15, 17929), (24, 18028), (41, 18160), (52, 18256), (58, 18298), (63, 18310), (69, 18334), (71, 18340), (81, 18403), (87, 18457), (88, 18460), (105, 18613), (106, 18616), (120, 18718), (123, 18736), (127, 18763), (137, 18811), (138, 18820), (148, 18889), (153, 18925), (156, 18946), (157, 18958), (159,

18970), (160, 18985), (170, 19021), (182, 19096), (199, 19201), (207, 19270), (208, 19282), (210, 19291), (243, 19582), (248, 19624), (250, 19645), (251, 19654), (254, 19678), (255, 19684), (257, 19705), (267, 19789), (274, 19885), (277, 19912), (281, 19945), (285, 19966), (298, 20068), (308, 20146), (309, 20149), (313, 20173), (317, 20185), (321, 20200), (323, 20224), (330, 20302), (331, 20314), (346, 20392), (359, 20539), (361, 20554), (363, 20569), (373, 20668), (375, 20716), (377, 20764), (378, 20770), (383, 20842), (389, 20926), (394, 20968), (396, 21022), (401, 21064), (406, 21148), (412, 21271), (421, 21391), (427, 21442), (436, 21601), (441, 21715), (452, 21895), (455, 21982), (456, 21991), (466, 22123), (469, 22135), (478, 22219), (482, 22252), (503, 22528), (534, 23038), (536, 23071), (539, 23083), (544, 23161), (566, 23449), (571, 23467), (587, 23746), (592, 23788), (611, 24034), (623, 24142), (626, 24181), (627, 24184), (629, 24223), (637, 24277), (638, 24286), (639, 24298), (643, 24316), (644, 24340), (651, 24370), (658, 24409), (661, 24433), (672, 24583), (675, 24598), (676, 24622), (682, 24688), (684, 24700),

Gene: LilyPad_23 Start: 13210, Stop: 19905, Start Num: 47

Candidate Starts for LilyPad_23:

(43, 13186), (Start: 47 @13210 has 9 MA's), (53, 13279), (62, 13321), (72, 13354), (76, 13384), (83, 13426), (97, 13552), (98, 13558), (102, 13606), (124, 13744), (128, 13771), (129, 13777), (154, 13945), (156, 13954), (161, 13996), (170, 14029), (180, 14086), (188, 14140), (209, 14281), (219, 14386), (233, 14494), (234, 14497), (237, 14512), (245, 14593), (250, 14641), (252, 14659), (258, 14692), (262, 14734), (267, 14767), (273, 14854), (277, 14890), (278, 14893), (284, 14938), (285, 14944), (290, 14989), (300, 15061), (306, 15112), (308, 15121), (311, 15139), (314, 15151), (316, 15157), (323, 15196), (326, 15220), (333, 15295), (338, 15337), (339, 15340), (346, 15373), (351, 15388), (352, 15415), (353, 15424), (363, 15556), (365, 15577), (368, 15601), (372, 15631), (374, 15691), (375, 15700), (391, 15931), (393, 15943), (395, 15994), (396, 16006), (397, 16015), (407, 16186), (411, 16237), (413, 16258), (417, 16330), (418, 16342), (445, 16846), (454, 17026), (475, 17326), (478, 17350), (482, 17383), (485, 17404), (488, 17446), (493, 17506), (505, 17671), (508, 17695), (533, 18184), (537, 18226), (539, 18235), (540, 18262), (556, 18505), (560, 18541), (568, 18634), (584, 18874), (588, 18919), (590, 18934), (594, 18988), (602, 19135), (603, 19144), (607, 19168), (611, 19192), (625, 19342), (630, 19396), (638, 19456), (639, 19468), (643, 19486), (648, 19528), (651, 19540), (656, 19570), (658, 19579), (660, 19591), (665, 19687), (671, 19750), (680, 19846), (681, 19849), (683, 19861), (686, 19891),

Gene: LittleFella_24 Start: 15083, Stop: 21778, Start Num: 47

Candidate Starts for LittleFella_24:

(Start: 47 @15083 has 9 MA's), (59, 15185), (62, 15194), (72, 15227), (83, 15299), (85, 15320), (94, 15404), (96, 15419), (98, 15431), (100, 15437), (111, 15548), (122, 15602), (129, 15647), (131, 15656), (140, 15710), (142, 15716), (145, 15752), (151, 15782), (156, 15824), (158, 15845), (162, 15869), (164, 15878), (175, 15929), (187, 16004), (188, 16010), (191, 16028), (197, 16058), (233, 16364), (247, 16481), (253, 16538), (266, 16631), (273, 16724), (277, 16760), (282, 16796), (283, 16805), (284, 16808), (285, 16814), (287, 16826), (290, 16859), (294, 16895), (308, 16991), (311, 17009), (312, 17012), (316, 17027), (318, 17033), (320, 17036), (323, 17066), (333, 17165), (338, 17207), (339, 17210), (351, 17258), (352, 17285), (353, 17294), (354, 17303), (363, 17426), (368, 17471), (372, 17501), (374, 17558), (385, 17726), (393, 17810), (395, 17861), (397, 17882), (402, 17924), (409, 18062), (424, 18260), (435, 18386), (442, 18596), (444, 18662), (450, 18824), (457, 18989), (476, 19229), (477, 19238), (479, 19262), (485, 19304), (486, 19313), (493, 19406), (504, 19565), (505, 19571), (507, 19589), (508, 19595), (533, 20078), (540, 20156), (556, 20399), (568, 20528), (588, 20804), (590, 20819), (602, 21011), (603, 21020), (607, 21044), (611, 21068), (624, 21212), (625, 21218), (630, 21272), (639, 21344), (643, 21362), (648, 21404), (656, 21446), (658, 21455), (665, 21563), (670, 21623), (680, 21722), (681, 21725), (683, 21737), (686, 21767),

Gene: LuckyLeo_26 Start: 16873, Stop: 24093, Start Num: 2

Candidate Starts for LuckyLeo_26:

(1, 16852), (Start: 2 @16873 has 29 MA's), (7, 17068), (10, 17143), (12, 17248), (13, 17269), (14, 17272), (17, 17302), (18, 17311), (22, 17365), (28, 17428), (30, 17434), (44, 17530), (48, 17581), (52, 17608), (63, 17662), (64, 17671), (69, 17686), (83, 17764), (86, 17800), (90, 17824), (111, 18019), (116, 18049), (134, 18154), (148, 18244), (152, 18268), (153, 18280), (156, 18301), (157, 18313), (160, 18340), (173, 18409), (180, 18445), (182, 18451), (185, 18481), (193, 18526), (197, 18547), (199, 18556), (202, 18580), (208, 18637), (220, 18757), (241, 18925), (248, 18979), (250, 19000), (252, 19018), (254, 19033), (257, 19060), (267, 19144), (277, 19267), (298, 19423), (301, 19450), (304, 19471), (308, 19501), (315, 19534), (321, 19555), (323, 19579), (324, 19582), (325, 19585), (327, 19606), (328, 19618), (330, 19657), (334, 19693), (344, 19744), (355, 19804), (356, 19837), (362, 19915), (363, 19924), (377, 20113), (378, 20119), (383, 20191), (384, 20221), (389, 20275), (394, 20317), (401, 20413), (406, 20497), (412, 20620), (421, 20740), (427, 20791), (452, 21244), (453, 21274), (455, 21331), (460, 21406), (466, 21472), (469, 21484), (478, 21568), (482, 21601), (485, 21622), (490, 21691), (534, 22387), (544, 22507), (545, 22510), (566, 22807), (571, 22825), (587, 23104), (591, 23131), (601, 23320), (611, 23392), (620, 23479), (623, 23500), (626, 23539), (629, 23581), (637, 23635), (638, 23644), (639, 23656), (649, 23719), (651, 23728), (658, 23767), (661, 23791), (666, 23893), (675, 23956), (676, 23980), (681, 24037), (682, 24046), (684, 24058),

Gene: Madi_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Madi_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (537, 17649), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665, 19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: Madruga_32 Start: 19236, Stop: 25883, Start Num: 20

Candidate Starts for Madruga_32:

(Start: 20 @19236 has 5 MA's), (29, 19329), (31, 19341), (32, 19350), (34, 19371), (37, 19383), (42, 19425), (55, 19530), (66, 19587), (68, 19593), (70, 19599), (79, 19656), (80, 19662), (82, 19668), (104, 19866), (108, 19896), (109, 19908), (114, 19944), (135, 20085), (149, 20181), (155, 20229), (170, 20307), (171, 20331), (177, 20364), (184, 20415), (190, 20448), (198, 20487), (208, 20577), (213, 20616), (214, 20628), (218, 20676), (222, 20709), (232, 20775), (240, 20844), (242, 20868), (244, 20886), (247, 20910), (258, 20991), (260, 21003), (271, 21138), (272, 21147), (282, 21231), (288, 21273), (298, 21351), (304, 21396), (327, 21552), (329, 21573), (331, 21615), (341, 21678), (357, 21834), (360, 21861), (363, 21882), (364, 21885), (366, 21924), (368, 21936), (376, 22071), (379, 22128), (388, 22254), (393, 22296), (395, 22347), (403, 22431), (412, 22602), (413, 22614), (426, 22776), (428, 22788), (437, 22926), (459, 23289), (473, 23424), (484, 23508), (511, 23838), (512, 23871), (515, 23880), (521, 23934), (548, 24390), (550, 24417), (553, 24465), (559, 24522), (570, 24621), (580, 24807), (599, 24993), (617, 25203), (629, 25344), (633, 25374), (647, 25476), (651, 25515), (654, 25530), (665, 25662), (667, 25686), (669, 25710), (677, 25770), (679, 25788), (680, 25821), (682, 25833), (683, 25836), (685, 25860),

Gene: Megatron06_28 Start: 16768, Stop: 23091, Start Num: 19

Candidate Starts for Megatron06_28:

(Start: 19 @16768 has 9 MA's), (25, 16831), (36, 16912), (38, 16930), (57, 17077), (61, 17086), (65, 17098), (77, 17161), (89, 17245), (112, 17431), (115, 17440), (121, 17497), (147, 17650), (157, 17725), (174, 17827), (177, 17842), (183, 17872), (186, 17905), (189, 17923), (195, 17953), (200, 17977), (201, 17986), (207, 18049), (210, 18070), (211, 18076), (213, 18100), (227, 18211), (229, 18229), (231, 18250), (233, 18277), (246, 18385), (259, 18478), (260, 18487), (264, 18532), (271, 18619), (279, 18688), (299, 18841), (312, 18928), (331, 19075), (337, 19117), (340, 19126), (342, 19138), (345, 19147), (374, 19471), (377, 19528), (392, 19714), (399, 19804), (413, 20047), (418, 20131), (419, 20143), (433, 20263), (436, 20323), (439, 20371), (440, 20392), (444, 20452), (452, 20533), (463, 20683), (472, 20761), (483, 20842), (487, 20863), (489, 20908), (496, 20962), (499, 21070), (514, 21166), (516, 21175), (519, 21205), (520, 21208), (535, 21523), (561, 21796), (562, 21805), (572, 21880), (574, 21913), (575, 21925), (576, 21934), (581, 22057), (596, 22177), (600, 22261), (606, 22327), (612, 22372), (614, 22399), (629, 22561), (630, 22564), (635, 22603), (637, 22615), (638, 22624), (662, 22831), (673, 22945), (678, 22990), (682, 23041), (683, 23044), (684, 23053), (685, 23068),

Gene: Mima20_27 Start: 17523, Stop: 24464, Start Num: 9

Candidate Starts for Mima20_27:

(1, 17241), (Start: 2 @17262 has 29 MA's), (6, 17409), (9, 17523), (11, 17622), (13, 17658), (15, 17670), (24, 17769), (41, 17901), (45, 17928), (46, 17931), (52, 17997), (58, 18039), (63, 18051), (69, 18075), (71, 18081), (81, 18144), (87, 18198), (88, 18201), (105, 18354), (106, 18357), (120, 18459), (123, 18477), (127, 18504), (138, 18561), (148, 18630), (153, 18666), (156, 18687), (157, 18699), (159, 18711), (160, 18726), (170, 18762), (182, 18837), (199, 18942), (207, 19011), (208, 19023), (210, 19032), (243, 19323), (248, 19365), (250, 19386), (251, 19395), (254, 19419), (255, 19425), (257, 19446), (267, 19530), (274, 19626), (277, 19653), (281, 19686), (292, 19779), (298, 19809), (301, 19836), (308, 19887), (309, 19890), (313, 19914), (317, 19926), (321, 19941), (323, 19965), (330, 20043), (331, 20055), (346, 20133), (359, 20280), (361, 20295), (363, 20310), (373, 20409), (375, 20457), (377, 20505), (378, 20511), (380, 20556), (383, 20583), (389, 20667), (394, 20709), (396, 20763), (401, 20805), (406, 20889), (412, 21012), (421, 21132), (427, 21183), (436, 21342), (441, 21456), (452, 21624), (455, 21711), (466, 21852), (469, 21864), (478, 21948), (482, 21981), (503, 22257), (534, 22767), (536, 22800), (539, 22812), (544, 22890), (566, 23178), (571, 23196), (587, 23475), (592, 23517), (611, 23763), (623, 23871), (626, 23910), (627, 23913), (629, 23952), (637, 24006), (638, 24015), (639, 24027), (643, 24045), (644, 24069), (658, 24138), (661, 24162), (675, 24327), (676, 24351), (682, 24417), (684, 24429),

Gene: MoiGyank_29 Start: 17934, Stop: 25145, Start Num: 2

Candidate Starts for MoiGyank_29:

(1, 17913), (Start: 2 @17934 has 29 MA's), (6, 18081), (9, 18195), (11, 18294), (13, 18330), (15, 18342), (24, 18441), (41, 18573), (45, 18600), (46, 18603), (52, 18669), (58, 18711), (63, 18723), (69, 18747), (71, 18753), (81, 18816), (87, 18870), (88, 18873), (105, 19026), (106, 19029), (123, 19149), (127, 19176), (138, 19233), (148, 19302), (153, 19338), (156, 19359), (157, 19371), (159, 19383), (160, 19398), (170, 19434), (182, 19509), (199, 19614), (207, 19683), (208, 19695), (210, 19704), (243, 19995), (248, 20037), (250, 20058), (251, 20067), (254, 20091), (255, 20097), (257, 20118), (267, 20202), (274, 20298), (277, 20325), (281, 20358), (292, 20451), (298, 20481), (301, 20508), (308, 20559), (309, 20562), (313, 20586), (317, 20598), (321, 20613), (323, 20637), (330, 20715), (331, 20727), (344, 20802), (346, 20805), (359, 20952), (361, 20967), (363, 20982), (373, 21081), (375, 21129), (377, 21177), (378, 21183), (383, 21255), (389, 21339), (394, 21381), (396, 21435), (401, 21477), (406, 21561), (412, 21684), (421, 21804), (427, 21855), (436, 22014), (441, 22128), (452, 22296), (455, 22383), (456, 22392), (464, 22515), (466, 22524), (469, 22536), (478, 22620), (503, 22929), (534, 23439), (539, 23484), (544, 23559), (566, 23859), (571, 23877), (587, 24156), (592, 24198), (611, 24444), (623, 24552), (626, 24591), (627, 24594), (629, 24633), (637, 24687), (638, 24696), (639, 24708), (643, 24726), (644, 24750), (649, 24771), (651, 24780), (658, 24819), (661, 24843), (675, 25008), (676, 25032), (682, 25098), (684, 25110),

Gene: NorManre_28 Start: 17141, Stop: 24352, Start Num: 2

Candidate Starts for NorManre_28:

(1, 17120), (Start: 2 @17141 has 29 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (52, 17876), (58, 17918), (63, 17930), (69, 17954), (71, 17960), (81, 18023), (87, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (137, 18431), (138, 18440), (148, 18509), (153, 18545), (156, 18566), (157, 18578), (159, 18590), (160, 18605), (170, 18641), (173, 18674), (176, 18686), (182, 18716), (199, 18821), (207, 18890), (208, 18902), (210, 18911), (222, 19034), (243, 19202), (246, 19226), (248, 19244), (250, 19265), (251, 19274), (254, 19298), (255, 19304), (257, 19325), (267, 19409), (274, 19505), (277, 19532), (281, 19565), (292, 19658), (298, 19688), (301, 19715), (308, 19766), (309, 19769), (313, 19793), (317, 19805), (321, 19820), (323, 19844), (330, 19922), (331, 19934), (344, 20009), (346, 20012), (359, 20159), (361, 20174), (363, 20189), (373, 20288), (375, 20336), (377, 20384), (378, 20390), (383, 20462), (389, 20546), (394, 20588), (396, 20642), (401, 20684), (406, 20768), (412, 20891), (421, 21011), (427, 21062), (436, 21221), (441, 21335), (452, 21503), (455, 21590), (456, 21599), (466, 21731), (469, 21743), (478, 21827), (482, 21860), (503, 22136), (534, 22646), (539, 22691), (544, 22766), (566, 23066), (571, 23084), (587, 23363), (592, 23405), (611, 23651), (623, 23759), (626, 23798), (627, 23801), (629, 23840), (637, 23894), (638, 23903), (639, 23915), (643, 23933), (644, 23957), (651, 23987), (658, 24026), (661, 24050), (675, 24215), (676, 24239), (682, 24305), (684, 24317),

Gene: NovaSharks_26 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for NovaSharks_26:

(1, 15115), (Start: 2 @15136 has 29 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (50, 15862), (52, 15871), (58, 15913), (63, 15925), (69, 15949), (71, 15955), (75, 15976), (81, 16018), (87, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (137, 16426), (138, 16435), (153, 16540), (156, 16561), (157, 16573), (159, 16585), (160, 16600), (170, 16636), (176, 16681), (182, 16711), (184, 16738), (199, 16816), (207, 16885), (208, 16897), (210, 16906), (241, 17185), (243, 17197), (248, 17239), (250, 17260), (251, 17269), (254, 17293), (255, 17299), (257, 17320), (267, 17404), (274, 17500), (277, 17527), (281, 17560), (292, 17653), (298, 17683), (308, 17761), (309, 17764), (313, 17788), (317, 17800), (321, 17815), (323, 17839), (330, 17917), (331, 17929), (344, 18004), (346, 18007), (359, 18154), (361, 18169), (363, 18184), (373, 18283), (375, 18331), (377, 18379), (378, 18385), (380, 18430), (383, 18457), (394, 18583), (396, 18637), (401, 18679), (406, 18763), (410, 18850), (412, 18886), (421, 19006), (427, 19057), (436, 19216), (441, 19330), (452, 19507), (455, 19594), (466, 19735), (469, 19747), (478, 19831), (534, 20650), (536, 20683), (539, 20695), (544, 20773), (565, 21049), (567, 21061), (582, 21304), (587, 21355), (592, 21397), (611, 21643), (623, 21751), (626, 21790), (627, 21793), (629, 21832), (632, 21856), (637, 21886), (638, 21895), (639, 21907), (649, 21970), (651, 21979), (658, 22018), (661, 22042), (675, 22207), (676, 22231), (682, 22297), (684, 22309),

Gene: Oaker_26 Start: 16492, Stop: 22815, Start Num: 19

Candidate Starts for Oaker_26:

(Start: 19 @16492 has 9 MA's), (25, 16555), (36, 16636), (38, 16654), (57, 16801), (61, 16810), (65, 16822), (77, 16885), (84, 16927), (89, 16969), (112, 17155), (115, 17164), (147, 17374), (157, 17449), (174, 17551), (177, 17566), (183, 17596), (186, 17629), (189, 17647), (195, 17677), (200, 17701), (201, 17710), (207, 17773), (210, 17794), (211, 17800), (213, 17824), (227, 17935), (229, 17953), (231, 17974), (233, 18001), (246, 18109), (259, 18202), (260, 18211), (264, 18256), (271, 18343), (279, 18412), (297, 18550), (299, 18565), (312, 18652), (331, 18799), (337, 18841), (340, 18850), (342, 18862), (345, 18871), (374, 19195), (377, 19252), (385, 19363), (392, 19438), (399, 19528), (413, 19771), (418, 19855), (419, 19867), (433, 19987), (436, 20047), (439, 20095), (440, 20116), (444, 20176), (452, 20257), (463, 20407), (483, 20566), (487, 20587), (489, 20632), (496, 20686), (499, 20794), (514, 20890), (516, 20899), (519, 20929), (520, 20932), (535, 21247), (561, 21520),

(562, 21529), (572, 21604), (574, 21637), (575, 21649), (576, 21658), (581, 21781), (596, 21901), (600, 21985), (606, 22051), (612, 22096), (614, 22123), (629, 22285), (630, 22288), (635, 22327), (637, 22339), (638, 22348), (662, 22555), (673, 22669), (678, 22714), (682, 22765), (683, 22768), (684, 22777), (685, 22792),

Gene: OtterstedtS21_27 Start: 17219, Stop: 24430, Start Num: 2

Candidate Starts for OtterstedtS21_27:

(1, 17198), (Start: 2 @17219 has 29 MA's), (6, 17366), (9, 17480), (11, 17579), (13, 17615), (15, 17627), (24, 17726), (41, 17858), (45, 17885), (46, 17888), (52, 17954), (58, 17996), (63, 18008), (69, 18032), (71, 18038), (81, 18101), (87, 18155), (88, 18158), (105, 18311), (106, 18314), (120, 18416), (123, 18434), (127, 18461), (137, 18509), (138, 18518), (148, 18587), (153, 18623), (156, 18644), (157, 18656), (159, 18668), (160, 18683), (170, 18719), (182, 18794), (199, 18899), (207, 18968), (208, 18980), (210, 18989), (243, 19280), (248, 19322), (250, 19343), (251, 19352), (254, 19376), (255, 19382), (257, 19403), (267, 19487), (274, 19583), (277, 19610), (281, 19643), (285, 19664), (292, 19736), (298, 19766), (301, 19793), (308, 19844), (309, 19847), (313, 19871), (317, 19883), (321, 19898), (323, 19922), (330, 20000), (331, 20012), (359, 20237), (361, 20252), (363, 20267), (373, 20366), (375, 20414), (377, 20462), (378, 20468), (383, 20540), (389, 20624), (394, 20666), (396, 20720), (401, 20762), (406, 20846), (412, 20969), (421, 21089), (427, 21140), (436, 21299), (441, 21413), (452, 21581), (455, 21668), (456, 21677), (464, 21800), (466, 21809), (469, 21821), (478, 21905), (503, 22214), (534, 22724), (539, 22769), (544, 22844), (566, 23144), (571, 23162), (587, 23441), (592, 23483), (611, 23729), (623, 23837), (626, 23876), (627, 23879), (629, 23918), (637, 23972), (638, 23981), (639, 23993), (643, 24011), (644, 24035), (649, 24056), (651, 24065), (658, 24104), (661, 24128), (675, 24293), (676, 24317), (682, 24383), (684, 24395),

Gene: ParvusTarda_27 Start: 16701, Stop: 23912, Start Num: 2

Candidate Starts for ParvusTarda_27:

(1, 16680), (Start: 2 @16701 has 29 MA's), (6, 16848), (9, 16962), (11, 17061), (13, 17097), (15, 17109), (24, 17208), (41, 17340), (45, 17367), (50, 17427), (52, 17436), (58, 17478), (63, 17490), (69, 17514), (71, 17520), (81, 17583), (83, 17592), (87, 17637), (88, 17640), (105, 17793), (106, 17796), (123, 17916), (127, 17943), (138, 18000), (148, 18069), (153, 18105), (156, 18126), (157, 18138), (159, 18150), (160, 18165), (170, 18201), (182, 18276), (199, 18381), (207, 18450), (208, 18462), (210, 18471), (243, 18762), (248, 18804), (250, 18825), (251, 18834), (254, 18858), (255, 18864), (257, 18885), (263, 18948), (267, 18969), (274, 19065), (277, 19092), (281, 19125), (292, 19218), (298, 19248), (301, 19275), (308, 19326), (309, 19329), (310, 19335), (313, 19353), (317, 19365), (321, 19380), (323, 19404), (330, 19482), (331, 19494), (344, 19569), (346, 19572), (359, 19719), (361, 19734), (363, 19749), (373, 19848), (375, 19896), (377, 19944), (378, 19950), (383, 20022), (389, 20106), (394, 20148), (396, 20202), (401, 20244), (406, 20328), (412, 20451), (421, 20571), (427, 20622), (436, 20781), (441, 20895), (452, 21072), (455, 21159), (460, 21234), (466, 21300), (469, 21312), (478, 21396), (482, 21429), (485, 21450), (534, 22215), (536, 22248), (539, 22260), (544, 22338), (566, 22626), (571, 22644), (592, 22965), (611, 23211), (620, 23298), (623, 23319), (626, 23358), (629, 23400), (636, 23445), (637, 23454), (638, 23463), (639, 23475), (649, 23538), (651, 23547), (658, 23586), (661, 23610), (675, 23775), (676, 23799), (682, 23865), (684, 23877),

Gene: Patience_34 Start: 20117, Stop: 26764, Start Num: 20

Candidate Starts for Patience_34:

(Start: 20 @20117 has 5 MA's), (29, 20210), (31, 20222), (32, 20231), (34, 20252), (37, 20264), (42, 20306), (55, 20411), (66, 20468), (68, 20474), (70, 20480), (79, 20537), (80, 20543), (82, 20549), (104, 20747), (108, 20777), (109, 20789), (114, 20825), (135, 20966), (149, 21062), (155, 21110), (170, 21188), (171, 21212), (177, 21245), (184, 21296), (190, 21329), (198, 21368), (208, 21458), (213, 21497), (214, 21509), (218, 21557), (222, 21590), (232, 21656), (240, 21725), (242, 21749), (244, 21767), (247, 21791), (258, 21872), (260, 21884), (271, 22019), (272, 22028), (282, 22112), (298, 22232), (304, 22277), (327, 22433), (329, 22454), (331, 22496), (341, 22559), (357, 22715), (360, 22742), (363, 22763), (364, 22766), (366, 22805), (368, 22817), (376, 22952), (379, 23009), (388,

23135), (393, 23177), (395, 23228), (403, 23312), (412, 23483), (413, 23495), (420, 23603), (426, 23657), (428, 23669), (437, 23807), (459, 24170), (473, 24305), (484, 24389), (511, 24719), (512, 24752), (515, 24761), (521, 24815), (548, 25271), (550, 25298), (553, 25346), (559, 25403), (570, 25502), (580, 25688), (599, 25874), (617, 26084), (629, 26225), (633, 26255), (647, 26357), (654, 26411), (665, 26543), (667, 26567), (669, 26591), (677, 26651), (679, 26669), (680, 26702), (682, 26714), (683, 26717), (685, 26741),

Gene: Patos_28 Start: 17141, Stop: 24352, Start Num: 2

Candidate Starts for Patos_28:

(1, 17120), (Start: 2 @17141 has 29 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (52, 17876), (58, 17918), (63, 17930), (69, 17954), (71, 17960), (81, 18023), (87, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (137, 18431), (138, 18440), (148, 18509), (153, 18545), (156, 18566), (157, 18578), (159, 18590), (160, 18605), (170, 18641), (173, 18674), (176, 18686), (182, 18716), (199, 18821), (207, 18890), (208, 18902), (210, 18911), (222, 19034), (243, 19202), (246, 19226), (248, 19244), (250, 19265), (251, 19274), (254, 19298), (255, 19304), (257, 19325), (267, 19409), (274, 19505), (277, 19532), (281, 19565), (292, 19658), (298, 19688), (301, 19715), (308, 19766), (309, 19769), (313, 19793), (317, 19805), (321, 19820), (323, 19844), (330, 19922), (331, 19934), (344, 20009), (346, 20012), (359, 20159), (361, 20174), (363, 20189), (373, 20288), (375, 20336), (377, 20384), (378, 20390), (383, 20462), (389, 20546), (394, 20588), (396, 20642), (401, 20684), (406, 20768), (412, 20891), (421, 21011), (427, 21062), (436, 21221), (441, 21335), (452, 21503), (455, 21590), (456, 21599), (466, 21731), (469, 21743), (478, 21827), (482, 21860), (503, 22136), (534, 22646), (539, 22691), (544, 22766), (566, 23066), (571, 23084), (587, 23363), (592, 23405), (611, 23651), (623, 23759), (626, 23798), (627, 23801), (629, 23840), (637, 23894), (638, 23903), (639, 23915), (643, 23933), (644, 23957), (651, 23987), (658, 24026), (661, 24050), (675, 24215), (676, 24239), (682, 24305), (684, 24317),

Gene: Phreeze_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Phreeze_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (57, 16544), (61, 16553), (65, 16565), (77, 16628), (89, 16712), (112, 16898), (115, 16907), (147, 17117), (157, 17192), (174, 17294), (177, 17309), (183, 17339), (186, 17372), (189, 17390), (195, 17420), (200, 17444), (201, 17453), (207, 17516), (210, 17537), (211, 17543), (213, 17567), (227, 17678), (229, 17696), (231, 17717), (233, 17744), (246, 17852), (259, 17945), (260, 17954), (264, 17999), (271, 18086), (279, 18155), (297, 18293), (299, 18308), (308, 18374), (312, 18395), (319, 18416), (331, 18542), (337, 18584), (340, 18593), (342, 18605), (345, 18614), (374, 18938), (377, 18995), (385, 19106), (392, 19181), (398, 19268), (399, 19271), (400, 19286), (413, 19514), (414, 19526), (419, 19610), (429, 19679), (433, 19730), (436, 19790), (439, 19838), (440, 19859), (444, 19919), (452, 20000), (463, 20150), (472, 20228), (483, 20309), (487, 20330), (489, 20375), (496, 20429), (499, 20537), (514, 20633), (516, 20642), (519, 20672), (520, 20675), (535, 20990), (561, 21263), (562, 21272), (569, 21329), (572, 21347), (574, 21380), (575, 21392), (576, 21401), (581, 21524), (596, 21644), (600, 21728), (606, 21794), (612, 21839), (614, 21866), (629, 22028), (630, 22031), (635, 22070), (638, 22091), (662, 22298), (673, 22412), (678, 22457), (682, 22508), (683, 22511), (684, 22520), (685, 22535),

Gene: Predator_30 Start: 17750, Stop: 24115, Start Num: 19

Candidate Starts for Predator_30:

(Start: 19 @17750 has 9 MA's), (40, 17921), (49, 18005), (56, 18053), (77, 18143), (84, 18185), (86, 18206), (89, 18227), (93, 18266), (101, 18317), (107, 18374), (108, 18377), (110, 18389), (112, 18410), (141, 18581), (156, 18692), (157, 18704), (158, 18713), (166, 18755), (167, 18758), (183, 18851), (186, 18884), (203, 18989), (206, 19019), (212, 19073), (215, 19103), (216, 19106), (221, 19163), (225, 19187), (229, 19208), (231, 19229), (236, 19271), (243, 19340), (246, 19364), (250, 19403), (259, 19457), (260, 19466), (269, 19547), (271, 19598), (279, 19667), (288, 19733), (293,

19784), (299, 19820), (302, 19841), (312, 19907), (314, 19916), (322, 19946), (326, 19988), (335, 20084), (343, 20123), (349, 20135), (350, 20138), (381, 20591), (385, 20636), (396, 20783), (399, 20801), (404, 20876), (413, 21044), (414, 21056), (419, 21140), (443, 21443), (472, 21779), (480, 21839), (483, 21860), (487, 21881), (489, 21926), (490, 21929), (496, 21980), (498, 22067), (499, 22088), (502, 22109), (514, 22184), (516, 22193), (517, 22202), (518, 22205), (526, 22370), (531, 22463), (532, 22472), (542, 22592), (543, 22613), (547, 22658), (551, 22691), (552, 22721), (562, 22826), (564, 22856), (575, 22946), (576, 22955), (585, 23099), (596, 23198), (597, 23201), (599, 23231), (600, 23282), (605, 23345), (612, 23393), (614, 23420), (627, 23543), (629, 23582), (635, 23624), (662, 23852), (663, 23873), (665, 23897), (673, 23966), (678, 24014), (679, 24020), (682, 24065), (683, 24068), (684, 24077), (685, 24092),

Gene: Puissant_25 Start: 16698, Stop: 23021, Start Num: 19

Candidate Starts for Puissant_25:

(Start: 19 @16698 has 9 MA's), (27, 16797), (38, 16860), (49, 16953), (61, 17016), (65, 17028), (70, 17046), (74, 17058), (77, 17091), (84, 17133), (89, 17175), (112, 17361), (125, 17448), (132, 17484), (154, 17634), (163, 17694), (174, 17757), (177, 17772), (178, 17775), (183, 17802), (186, 17835), (194, 17877), (195, 17883), (200, 17907), (201, 17916), (203, 17940), (207, 17979), (210, 18000), (213, 18030), (227, 18141), (229, 18159), (231, 18180), (233, 18207), (246, 18315), (259, 18408), (260, 18417), (264, 18462), (271, 18549), (279, 18618), (283, 18651), (293, 18735), (299, 18771), (303, 18801), (312, 18858), (331, 19005), (335, 19035), (337, 19047), (340, 19056), (342, 19068), (345, 19077), (369, 19314), (374, 19401), (377, 19458), (385, 19569), (392, 19644), (399, 19734), (409, 19914), (413, 19977), (414, 19989), (419, 20073), (429, 20142), (433, 20193), (436, 20253), (439, 20301), (440, 20322), (444, 20382), (452, 20463), (472, 20691), (483, 20772), (487, 20793), (489, 20838), (496, 20892), (499, 21000), (514, 21096), (516, 21105), (535, 21453), (558, 21693), (561, 21726), (562, 21735), (564, 21765), (574, 21843), (576, 21864), (581, 21987), (586, 22014), (589, 22032), (593, 22056), (596, 22107), (599, 22140), (600, 22191), (612, 22302), (614, 22329), (629, 22491), (638, 22554), (640, 22578), (678, 22920), (679, 22926), (682, 22971), (683, 22974), (684, 22983), (685, 22998),

Gene: Ranch_27 Start: 16067, Stop: 23266, Start Num: 2

Candidate Starts for Ranch_27:

(1, 16046), (Start: 2 @16067 has 29 MA's), (6, 16214), (9, 16328), (11, 16427), (13, 16463), (15, 16475), (24, 16574), (50, 16793), (52, 16802), (58, 16844), (63, 16856), (69, 16880), (71, 16886), (81, 16949), (87, 17003), (88, 17006), (106, 17162), (120, 17264), (123, 17282), (127, 17309), (137, 17357), (138, 17366), (153, 17471), (156, 17492), (157, 17504), (159, 17516), (160, 17531), (170, 17567), (182, 17642), (183, 17648), (199, 17747), (207, 17816), (208, 17828), (210, 17837), (241, 18116), (243, 18128), (248, 18170), (250, 18191), (251, 18200), (254, 18224), (255, 18230), (257, 18251), (267, 18335), (274, 18431), (277, 18458), (281, 18491), (285, 18512), (308, 18692), (309, 18695), (313, 18719), (317, 18731), (321, 18746), (323, 18770), (330, 18848), (331, 18860), (344, 18935), (346, 18938), (359, 19085), (361, 19100), (363, 19115), (373, 19214), (375, 19262), (377, 19310), (378, 19316), (383, 19388), (389, 19472), (394, 19514), (396, 19568), (401, 19610), (406, 19694), (412, 19817), (421, 19937), (427, 19988), (436, 20147), (441, 20261), (452, 20429), (455, 20516), (466, 20657), (469, 20669), (478, 20753), (482, 20786), (506, 21086), (534, 21572), (536, 21605), (539, 21617), (544, 21695), (565, 21971), (567, 21983), (587, 22277), (592, 22319), (611, 22565), (623, 22673), (626, 22712), (627, 22715), (629, 22754), (631, 22766), (637, 22808), (638, 22817), (639, 22829), (643, 22847), (644, 22871), (651, 22901), (658, 22940), (661, 22964), (675, 23129), (676, 23153), (682, 23219), (684, 23231),

Gene: RazorC_25 Start: 15528, Stop: 22736, Start Num: 2

Candidate Starts for RazorC_25:

(Start: 2 @15528 has 29 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (50, 16254), (52, 16263), (58, 16305), (63, 16317), (69, 16341), (71, 16347), (75, 16368), (81, 16410), (87, 16464), (88, 16467), (106, 16623), (120, 16725),

(123, 16743), (127, 16770), (137, 16818), (138, 16827), (153, 16932), (156, 16953), (157, 16965), (159, 16977), (160, 16992), (170, 17028), (176, 17073), (182, 17103), (184, 17130), (199, 17208), (207, 17277), (208, 17289), (210, 17298), (241, 17577), (243, 17589), (248, 17631), (250, 17652), (251, 17661), (254, 17685), (255, 17691), (257, 17712), (267, 17796), (274, 17892), (277, 17919), (281, 17952), (292, 18045), (298, 18075), (308, 18153), (309, 18156), (313, 18180), (317, 18192), (321, 18207), (323, 18231), (330, 18309), (331, 18321), (344, 18396), (346, 18399), (359, 18546), (361, 18561), (363, 18576), (373, 18675), (375, 18723), (377, 18771), (378, 18777), (380, 18822), (383, 18849), (394, 18975), (396, 19029), (401, 19071), (406, 19155), (410, 19242), (412, 19278), (421, 19398), (427, 19449), (436, 19608), (441, 19722), (452, 19899), (455, 19986), (466, 20127), (469, 20139), (478, 20223), (534, 21042), (536, 21075), (539, 21087), (544, 21165), (565, 21441), (567, 21453), (582, 21696), (587, 21747), (592, 21789), (611, 22035), (623, 22143), (626, 22182), (627, 22185), (629, 22224), (632, 22248), (637, 22278), (638, 22287), (639, 22299), (649, 22362), (651, 22371), (658, 22410), (661, 22434), (675, 22599), (676, 22623), (682, 22689), (684, 22701),

Gene: Rumi_26 Start: 15136, Stop: 22347, Start Num: 2

Candidate Starts for Rumi_26:

(1, 15115), (Start: 2 @15136 has 29 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (50, 15862), (52, 15871), (58, 15913), (63, 15925), (69, 15949), (71, 15955), (75, 15976), (81, 16018), (87, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (137, 16426), (138, 16435), (153, 16540), (156, 16561), (157, 16573), (159, 16585), (160, 16600), (170, 16636), (176, 16681), (182, 16711), (184, 16738), (199, 16816), (207, 16885), (208, 16897), (210, 16906), (241, 17185), (243, 17197), (248, 17239), (250, 17260), (251, 17269), (254, 17293), (255, 17299), (257, 17320), (267, 17404), (274, 17500), (277, 17527), (281, 17560), (292, 17653), (298, 17683), (308, 17761), (309, 17764), (313, 17788), (317, 17800), (321, 17815), (323, 17839), (330, 17917), (331, 17929), (344, 18004), (346, 18007), (359, 18154), (361, 18169), (363, 18184), (373, 18283), (375, 18331), (377, 18379), (378, 18385), (380, 18430), (383, 18457), (394, 18583), (396, 18637), (401, 18679), (406, 18763), (410, 18850), (412, 18886), (421, 19006), (427, 19057), (436, 19216), (441, 19330), (452, 19507), (455, 19594), (466, 19735), (469, 19747), (478, 19831), (534, 20650), (536, 20683), (539, 20695), (544, 20773), (566, 21061), (582, 21307), (587, 21358), (592, 21400), (611, 21646), (623, 21754), (626, 21793), (627, 21796), (629, 21835), (631, 21847), (637, 21889), (638, 21898), (639, 21910), (643, 21928), (651, 21982), (658, 22021), (661, 22045), (675, 22210), (676, 22234), (682, 22300), (684, 22312),

Gene: Sadboi_27 Start: 17897, Stop: 25108, Start Num: 2

Candidate Starts for Sadboi_27:

(1, 17876), (Start: 2 @17897 has 29 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (52, 18632), (58, 18674), (63, 18686), (69, 18710), (71, 18716), (81, 18779), (87, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (137, 19187), (138, 19196), (148, 19265), (153, 19301), (156, 19322), (157, 19334), (159, 19346), (160, 19361), (170, 19397), (173, 19430), (176, 19442), (182, 19472), (199, 19577), (207, 19646), (208, 19658), (210, 19667), (243, 19958), (246, 19982), (248, 20000), (250, 20021), (251, 20030), (254, 20054), (255, 20060), (257, 20081), (267, 20165), (274, 20261), (277, 20288), (281, 20321), (285, 20342), (292, 20414), (298, 20444), (301, 20471), (308, 20522), (309, 20525), (313, 20549), (317, 20561), (321, 20576), (323, 20600), (330, 20678), (331, 20690), (344, 20765), (346, 20768), (359, 20915), (361, 20930), (363, 20945), (373, 21044), (375, 21092), (377, 21140), (378, 21146), (383, 21218), (389, 21302), (394, 21344), (396, 21398), (401, 21440), (406, 21524), (412, 21647), (421, 21767), (427, 21818), (436, 21977), (441, 22091), (452, 22259), (455, 22346), (456, 22355), (466, 22487), (469, 22499), (478, 22583), (503, 22892), (534, 23402), (539, 23447), (544, 23522), (566, 23822), (571, 23840), (587, 24119), (611, 24407), (623, 24515), (626, 24554), (627, 24557), (629, 24596), (637, 24650), (638, 24659), (639, 24671), (643, 24689), (644, 24713), (651, 24743), (658, 24782), (661, 24806), (675, 24971), (676, 24995), (682, 25061), (684, 25073),

Gene: Sampudon_27 Start: 18073, Stop: 25275, Start Num: 2

Candidate Starts for Sampudon_27:

(1, 18052), (Start: 2 @18073 has 29 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (50, 18799), (52, 18808), (58, 18850), (63, 18862), (69, 18886), (71, 18892), (75, 18913), (81, 18955), (87, 19009), (88, 19012), (105, 19165), (106, 19168), (120, 19270), (123, 19288), (127, 19315), (137, 19363), (138, 19372), (148, 19441), (153, 19477), (156, 19498), (157, 19510), (159, 19522), (160, 19537), (170, 19573), (182, 19648), (199, 19753), (207, 19822), (208, 19834), (210, 19843), (243, 20134), (246, 20158), (248, 20176), (250, 20197), (251, 20206), (254, 20230), (255, 20236), (257, 20257), (267, 20341), (274, 20437), (277, 20464), (281, 20497), (292, 20590), (298, 20620), (301, 20647), (308, 20698), (309, 20701), (313, 20725), (317, 20737), (321, 20752), (323, 20776), (330, 20854), (331, 20866), (344, 20941), (346, 20944), (359, 21091), (361, 21106), (363, 21121), (373, 21220), (375, 21268), (377, 21316), (378, 21322), (383, 21394), (389, 21478), (394, 21520), (396, 21574), (401, 21616), (406, 21700), (412, 21823), (421, 21943), (427, 21994), (436, 22153), (441, 22267), (452, 22435), (455, 22522), (456, 22531), (466, 22663), (469, 22675), (478, 22759), (482, 22792), (503, 23068), (534, 23578), (536, 23611), (539, 23623), (544, 23701), (566, 23989), (571, 24007), (587, 24286), (592, 24328), (611, 24574), (623, 24682), (626, 24721), (627, 24724), (629, 24763), (637, 24817), (638, 24826), (639, 24838), (643, 24856), (644, 24880), (651, 24910), (658, 24949), (661, 24973), (675, 25138), (676, 25162), (682, 25228), (684, 25240),

Gene: Sienna_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Sienna_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (537, 17649), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665, 19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: Stormer_26 Start: 15496, Stop: 22347, Start Num: 11

Candidate Starts for Stormer_26:

(1, 15115), (Start: 2 @15136 has 29 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (50, 15862), (52, 15871), (58, 15913), (63, 15925), (69, 15949), (71, 15955), (75, 15976), (81, 16018), (87, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (137, 16426), (138, 16435), (153, 16540), (156, 16561), (157, 16573), (159, 16585), (160, 16600), (170, 16636), (176, 16681), (182, 16711), (184, 16738), (199, 16816), (207, 16885), (208, 16897), (210, 16906), (241, 17185), (243, 17197), (248, 17239), (250, 17260), (251, 17269), (254, 17293), (255, 17299), (257, 17320), (267, 17404), (274, 17500), (277, 17527), (281, 17560), (292, 17653), (298, 17683), (308, 17761), (309, 17764), (313, 17788), (317, 17800), (321, 17815), (323, 17839), (330, 17917), (331, 17929), (344, 18004), (346, 18007), (359, 18154), (361, 18169), (363, 18184), (373, 18283), (375, 18331), (377, 18379), (378, 18385), (380, 18430), (383, 18457), (394, 18583), (396, 18637), (401, 18679), (406, 18763), (410, 18850), (412, 18886), (421, 19006), (427, 19057), (436, 19216), (441, 19330), (452, 19507), (455, 19594), (466, 19735), (469, 19747), (478, 19831), (534, 20650), (536, 20683), (539, 20695), (544, 20773),

(566, 21061), (582, 21307), (587, 21358), (592, 21400), (611, 21646), (623, 21754), (626, 21793), (627, 21796), (629, 21835), (631, 21847), (637, 21889), (638, 21898), (639, 21910), (643, 21928), (651, 21982), (658, 22021), (661, 22045), (675, 22210), (676, 22234), (682, 22300), (684, 22312),

Gene: Suzy_22 Start: 13782, Stop: 20483, Start Num: 47

Candidate Starts for Suzy_22:

(39, 13731), (Start: 47 @13782 has 9 MA's), (72, 13926), (83, 13998), (85, 14019), (96, 14118), (98, 14130), (100, 14136), (129, 14346), (131, 14355), (142, 14415), (149, 14472), (156, 14523), (157, 14535), (170, 14598), (188, 14709), (191, 14727), (224, 14991), (230, 15033), (231, 15036), (233, 15063), (237, 15081), (245, 15162), (263, 15315), (265, 15324), (266, 15330), (268, 15345), (273, 15423), (289, 15540), (290, 15558), (296, 15603), (301, 15642), (303, 15654), (305, 15669), (308, 15690), (312, 15711), (314, 15720), (316, 15726), (320, 15735), (323, 15765), (329, 15813), (338, 15906), (339, 15909), (346, 15942), (351, 15957), (363, 16125), (368, 16170), (370, 16179), (372, 16200), (374, 16254), (388, 16464), (393, 16506), (397, 16578), (415, 16887), (420, 16935), (423, 16956), (431, 17064), (451, 17511), (455, 17631), (462, 17769), (476, 17910), (481, 17961), (485, 17985), (486, 17994), (493, 18087), (505, 18252), (508, 18276), (509, 18291), (524, 18513), (533, 18771), (537, 18813), (539, 18822), (540, 18849), (556, 19092), (560, 19128), (573, 19266), (574, 19281), (579, 19377), (583, 19455), (588, 19497), (590, 19512), (594, 19566), (600, 19680), (602, 19713), (603, 19722), (607, 19746), (610, 19767), (611, 19770), (622, 19878), (624, 19914), (625, 19920), (632, 19995), (638, 20034), (645, 20097), (655, 20139), (656, 20148), (658, 20157), (659, 20160), (660, 20169), (664, 20262), (665, 20265), (671, 20328), (680, 20424), (681, 20427), (683, 20439), (684, 20448), (686, 20469),

Gene: Terapin_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Terapin_22:

(Start: 47 @12549 has 9 MA's), (72, 12693), (83, 12765), (85, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (131, 13122), (142, 13182), (149, 13239), (156, 13290), (170, 13365), (188, 13476), (191, 13494), (195, 13515), (224, 13758), (228, 13767), (230, 13800), (231, 13803), (233, 13830), (251, 13986), (266, 14097), (267, 14103), (273, 14190), (284, 14274), (289, 14307), (290, 14325), (296, 14370), (301, 14409), (303, 14421), (305, 14436), (308, 14457), (312, 14478), (314, 14487), (316, 14493), (320, 14502), (323, 14532), (339, 14676), (346, 14709), (351, 14724), (363, 14892), (368, 14937), (370, 14946), (372, 14967), (374, 15021), (388, 15231), (393, 15273), (397, 15345), (415, 15654), (420, 15702), (423, 15723), (431, 15831), (445, 16212), (449, 16287), (455, 16473), (470, 16704), (476, 16752), (481, 16803), (485, 16827), (486, 16836), (493, 16929), (505, 17094), (508, 17118), (509, 17133), (533, 17607), (540, 17685), (556, 17928), (560, 17964), (568, 18057), (579, 18216), (588, 18336), (590, 18351), (594, 18405), (600, 18519), (602, 18552), (603, 18561), (607, 18585), (611, 18609), (624, 18753), (625, 18759), (634, 18846), (638, 18873), (639, 18885), (643, 18903), (648, 18945), (655, 18978), (656, 18987), (658, 18996), (660, 19008), (665, 19104), (670, 19164), (671, 19167), (680, 19263), (681, 19266), (683, 19278), (684, 19287), (686, 19308),

Gene: Thumb_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Thumb_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (57, 16544), (61, 16553), (65, 16565), (70, 16583), (77, 16628), (84, 16670), (87, 16700), (89, 16712), (112, 16898), (115, 16907), (147, 17117), (157, 17192), (174, 17294), (177, 17309), (183, 17339), (186, 17372), (189, 17390), (195, 17420), (200, 17444), (201, 17453), (203, 17477), (207, 17516), (210, 17537), (211, 17543), (213, 17567), (227, 17678), (229, 17696), (231, 17717), (233, 17744), (246, 17852), (259, 17945), (260, 17954), (261, 17966), (264, 17999), (271, 18086), (279, 18155), (297, 18293), (299, 18308), (308, 18374), (312, 18395), (319, 18416), (331, 18542), (337, 18584), (340, 18593), (342, 18605), (345, 18614), (374, 18938), (377, 18995), (385, 19106), (392, 19181), (398, 19268), (399, 19271), (400, 19286), (413, 19514), (414, 19526), (419, 19610), (429, 19679), (433, 19730), (436, 19790), (439, 19838), (440, 19859), (444, 19919), (452, 20000), (463, 20150), (472, 20228), (483, 20309),

(487, 20330), (489, 20375), (496, 20429), (499, 20537), (514, 20633), (516, 20642), (519, 20672), (520, 20675), (535, 20990), (561, 21263), (562, 21272), (564, 21302), (572, 21347), (574, 21380), (575, 21392), (576, 21401), (581, 21524), (596, 21644), (599, 21677), (600, 21728), (606, 21794), (609, 21815), (612, 21839), (614, 21866), (629, 22028), (630, 22031), (635, 22070), (638, 22091), (662, 22298), (673, 22412), (678, 22457), (682, 22508), (683, 22511), (684, 22520), (685, 22535),

Gene: Tillicus_27 Start: 16467, Stop: 23687, Start Num: 2

Candidate Starts for Tillicus_27:

(1, 16446), (Start: 2 @16467 has 29 MA's), (7, 16662), (10, 16737), (12, 16842), (13, 16863), (14, 16866), (17, 16896), (18, 16905), (22, 16959), (28, 17022), (30, 17028), (44, 17124), (48, 17175), (52, 17202), (63, 17256), (64, 17265), (69, 17280), (83, 17358), (86, 17394), (90, 17418), (111, 17613), (116, 17643), (134, 17748), (148, 17838), (152, 17862), (153, 17874), (156, 17895), (160, 17934), (172, 18000), (173, 18003), (180, 18039), (182, 18045), (183, 18051), (185, 18075), (193, 18120), (199, 18150), (200, 18156), (202, 18174), (208, 18231), (220, 18351), (241, 18519), (248, 18573), (250, 18594), (252, 18612), (254, 18627), (257, 18654), (267, 18738), (277, 18861), (298, 19017), (301, 19044), (304, 19065), (308, 19095), (315, 19128), (321, 19149), (323, 19173), (324, 19176), (325, 19179), (327, 19200), (328, 19212), (330, 19251), (334, 19287), (344, 19338), (355, 19398), (356, 19431), (362, 19509), (363, 19518), (377, 19707), (378, 19713), (383, 19785), (384, 19815), (389, 19869), (394, 19911), (401, 20007), (406, 20091), (412, 20214), (421, 20334), (427, 20385), (452, 20838), (453, 20868), (455, 20925), (460, 21000), (466, 21066), (469, 21078), (478, 21162), (482, 21195), (485, 21216), (490, 21285), (534, 21981), (539, 22026), (544, 22101), (566, 22401), (571, 22419), (591, 22725), (601, 22914), (611, 22986), (620, 23073), (623, 23094), (626, 23133), (629, 23175), (636, 23220), (637, 23229), (638, 23238), (639, 23250), (643, 23268), (650, 23319), (657, 23355), (658, 23361), (661, 23385), (666, 23487), (672, 23535), (675, 23550), (676, 23574), (681, 23631), (682, 23640), (684, 23652),

Gene: Wojtek_26 Start: 16774, Stop: 23985, Start Num: 2

Candidate Starts for Wojtek_26:

(1, 16753), (Start: 2 @16774 has 29 MA's), (6, 16921), (9, 17035), (11, 17134), (13, 17170), (15, 17182), (24, 17281), (41, 17413), (50, 17500), (52, 17509), (58, 17551), (63, 17563), (69, 17587), (71, 17593), (81, 17656), (87, 17710), (88, 17713), (105, 17866), (106, 17869), (120, 17971), (123, 17989), (127, 18016), (137, 18064), (138, 18073), (148, 18142), (153, 18178), (156, 18199), (157, 18211), (159, 18223), (160, 18238), (182, 18349), (199, 18454), (207, 18523), (208, 18535), (210, 18544), (243, 18835), (248, 18877), (250, 18898), (251, 18907), (254, 18931), (255, 18937), (257, 18958), (263, 19021), (267, 19042), (274, 19138), (277, 19165), (281, 19198), (298, 19321), (301, 19348), (308, 19399), (309, 19402), (313, 19426), (317, 19438), (321, 19453), (323, 19477), (330, 19555), (331, 19567), (344, 19642), (346, 19645), (359, 19792), (361, 19807), (363, 19822), (373, 19921), (375, 19969), (377, 20017), (378, 20023), (380, 20068), (383, 20095), (389, 20179), (394, 20221), (396, 20275), (401, 20317), (406, 20401), (412, 20524), (421, 20644), (427, 20695), (436, 20854), (452, 21148), (453, 21178), (455, 21235), (460, 21310), (466, 21376), (469, 21388), (478, 21472), (482, 21505), (485, 21526), (534, 22291), (536, 22324), (539, 22336), (544, 22414), (565, 22690), (567, 22702), (587, 22996), (592, 23038), (611, 23284), (620, 23371), (623, 23392), (626, 23431), (629, 23473), (636, 23518), (637, 23527), (638, 23536), (639, 23548), (649, 23611), (651, 23620), (658, 23659), (661, 23683), (675, 23848), (676, 23872), (681, 23929), (682, 23938), (684, 23950),

Gene: Xenia2_27 Start: 16812, Stop: 24071, Start Num: 2

Candidate Starts for Xenia2_27:

(1, 16791), (Start: 2 @16812 has 29 MA's), (5, 16956), (6, 16959), (8, 17031), (13, 17208), (14, 17211), (15, 17220), (16, 17235), (17, 17241), (22, 17304), (23, 17313), (25, 17325), (28, 17367), (48, 17520), (50, 17538), (54, 17559), (58, 17589), (67, 17619), (69, 17625), (73, 17640), (78, 17682), (81, 17694), (83, 17703), (85, 17727), (87, 17748), (90, 17763), (91, 17781), (95, 17817), (99, 17844), (105, 17904), (117, 18006), (118, 18009), (120, 18030), (123, 18048), (126, 18063), (129, 18084), (130, 18093), (136, 18129), (138, 18141), (145, 18195), (152, 18234), (153, 18246), (156, 18267), (161, 18309),

(164, 18321), (169, 18339), (171, 18363), (182, 18417), (196, 18507), (199, 18522), (208, 18603), (217, 18678), (223, 18741), (241, 18891), (248, 18945), (250, 18966), (251, 18975), (256, 19014), (259, 19032), (267, 19107), (281, 19263), (282, 19266), (308, 19473), (323, 19551), (330, 19629), (336, 19683), (348, 19725), (355, 19776), (362, 19887), (363, 19896), (367, 19938), (371, 19971), (373, 19995), (377, 20085), (378, 20091), (383, 20163), (384, 20193), (394, 20289), (401, 20385), (405, 20457), (406, 20469), (412, 20592), (421, 20712), (448, 21183), (456, 21330), (465, 21456), (467, 21465), (468, 21471), (469, 21474), (471, 21504), (474, 21528), (476, 21537), (478, 21558), (485, 21612), (488, 21654), (504, 21873), (506, 21891), (525, 22167), (529, 22266), (534, 22377), (536, 22410), (539, 22422), (544, 22500), (570, 22800), (571, 22803), (595, 23187), (611, 23370), (637, 23613), (649, 23697), (655, 23727), (675, 23934), (676, 23958), (681, 24015),

Gene: Yikes_28 Start: 18158, Stop: 25360, Start Num: 2

Candidate Starts for Yikes_28:

(1, 18137), (Start: 2 @18158 has 29 MA's), (6, 18305), (9, 18419), (11, 18518), (13, 18554), (15, 18566), (24, 18665), (41, 18797), (45, 18824), (46, 18827), (52, 18893), (58, 18935), (63, 18947), (69, 18971), (71, 18977), (81, 19040), (87, 19094), (88, 19097), (105, 19250), (106, 19253), (120, 19355), (123, 19373), (127, 19400), (137, 19448), (138, 19457), (148, 19526), (153, 19562), (156, 19583), (157, 19595), (159, 19607), (160, 19622), (170, 19658), (182, 19733), (199, 19838), (207, 19907), (208, 19919), (210, 19928), (243, 20219), (248, 20261), (250, 20282), (251, 20291), (254, 20315), (255, 20321), (257, 20342), (267, 20426), (274, 20522), (277, 20549), (281, 20582), (292, 20675), (298, 20705), (301, 20732), (308, 20783), (309, 20786), (313, 20810), (317, 20822), (321, 20837), (323, 20861), (330, 20939), (331, 20951), (346, 21029), (359, 21176), (361, 21191), (363, 21206), (373, 21305), (375, 21353), (377, 21401), (378, 21407), (383, 21479), (389, 21563), (394, 21605), (396, 21659), (401, 21701), (406, 21785), (412, 21908), (421, 22028), (427, 22079), (436, 22238), (441, 22352), (452, 22520), (455, 22607), (456, 22616), (464, 22739), (466, 22748), (469, 22760), (478, 22844), (503, 23153), (534, 23663), (536, 23696), (539, 23708), (544, 23786), (566, 24074), (571, 24092), (587, 24371), (592, 24413), (611, 24659), (623, 24767), (626, 24806), (627, 24809), (629, 24848), (637, 24902), (638, 24911), (639, 24923), (643, 24941), (644, 24965), (651, 24995), (658, 25034), (661, 25058), (675, 25223), (676, 25247), (682, 25313), (684, 25325),

Gene: Zany_26 Start: 17679, Stop: 24881, Start Num: 3

Candidate Starts for Zany_26:

(Start: 3 @17679 has 1 MA's), (6, 17826), (9, 17940), (11, 18039), (13, 18075), (15, 18087), (24, 18186), (41, 18318), (52, 18414), (58, 18456), (63, 18468), (69, 18492), (71, 18498), (81, 18561), (87, 18615), (88, 18618), (105, 18771), (106, 18774), (120, 18876), (123, 18894), (127, 18921), (137, 18969), (138, 18978), (148, 19047), (153, 19083), (156, 19104), (157, 19116), (159, 19128), (160, 19143), (170, 19179), (182, 19254), (199, 19359), (207, 19428), (208, 19440), (210, 19449), (243, 19740), (248, 19782), (250, 19803), (251, 19812), (254, 19836), (255, 19842), (257, 19863), (267, 19947), (274, 20043), (277, 20070), (281, 20103), (292, 20196), (298, 20226), (301, 20253), (308, 20304), (309, 20307), (313, 20331), (317, 20343), (321, 20358), (323, 20382), (330, 20460), (331, 20472), (344, 20547), (346, 20550), (359, 20697), (361, 20712), (363, 20727), (373, 20826), (375, 20874), (377, 20922), (378, 20928), (383, 21000), (389, 21084), (394, 21126), (396, 21180), (401, 21222), (406, 21306), (412, 21429), (421, 21549), (427, 21600), (436, 21759), (441, 21873), (452, 22041), (454, 22101), (455, 22128), (456, 22137), (466, 22269), (469, 22281), (478, 22365), (503, 22674), (505, 22686), (534, 23184), (536, 23217), (539, 23229), (544, 23307), (566, 23595), (571, 23613), (587, 23892), (611, 24180), (623, 24288), (626, 24327), (627, 24330), (629, 24369), (637, 24423), (638, 24432), (639, 24444), (643, 24462), (644, 24486), (649, 24507), (651, 24516), (658, 24555), (661, 24579), (675, 24744), (676, 24768), (682, 24834), (684, 24846),