

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 308538 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308538 has 72 members, 8 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 : Gibbin_28
- Track 7 : DumpTruck_26
- Track 8 : Erutan_27
- Track 9 : Zany_26
- Track 10 : Apeppi_24, LuckyLeo_26
- Track 11 : GretelLyn_27, Sadboi_27
- Track 12 : Rukungu_27
- Track 13 : Alyssamiracle_27
- Track 14 : MoiGyank_29
- Track 15 : Alephilan_24
- Track 16 : Riduram_24, NovaSharks_26
- Track 17 : Avian_24
- Track 18 : ParvusTarda_27
- Track 19 : Wojtek_26
- Track 20 : Lila22_26
- Track 21 : Charminar_24
- Track 22 : Xenia2_27
- Track 23 : Astralis_24
- Track 24 : Pywacket_26
- Track 25 : Genamy16_27
- Track 26 : Stormer_26
- Track 27 : Sampudon_27, Jalebi_26
- Track 28 : Yikes_28
- Track 29 : BirthdayBoy_28
- Track 30 : DaviePasture_27
- Track 31 : Rumi_26
- Track 32 : Patos_28, NorManre_28
- Track 33 : Jamemuya19_24
- Track 34 : Lambo_27
- Track 35 : OtterstedtS21_27
- Track 36 : Rota_26
- Track 37 : Ranch_27

- Track 38 : Fulcrum_28, GOATification_28
- Track 39 : RazorC_25
- Track 40 : Tillicus_26
- Track 41 : LavAbarElk_25
- Track 42 : Mima20_25
- Track 43 : DoobyDoo_26
- Track 44 : Thumb_26
- Track 45 : Predator_30
- Track 46 : Puissant_27
- Track 47 : Damien_26
- Track 48 : Megatron06_28
- Track 49 : BobtimousPrime_28
- Track 50 : Phreeze_26
- Track 51 : Cborch11_27, Nish23_27
- Track 52 : Oaker_26
- Track 53 : Beckerton_26
- Track 54 : Konstantine_31
- Track 55 : Barnyard_33
- Track 56 : DrLupo_35
- Track 57 : Patience_34
- Track 58 : Demikore_34, Labelle_33
- Track 59 : SuperSonics_33
- Track 60 : 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 34 of the 64 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alephilan_24, Apeppi_24, Astralis_24, BirthdayBoy_28, Charminar_24, DaviePasture_27, DoobyDoo_26, DumpTruck_26, Erutan_27, Fulcrum_28, GOATification_28, Gibbin_28, GretelLyn_27, Jalebi_26, Jamemuya19_24, Lambo_27, LavAbarElk_25, Lila22_26, LuckyLeo_26, Mima20_25, MoiGyank_29, NorManre_28, NovaSharks_26, OtterstedtS21_27, ParvusTarda_27, Patos_28, Pywacket_26, Ranch_27, Riduram_24, Rukungu_27, Rumi_26, Sadboi_27, Sampudon_27, Tillicus_26, Wojtek_26, Xenia2_27, Yikes_28,

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

- Stormer_26,

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

- Alyssmiracle_27, Avian_24, Barnyard_33, Beckerton_26, Beyoncage_22, BiteSize_22, BobtimousPrime_28, Cborch11_27, Damien_26, Demikore_34, Djokovic_22, DrLupo_35, Genamy16_27, Konstantine_31, Labelle_33, LilyPad_23, LittleFella_24, Madi_22, Madruga_32, Megatron06_28, Nish23_27, Oaker_26, Patience_34, Phreeze_26, Predator_30, Puissant_27, RazorC_25, Rota_26, Sienna_22, SuperSonics_33, Suzy_22, Terapin_22, Thumb_26, Zany_26,

Summary by start number:

Start 2:

- Found in 38 of 72 (52.8%) of genes in pham
- Manual Annotations of this start: 34 of 64
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Alephilan_24 (DV), Apeppi_24 (DV), Astralis_24 (DV), BirthdayBoy_28 (DV), Charminar_24 (DV), DaviePasture_27 (DV), DoobyDoo_26 (DV), DumpTruck_26 (DV), Erutan_27 (DV), Fulcrum_28 (DV), GOATification_28 (DV), Gibbin_28 (DV), GretelLyn_27 (DV), Jalebi_26 (DV), Jamemuya19_24 (DV), Lambo_27 (DV), LavAbarElk_25 (DV), Lila22_26 (DV), LuckyLeo_26 (DV), Mima20_25 (DV), MoiGyank_29 (DV), NorManre_28 (DV), NovaSharks_26 (DV), OtterstedtS21_27 (DV), ParvusTarda_27 (DV), Patos_28 (DV), Pywacket_26 (DV), Ranch_27 (DV), Riduram_24 (DV), Rukungu_27 (DV), Rumi_26 (DV), Sadboi_27 (DV), Sampudon_27 (DV), Tillicus_26 (DV), Wojtek_26 (DV), Xenia2_27 (DV), Yikes_28 (DV),

Start 3:

- Found in 6 of 72 (8.3%) of genes in pham
- Manual Annotations of this start: 5 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alyssamiracle_27 (DV), Avian_24 (DV), Genamy16_27 (DV), RazorC_25 (DV), Rota_26 (DV), Zany_26 (DV),

Start 11:

- Found in 39 of 72 (54.2%) of genes in pham
- No Manual Annotations of this start.
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Stormer_26 (DV),

Start 19:

- Found in 12 of 72 (16.7%) of genes in pham
- Manual Annotations of this start: 11 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beckerton_26 (H1), BobtimousPrime_28 (H1), Cborch11_27 (H1), Damien_26 (H1), Konstantine_31 (H1), Megatron06_28 (H1), Nish23_27 (H1), Oaker_26 (H1), Phreeze_26 (H1), Predator_30 (H1), Puissant_27 (H1), Thumb_26 (H1),

Start 20:

- Found in 7 of 72 (9.7%) of genes in pham
- Manual Annotations of this start: 5 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard_33 (H2), Demikore_34 (U), DrLupo_35 (H2), Labelle_33 (U), Madruga_32 (U), Patience_34 (U), SuperSonics_33 (U),

Start 47:

- Found in 9 of 72 (12.5%) of genes in pham
- Manual Annotations of this start: 9 of 64
- 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 34 times for cluster DV.
- Start number 3 was manually annotated 5 times for cluster DV.

Info for manual annotations of cluster H1:

- Start number 19 was manually annotated 11 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: 16739, Stop: 23944, Start Num: 2

Candidate Starts for Alephilan_24:

(1, 16718), (Start: 2 @16739 has 34 MA's), (9, 17000), (11, 17099), (13, 17135), (15, 17147), (24, 17246), (41, 17378), (45, 17405), (49, 17465), (51, 17474), (56, 17516), (60, 17528), (66, 17552), (68, 17558), (79, 17621), (86, 17675), (88, 17678), (105, 17831), (106, 17834), (120, 17936), (123, 17954), (127, 17981), (138, 18029), (141, 18038), (151, 18107), (156, 18143), (159, 18164), (160, 18176), (162, 18188), (163, 18203), (173, 18239), (185, 18314), (186, 18320), (202, 18419), (211, 18500), (213, 18509), (246, 18800), (251, 18842), (253, 18863), (254, 18872), (257, 18896), (258, 18902), (260, 18923), (277, 19103), (280, 19130), (284, 19163), (288, 19184), (301, 19286), (304, 19313), (311, 19364), (312, 19367), (316, 19391), (320, 19403), (324, 19418), (326, 19442), (333, 19520), (334, 19532), (347, 19607), (359, 19700), (362, 19757), (366, 19787), (380, 19976), (381, 19982), (386, 20054), (387, 20084), (391, 20129), (392, 20138), (397, 20180), (399, 20234), (404, 20276), (409, 20360), (415, 20483), (424, 20603), (430, 20654), (439, 20813), (456, 21104), (459, 21191), (470, 21332), (473, 21344), (480, 21428), (484, 21461), (496, 21590), (536, 22247), (537, 22280), (545, 22370), (567, 22658), (569, 22667), (571, 22676), (605, 23171), (615, 23243), (625, 23333), (627, 23351), (630, 23390), (633, 23432), (636, 23456), (643, 23486), (644, 23495), (649, 23525), (653, 23561), (657, 23579), (664, 23618), (667, 23642), (681, 23807), (682, 23831), (688, 23897), (690, 23909),

Gene: Alyssamiracle_27 Start: 15546, Stop: 22754, Start Num: 3

Candidate Starts for Alyssamiracle_27:

(Start: 3 @15546 has 5 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (49, 16272), (51, 16281), (56, 16323), (60, 16335), (66, 16359), (68, 16365), (74, 16386), (79, 16428), (86, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (138, 16836), (141, 16845), (156, 16950), (159, 16971), (160,

16983), (162, 16995), (163, 17010), (173, 17046), (179, 17091), (185, 17121), (187, 17148), (202, 17226), (210, 17295), (211, 17307), (213, 17316), (244, 17595), (246, 17607), (251, 17649), (253, 17670), (254, 17679), (257, 17703), (258, 17709), (260, 17730), (270, 17814), (277, 17910), (280, 17937), (284, 17970), (295, 18063), (301, 18093), (311, 18171), (312, 18174), (316, 18198), (320, 18210), (324, 18225), (326, 18249), (333, 18327), (334, 18339), (347, 18414), (349, 18417), (362, 18564), (364, 18579), (366, 18594), (376, 18693), (378, 18741), (380, 18789), (381, 18795), (383, 18840), (386, 18867), (397, 18993), (399, 19047), (404, 19089), (409, 19173), (413, 19260), (415, 19296), (424, 19416), (430, 19467), (439, 19626), (444, 19740), (456, 19917), (459, 20004), (470, 20145), (473, 20157), (480, 20241), (536, 21060), (537, 21093), (539, 21105), (545, 21183), (565, 21459), (568, 21471), (583, 21714), (590, 21765), (595, 21807), (615, 22053), (627, 22161), (630, 22200), (631, 22203), (633, 22242), (636, 22266), (643, 22296), (644, 22305), (646, 22317), (655, 22380), (657, 22389), (664, 22428), (667, 22452), (681, 22617), (682, 22641), (688, 22707), (690, 22719),

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

Candidate Starts for Apeppi_24:

(1, 16852), (Start: 2 @16873 has 34 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), (51, 17608), (60, 17662), (63, 17671), (66, 17686), (82, 17764), (85, 17800), (90, 17824), (111, 18019), (116, 18049), (135, 18154), (151, 18244), (155, 18268), (156, 18280), (159, 18301), (160, 18313), (163, 18340), (176, 18409), (183, 18445), (185, 18451), (188, 18481), (196, 18526), (200, 18547), (202, 18556), (205, 18580), (211, 18637), (223, 18757), (244, 18925), (251, 18979), (253, 19000), (255, 19018), (257, 19033), (260, 19060), (270, 19144), (280, 19267), (301, 19423), (304, 19450), (307, 19471), (311, 19501), (318, 19534), (324, 19555), (326, 19579), (327, 19582), (328, 19585), (330, 19606), (331, 19618), (333, 19657), (337, 19693), (347, 19744), (358, 19804), (359, 19837), (365, 19915), (366, 19924), (380, 20113), (381, 20119), (386, 20191), (387, 20221), (392, 20275), (397, 20317), (404, 20413), (409, 20497), (415, 20620), (424, 20740), (430, 20791), (456, 21244), (457, 21274), (459, 21331), (463, 21406), (470, 21472), (473, 21484), (480, 21568), (484, 21601), (485, 21622), (491, 21691), (536, 22387), (545, 22507), (546, 22510), (567, 22807), (571, 22825), (590, 23104), (594, 23131), (605, 23320), (615, 23392), (624, 23479), (627, 23500), (630, 23539), (633, 23581), (643, 23635), (644, 23644), (646, 23656), (655, 23719), (657, 23728), (664, 23767), (667, 23791), (672, 23893), (681, 23956), (682, 23980), (687, 24037), (688, 24046), (690, 24058),

Gene: Astralis_24 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for Astralis_24:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (249, 17221), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007), (362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (565, 21049), (568, 21061), (590, 21355), (595, 21397), (615, 21643), (627, 21751), (630, 21790), (631, 21793), (633, 21832), (636, 21856), (643, 21886), (644, 21895), (646, 21907), (655, 21970), (657, 21979), (664, 22018), (667, 22042), (681, 22207), (682, 22231), (688, 22297), (690, 22309),

Gene: Avian_24 Start: 15528, Stop: 22736, Start Num: 3

Candidate Starts for Avian_24:

(Start: 3 @15528 has 5 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (49, 16254), (51, 16263), (56, 16305), (60, 16317), (66, 16341), (68, 16347), (74, 16368), (79, 16410), (86, 16464), (88, 16467), (106, 16623), (120, 16725), (123, 16743), (127, 16770), (138, 16818), (141, 16827), (156, 16932), (159, 16953), (160, 16965), (162, 16977), (163, 16992), (173, 17028), (179, 17073), (185, 17103), (187, 17130), (202, 17208), (210, 17277), (211, 17289), (213, 17298), (244, 17577), (246, 17589), (251, 17631), (253, 17652), (254, 17661), (257, 17685), (258, 17691), (260, 17712), (270, 17796), (277, 17892), (280, 17919), (284, 17952), (295, 18045), (301, 18075), (311, 18153), (312, 18156), (316, 18180), (320, 18192), (324, 18207), (326, 18231), (333, 18309), (334, 18321), (347, 18396), (349, 18399), (362, 18546), (364, 18561), (366, 18576), (376, 18675), (378, 18723), (380, 18771), (381, 18777), (383, 18822), (386, 18849), (397, 18975), (399, 19029), (404, 19071), (409, 19155), (413, 19242), (415, 19278), (424, 19398), (430, 19449), (439, 19608), (444, 19722), (456, 19899), (459, 19986), (470, 20127), (473, 20139), (480, 20223), (536, 21042), (537, 21075), (539, 21087), (545, 21165), (565, 21441), (568, 21453), (583, 21696), (590, 21747), (595, 21789), (615, 22035), (627, 22143), (630, 22182), (631, 22185), (633, 22224), (635, 22236), (643, 22278), (644, 22287), (646, 22299), (649, 22317), (657, 22371), (664, 22410), (667, 22434), (681, 22599), (682, 22623), (688, 22689), (690, 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), (61, 18384), (70, 18405), (81, 18453), (93, 18555), (98, 18579), (103, 18600), (119, 18714), (120, 18723), (130, 18777), (139, 18807), (142, 18819), (147, 18843), (149, 18849), (153, 18870), (157, 18903), (158, 18909), (168, 18951), (171, 18963), (172, 18966), (177, 19005), (180, 19020), (181, 19023), (184, 19041), (195, 19113), (207, 19203), (208, 19206), (218, 19299), (219, 19302), (221, 19335), (223, 19356), (229, 19383), (231, 19389), (238, 19461), (242, 19491), (246, 19536), (248, 19551), (252, 19590), (262, 19653), (263, 19662), (265, 19692), (267, 19707), (272, 19743), (273, 19773), (274, 19794), (278, 19839), (282, 19863), (283, 19872), (285, 19887), (288, 19905), (289, 19908), (298, 19989), (299, 19995), (302, 20016), (310, 20076), (335, 20253), (350, 20328), (360, 20448), (361, 20463), (365, 20487), (366, 20496), (367, 20499), (371, 20550), (377, 20646), (388, 20814), (389, 20823), (390, 20844), (401, 20976), (411, 21150), (413, 21174), (415, 21210), (416, 21222), (417, 21234), (418, 21276), (419, 21285), (428, 21366), (431, 21387), (433, 21423), (435, 21429), (437, 21447), (442, 21549), (447, 21630), (453, 21681), (457, 21711), (462, 21804), (464, 21843), (481, 21984), (484, 22005), (492, 22095), (493, 22107), (498, 22188), (507, 22275), (511, 22302), (513, 22341), (516, 22359), (522, 22413), (524, 22425), (530, 22566), (532, 22614), (534, 22638), (541, 22728), (548, 22830), (555, 22944), (557, 22956), (560, 22989), (566, 23043), (572, 23073), (579, 23172), (580, 23184), (582, 23232), (596, 23337), (601, 23367), (602, 23388), (608, 23487), (617, 23565), (619, 23586), (620, 23592), (622, 23604), (624, 23637), (629, 23688), (630, 23697), (632, 23733), (633, 23739), (647, 23823), (648, 23826), (655, 23880), (657, 23889), (659, 23901), (662, 23922), (664, 23931), (668, 23988), (671, 24036), (672, 24057), (674, 24078), (680, 24114), (684, 24153), (688, 24204), (689, 24207), (690, 24216),

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

Candidate Starts for Beckerton_26:

(Start: 19 @16772 has 11 MA's), (25, 16835), (36, 16916), (38, 16934), (58, 17081), (62, 17090), (65, 17102), (71, 17120), (77, 17165), (84, 17207), (89, 17237), (91, 17249), (112, 17435), (115, 17444), (150, 17654), (160, 17729), (177, 17831), (180, 17846), (186, 17876), (189, 17909), (192, 17927), (198, 17957), (203, 17981), (204, 17990), (210, 18053), (213, 18074), (214, 18080), (216, 18104), (230, 18215), (232, 18233), (234, 18254), (236, 18281), (249, 18389), (262, 18482), (263, 18491), (267, 18536), (274, 18623), (282, 18692), (302, 18845), (315, 18932), (334, 19079), (340, 19121), (343, 19130), (345, 19142), (348, 19151), (377, 19475), (380, 19532), (388, 19643), (395, 19718), (402, 19808), (416, 20051), (421, 20135), (422, 20147), (436, 20267), (439, 20327), (442, 20375), (443, 20396), (447, 20456), (457, 20537), (466, 20687), (484, 20846), (485, 20867), (488, 20912),

(497, 20966), (500, 21074), (514, 21170), (515, 21179), (519, 21209), (520, 21212), (540, 21527), (564, 21800), (566, 21809), (576, 21884), (577, 21917), (578, 21929), (579, 21938), (587, 22061), (599, 22181), (604, 22265), (610, 22331), (616, 22376), (618, 22403), (633, 22565), (634, 22568), (639, 22607), (640, 22619), (642, 22628), (668, 22835), (679, 22949), (684, 22994), (688, 23045), (689, 23048), (690, 23057), (691, 23072),

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

Candidate Starts for Beyoncage_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459, 16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 19308),

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

Candidate Starts for BirthdayBoy_28:

(1, 17562), (Start: 2 @17583 has 34 MA's), (6, 17730), (9, 17844), (11, 17943), (13, 17979), (15, 17991), (24, 18090), (41, 18222), (51, 18318), (56, 18360), (60, 18372), (66, 18396), (68, 18402), (79, 18465), (86, 18519), (88, 18522), (105, 18675), (106, 18678), (120, 18780), (123, 18798), (127, 18825), (138, 18873), (141, 18882), (151, 18951), (156, 18987), (159, 19008), (160, 19020), (162, 19032), (163, 19047), (173, 19083), (185, 19158), (202, 19263), (210, 19332), (211, 19344), (213, 19353), (244, 19632), (246, 19644), (251, 19686), (253, 19707), (254, 19716), (257, 19740), (258, 19746), (260, 19767), (266, 19830), (270, 19851), (277, 19947), (280, 19974), (284, 20007), (311, 20208), (312, 20211), (316, 20235), (320, 20247), (324, 20262), (326, 20286), (333, 20364), (334, 20376), (347, 20451), (349, 20454), (362, 20601), (364, 20616), (366, 20631), (376, 20730), (378, 20778), (380, 20826), (381, 20832), (385, 20898), (386, 20904), (392, 20988), (397, 21030), (399, 21084), (404, 21126), (409, 21210), (415, 21333), (424, 21453), (430, 21504), (439, 21663), (444, 21777), (456, 21957), (458, 22017), (459, 22044), (463, 22119), (470, 22185), (473, 22197), (480, 22281), (484, 22314), (536, 23100), (537, 23133), (539, 23145), (545, 23223), (567, 23511), (571, 23529), (590, 23808), (615, 24096), (627, 24204), (630, 24243), (631, 24246), (633, 24285), (643, 24339), (644, 24348), (646, 24360), (649, 24378), (651, 24402), (657, 24432), (664, 24471), (667, 24495), (681, 24660), (682, 24684), (688, 24750), (690, 24762),

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

Candidate Starts for BiteSize_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459,

16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 19308),

Gene: BobtimousPrime_28 Start: 16692, Stop: 23015, Start Num: 19

Candidate Starts for BobtimousPrime_28:

(Start: 19 @16692 has 11 MA's), (25, 16755), (36, 16836), (38, 16854), (58, 17001), (62, 17010), (65, 17022), (77, 17085), (91, 17169), (112, 17355), (115, 17364), (150, 17574), (160, 17649), (177, 17751), (180, 17766), (186, 17796), (189, 17829), (192, 17847), (198, 17877), (203, 17901), (204, 17910), (210, 17973), (213, 17994), (214, 18000), (216, 18024), (230, 18135), (232, 18153), (234, 18174), (236, 18201), (249, 18309), (262, 18402), (263, 18411), (267, 18456), (274, 18543), (282, 18612), (300, 18750), (302, 18765), (315, 18852), (334, 18999), (338, 19029), (340, 19041), (343, 19050), (345, 19062), (348, 19071), (377, 19395), (380, 19452), (388, 19563), (395, 19638), (402, 19728), (416, 19971), (421, 20055), (422, 20067), (436, 20187), (439, 20247), (442, 20295), (443, 20316), (447, 20376), (457, 20457), (466, 20607), (484, 20766), (485, 20787), (488, 20832), (497, 20886), (500, 20994), (514, 21090), (515, 21099), (519, 21129), (520, 21132), (540, 21447), (564, 21720), (566, 21729), (573, 21786), (576, 21804), (577, 21837), (578, 21849), (579, 21858), (587, 21981), (599, 22101), (604, 22185), (610, 22251), (616, 22296), (618, 22323), (633, 22485), (634, 22488), (639, 22527), (640, 22539), (642, 22548), (668, 22755), (679, 22869), (684, 22914), (688, 22965), (689, 22968), (690, 22977), (691, 22992),

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

Candidate Starts for Cborch11_27:

(Start: 19 @16234 has 11 MA's), (25, 16297), (36, 16378), (38, 16396), (58, 16543), (62, 16552), (65, 16564), (77, 16627), (91, 16711), (112, 16897), (115, 16906), (121, 16963), (150, 17116), (160, 17191), (177, 17293), (180, 17308), (186, 17338), (189, 17371), (192, 17389), (198, 17419), (203, 17443), (204, 17452), (210, 17515), (213, 17536), (214, 17542), (216, 17566), (230, 17677), (232, 17695), (234, 17716), (236, 17743), (249, 17851), (262, 17944), (263, 17953), (267, 17998), (274, 18085), (282, 18154), (302, 18307), (315, 18394), (334, 18541), (340, 18583), (343, 18592), (345, 18604), (348, 18613), (377, 18937), (380, 18994), (388, 19105), (395, 19180), (402, 19270), (416, 19513), (422, 19609), (436, 19729), (439, 19789), (442, 19837), (443, 19858), (447, 19918), (457, 19999), (466, 20149), (484, 20308), (485, 20329), (488, 20374), (497, 20428), (500, 20536), (514, 20632), (515, 20641), (519, 20671), (520, 20674), (540, 20989), (564, 21262), (566, 21271), (576, 21346), (577, 21379), (578, 21391), (579, 21400), (587, 21523), (599, 21643), (604, 21727), (610, 21793), (616, 21838), (618, 21865), (633, 22027), (634, 22030), (639, 22069), (640, 22081), (642, 22090), (668, 22297), (679, 22411), (684, 22456), (688, 22507), (689, 22510), (690, 22519), (691, 22534),

Gene: Charminar_24 Start: 15136, Stop: 22347, Start Num: 2

Candidate Starts for Charminar_24:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (179, 16681), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007),

(362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (567, 21061), (590, 21358), (595, 21400), (615, 21646), (627, 21754), (630, 21793), (631, 21796), (633, 21835), (636, 21859), (643, 21889), (644, 21898), (646, 21910), (655, 21973), (657, 21982), (664, 22021), (667, 22045), (681, 22210), (682, 22234), (688, 22300), (690, 22312),

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

Candidate Starts for Damien_26:

(Start: 19 @16235 has 11 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (77, 16628), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (177, 17294), (180, 17309), (186, 17339), (189, 17372), (192, 17390), (198, 17420), (203, 17444), (204, 17453), (210, 17516), (213, 17537), (214, 17543), (216, 17567), (230, 17678), (232, 17696), (234, 17717), (236, 17744), (249, 17852), (262, 17945), (263, 17954), (267, 17999), (274, 18086), (282, 18155), (300, 18293), (302, 18308), (315, 18395), (334, 18542), (340, 18584), (343, 18593), (345, 18605), (348, 18614), (377, 18938), (380, 18995), (388, 19106), (395, 19181), (402, 19271), (416, 19514), (421, 19598), (422, 19610), (436, 19730), (439, 19790), (442, 19838), (443, 19859), (447, 19919), (457, 20000), (466, 20150), (484, 20309), (485, 20330), (488, 20375), (497, 20429), (500, 20537), (514, 20633), (515, 20642), (519, 20672), (520, 20675), (540, 20990), (564, 21263), (566, 21272), (576, 21347), (577, 21380), (578, 21392), (579, 21401), (587, 21524), (599, 21644), (604, 21728), (610, 21794), (616, 21839), (618, 21866), (633, 22028), (634, 22031), (639, 22070), (640, 22082), (642, 22091), (668, 22298), (679, 22412), (684, 22457), (688, 22508), (689, 22511), (690, 22520), (691, 22535),

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

Candidate Starts for DaviePasture_27:

(1, 17331), (Start: 2 @17352 has 34 MA's), (6, 17499), (9, 17613), (11, 17712), (13, 17748), (15, 17760), (24, 17859), (41, 17991), (45, 18018), (46, 18021), (49, 18078), (51, 18087), (56, 18129), (60, 18141), (66, 18165), (68, 18171), (79, 18234), (86, 18288), (88, 18291), (105, 18444), (106, 18447), (120, 18549), (123, 18567), (127, 18594), (138, 18642), (141, 18651), (151, 18720), (156, 18756), (159, 18777), (160, 18789), (162, 18801), (163, 18816), (173, 18852), (179, 18897), (185, 18927), (202, 19032), (210, 19101), (211, 19113), (213, 19122), (246, 19413), (249, 19437), (251, 19455), (253, 19476), (254, 19485), (257, 19509), (258, 19515), (260, 19536), (270, 19620), (277, 19716), (280, 19743), (284, 19776), (288, 19797), (301, 19899), (311, 19977), (312, 19980), (316, 20004), (320, 20016), (324, 20031), (326, 20055), (333, 20133), (334, 20145), (347, 20220), (349, 20223), (362, 20370), (364, 20385), (366, 20400), (376, 20499), (378, 20547), (380, 20595), (381, 20601), (386, 20673), (392, 20757), (397, 20799), (399, 20853), (404, 20895), (409, 20979), (415, 21102), (424, 21222), (425, 21228), (430, 21273), (439, 21432), (444, 21546), (450, 21660), (456, 21714), (459, 21801), (460, 21810), (468, 21933), (470, 21942), (473, 21954), (480, 22038), (504, 22347), (536, 22857), (539, 22902), (545, 22977), (567, 23277), (571, 23295), (590, 23574), (595, 23616), (615, 23862), (627, 23970), (630, 24009), (631, 24012), (633, 24051), (643, 24105), (644, 24114), (646, 24126), (649, 24144), (651, 24168), (657, 24198), (664, 24237), (667, 24261), (681, 24426), (682, 24450), (688, 24516), (690, 24528),

Gene: Demikore_34 Start: 19565, Stop: 26212, Start Num: 20

Candidate Starts for Demikore_34:

(Start: 20 @19565 has 5 MA's), (29, 19658), (31, 19670), (32, 19679), (37, 19712), (42, 19754), (55, 19859), (67, 19916), (69, 19922), (71, 19928), (78, 19985), (80, 19991), (82, 19997), (104, 20195), (108, 20225), (109, 20237), (114, 20273), (134, 20414), (152, 20510), (158, 20558), (173, 20636), (174, 20660), (180, 20693), (187, 20744), (193, 20777), (201, 20816), (211, 20906), (216, 20945), (217, 20957), (221, 21005), (225, 21038), (235, 21104), (243, 21173), (245, 21197), (247, 21215), (250, 21239), (261, 21320), (263, 21332), (274, 21467), (275, 21476), (285, 21560), (291, 21602),

(301, 21680), (307, 21725), (330, 21881), (332, 21902), (334, 21944), (344, 22007), (360, 22163), (363, 22190), (366, 22211), (367, 22214), (369, 22253), (371, 22265), (379, 22400), (382, 22457), (391, 22583), (396, 22625), (398, 22676), (406, 22760), (415, 22931), (416, 22943), (423, 23051), (429, 23105), (431, 23117), (440, 23255), (467, 23618), (482, 23753), (489, 23837), (518, 24167), (521, 24200), (523, 24209), (551, 24719), (553, 24746), (558, 24794), (562, 24851), (575, 24950), (586, 25136), (603, 25322), (621, 25532), (633, 25673), (637, 25703), (650, 25805), (657, 25844), (660, 25859), (671, 25991), (673, 26015), (675, 26039), (683, 26099), (685, 26117), (686, 26150), (688, 26162), (689, 26165), (691, 26189),

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

Candidate Starts for Djokovic_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459, 16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 19308),

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

Candidate Starts for DoobyDoo_26:

(1, 16496), (Start: 2 @16517 has 34 MA's), (6, 16664), (9, 16778), (11, 16877), (13, 16913), (15, 16925), (24, 17024), (41, 17156), (45, 17183), (46, 17186), (51, 17252), (56, 17294), (60, 17306), (66, 17330), (68, 17336), (79, 17399), (86, 17453), (88, 17456), (105, 17609), (106, 17612), (120, 17714), (123, 17732), (127, 17759), (138, 17807), (141, 17816), (151, 17885), (156, 17921), (159, 17942), (160, 17954), (162, 17966), (163, 17981), (173, 18017), (185, 18092), (186, 18098), (202, 18197), (210, 18266), (211, 18278), (213, 18287), (246, 18578), (251, 18620), (253, 18641), (254, 18650), (257, 18674), (258, 18680), (260, 18701), (266, 18764), (270, 18785), (277, 18881), (280, 18908), (284, 18941), (311, 19142), (312, 19145), (316, 19169), (320, 19181), (324, 19196), (326, 19220), (333, 19298), (334, 19310), (349, 19388), (362, 19535), (364, 19550), (366, 19565), (376, 19664), (378, 19712), (380, 19760), (381, 19766), (383, 19811), (386, 19838), (392, 19922), (397, 19964), (399, 20018), (404, 20060), (409, 20144), (415, 20267), (424, 20387), (430, 20438), (439, 20597), (444, 20711), (456, 20879), (459, 20966), (460, 20975), (470, 21107), (473, 21119), (480, 21203), (484, 21236), (504, 21512), (536, 22022), (537, 22055), (539, 22067), (545, 22145), (567, 22433), (569, 22442), (571, 22451), (590, 22730), (595, 22772), (615, 23018), (627, 23126), (630, 23165), (631, 23168), (633, 23207), (643, 23261), (644, 23270), (646, 23282), (649, 23300), (651, 23324), (657, 23354), (664, 23393), (667, 23417), (681, 23582), (682, 23606), (688, 23672), (690, 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), (52, 18748), (61, 18790), (70, 18811), (81, 18859), (93, 18961), (98, 18985), (103, 19006), (113, 19078), (119, 19120), (120, 19129), (130, 19183), (136, 19204), (140, 19216), (142, 19225), (146, 19240), (153, 19276), (156, 19297), (158, 19315), (177, 19411), (181, 19429), (182, 19435), (184, 19447), (207, 19609), (208, 19612), (210, 19630), (218, 19705), (219, 19708), (225, 19774), (231, 19795),

(241, 19882), (246, 19942), (247, 19951), (250, 19975), (251, 19984), (262, 20059), (263, 20068), (265, 20098), (267, 20113), (272, 20149), (273, 20179), (274, 20200), (279, 20248), (283, 20278), (290, 20323), (294, 20365), (298, 20395), (299, 20401), (310, 20482), (311, 20488), (322, 20530), (331, 20605), (344, 20713), (350, 20734), (352, 20740), (358, 20782), (360, 20854), (361, 20869), (365, 20893), (366, 20902), (367, 20905), (377, 21052), (384, 21178), (388, 21220), (389, 21229), (390, 21250), (393, 21289), (399, 21367), (400, 21376), (411, 21556), (413, 21580), (415, 21616), (416, 21628), (417, 21640), (419, 21691), (430, 21787), (431, 21793), (441, 21925), (442, 21955), (444, 21997), (446, 22030), (457, 22117), (484, 22411), (488, 22477), (494, 22522), (501, 22642), (502, 22657), (517, 22762), (519, 22780), (522, 22813), (530, 22966), (534, 23038), (543, 23167), (550, 23272), (556, 23347), (557, 23356), (560, 23389), (561, 23401), (564, 23434), (566, 23443), (572, 23473), (577, 23551), (579, 23572), (580, 23584), (601, 23767), (612, 23917), (613, 23926), (617, 23965), (623, 24007), (624, 24037), (629, 24088), (630, 24097), (632, 24133), (633, 24139), (647, 24223), (657, 24289), (658, 24292), (659, 24301), (662, 24322), (668, 24388), (669, 24412), (671, 24436), (672, 24457), (674, 24478), (680, 24514), (685, 24559), (688, 24604), (689, 24607), (690, 24616),

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

Candidate Starts for DumpTruck_26:

(1, 16749), (Start: 2 @16770 has 34 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), (49, 17496), (54, 17517), (56, 17547), (64, 17577), (66, 17583), (72, 17598), (76, 17640), (79, 17652), (82, 17661), (83, 17685), (86, 17706), (90, 17721), (92, 17739), (95, 17775), (99, 17802), (105, 17862), (117, 17964), (118, 17967), (120, 17988), (123, 18006), (126, 18021), (129, 18042), (131, 18051), (137, 18087), (141, 18099), (148, 18153), (155, 18192), (156, 18204), (159, 18225), (163, 18264), (164, 18267), (167, 18279), (172, 18297), (174, 18321), (185, 18375), (199, 18465), (202, 18480), (211, 18561), (220, 18636), (226, 18699), (244, 18849), (251, 18903), (253, 18924), (254, 18933), (259, 18972), (262, 18990), (270, 19065), (284, 19221), (285, 19224), (311, 19431), (326, 19509), (333, 19587), (339, 19641), (351, 19683), (358, 19734), (365, 19845), (366, 19854), (370, 19896), (374, 19929), (376, 19953), (380, 20043), (381, 20049), (386, 20121), (387, 20151), (397, 20247), (404, 20343), (408, 20415), (409, 20427), (415, 20550), (424, 20670), (460, 21288), (469, 21414), (471, 21423), (472, 21429), (473, 21432), (475, 21462), (476, 21486), (478, 21495), (480, 21516), (485, 21570), (487, 21612), (505, 21831), (508, 21849), (527, 22125), (529, 22173), (531, 22224), (536, 22335), (537, 22368), (539, 22380), (545, 22458), (570, 22758), (571, 22761), (598, 23145), (615, 23328), (625, 23418), (643, 23571), (655, 23655), (661, 23685), (681, 23892), (682, 23916), (687, 23973),

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

Candidate Starts for Erutan_27:

(1, 17009), (Start: 2 @17030 has 34 MA's), (6, 17177), (9, 17291), (11, 17390), (13, 17426), (15, 17438), (24, 17537), (41, 17669), (45, 17696), (49, 17756), (51, 17765), (56, 17807), (60, 17819), (66, 17843), (68, 17849), (79, 17912), (82, 17921), (86, 17966), (88, 17969), (105, 18122), (106, 18125), (120, 18227), (123, 18245), (127, 18272), (138, 18320), (141, 18329), (151, 18398), (156, 18434), (159, 18455), (160, 18467), (162, 18479), (163, 18494), (173, 18530), (185, 18605), (202, 18710), (210, 18779), (211, 18791), (213, 18800), (246, 19091), (251, 19133), (253, 19154), (254, 19163), (257, 19187), (258, 19193), (260, 19214), (266, 19277), (270, 19298), (277, 19394), (280, 19421), (284, 19454), (295, 19547), (301, 19577), (311, 19655), (312, 19658), (316, 19682), (320, 19694), (324, 19709), (326, 19733), (333, 19811), (334, 19823), (349, 19901), (362, 20048), (364, 20063), (366, 20078), (376, 20177), (378, 20225), (380, 20273), (381, 20279), (386, 20351), (392, 20435), (397, 20477), (399, 20531), (404, 20573), (409, 20657), (415, 20780), (424, 20900), (430, 20951), (439, 21110), (444, 21224), (456, 21404), (459, 21491), (463, 21566), (470, 21632), (473, 21644), (480, 21728), (484, 21761), (485, 21782), (536, 22547), (537, 22580), (539, 22592), (545, 22670), (565, 22946), (568, 22958), (574, 23024), (594, 23279), (611, 23516), (615, 23540), (627, 23648), (630, 23687), (633, 23729), (641, 23774), (643, 23783), (644, 23792), (646, 23804), (655, 23867),

(657, 23876), (664, 23915), (667, 23939), (681, 24104), (682, 24128), (687, 24185), (688, 24194), (690, 24206),

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

Candidate Starts for Fulcrum_28:

(1, 17542), (Start: 2 @17563 has 34 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (51, 18298), (56, 18340), (60, 18352), (66, 18376), (68, 18382), (79, 18445), (86, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (141, 18862), (151, 18931), (156, 18967), (159, 18988), (160, 19000), (162, 19012), (163, 19027), (173, 19063), (185, 19138), (186, 19144), (202, 19243), (210, 19312), (211, 19324), (213, 19333), (246, 19624), (251, 19666), (253, 19687), (254, 19696), (257, 19720), (258, 19726), (260, 19747), (266, 19810), (270, 19831), (277, 19927), (280, 19954), (284, 19987), (295, 20080), (301, 20110), (304, 20137), (311, 20188), (312, 20191), (313, 20197), (316, 20215), (320, 20227), (324, 20242), (326, 20266), (333, 20344), (334, 20356), (347, 20431), (349, 20434), (362, 20581), (364, 20596), (366, 20611), (376, 20710), (378, 20758), (380, 20806), (381, 20812), (386, 20884), (392, 20968), (397, 21010), (399, 21064), (404, 21106), (409, 21190), (415, 21313), (424, 21433), (430, 21484), (439, 21643), (444, 21757), (456, 21925), (458, 21985), (459, 22012), (460, 22021), (470, 22153), (473, 22165), (480, 22249), (504, 22558), (506, 22570), (536, 23068), (537, 23101), (539, 23113), (545, 23191), (567, 23479), (571, 23497), (590, 23776), (615, 24064), (627, 24172), (630, 24211), (631, 24214), (633, 24253), (643, 24307), (644, 24316), (646, 24328), (649, 24346), (651, 24370), (657, 24400), (664, 24439), (667, 24463), (681, 24628), (682, 24652), (688, 24718), (690, 24730),

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

Candidate Starts for GOATification_28:

(1, 17542), (Start: 2 @17563 has 34 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (51, 18298), (56, 18340), (60, 18352), (66, 18376), (68, 18382), (79, 18445), (86, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (141, 18862), (151, 18931), (156, 18967), (159, 18988), (160, 19000), (162, 19012), (163, 19027), (173, 19063), (185, 19138), (186, 19144), (202, 19243), (210, 19312), (211, 19324), (213, 19333), (246, 19624), (251, 19666), (253, 19687), (254, 19696), (257, 19720), (258, 19726), (260, 19747), (266, 19810), (270, 19831), (277, 19927), (280, 19954), (284, 19987), (295, 20080), (301, 20110), (304, 20137), (311, 20188), (312, 20191), (313, 20197), (316, 20215), (320, 20227), (324, 20242), (326, 20266), (333, 20344), (334, 20356), (347, 20431), (349, 20434), (362, 20581), (364, 20596), (366, 20611), (376, 20710), (378, 20758), (380, 20806), (381, 20812), (386, 20884), (392, 20968), (397, 21010), (399, 21064), (404, 21106), (409, 21190), (415, 21313), (424, 21433), (430, 21484), (439, 21643), (444, 21757), (456, 21925), (458, 21985), (459, 22012), (460, 22021), (470, 22153), (473, 22165), (480, 22249), (504, 22558), (506, 22570), (536, 23068), (537, 23101), (539, 23113), (545, 23191), (567, 23479), (571, 23497), (590, 23776), (615, 24064), (627, 24172), (630, 24211), (631, 24214), (633, 24253), (643, 24307), (644, 24316), (646, 24328), (649, 24346), (651, 24370), (657, 24400), (664, 24439), (667, 24463), (681, 24628), (682, 24652), (688, 24718), (690, 24730),

Gene: Genamy16_27 Start: 15546, Stop: 22754, Start Num: 3

Candidate Starts for Genamy16_27:

(Start: 3 @15546 has 5 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (49, 16272), (51, 16281), (56, 16323), (60, 16335), (66, 16359), (68, 16365), (74, 16386), (79, 16428), (86, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (138, 16836), (141, 16845), (156, 16950), (159, 16971), (160, 16983), (162, 16995), (163, 17010), (173, 17046), (185, 17121), (187, 17148), (202, 17226), (210, 17295), (211, 17307), (213, 17316), (244, 17595), (246, 17607), (251, 17649), (253, 17670), (254, 17679), (257, 17703), (258, 17709), (260, 17730), (270, 17814), (277, 17910), (280, 17937), (284, 17970), (295, 18063), (301, 18093), (311, 18171), (312, 18174), (316, 18198), (320, 18210), (324, 18225), (326, 18249), (333, 18327), (334, 18339), (347, 18414), (349, 18417), (362, 18564), (364, 18579), (366, 18594), (376, 18693), (378, 18741), (380, 18789), (381, 18795), (383, 18840), (386,

18867), (397, 18993), (399, 19047), (404, 19089), (409, 19173), (413, 19260), (415, 19296), (424, 19416), (430, 19467), (439, 19626), (444, 19740), (456, 19917), (459, 20004), (470, 20145), (473, 20157), (480, 20241), (536, 21060), (537, 21093), (539, 21105), (545, 21183), (565, 21459), (568, 21471), (583, 21714), (590, 21765), (595, 21807), (615, 22053), (627, 22161), (630, 22200), (631, 22203), (633, 22242), (636, 22266), (643, 22296), (644, 22305), (646, 22317), (655, 22380), (657, 22389), (664, 22428), (667, 22452), (681, 22617), (682, 22641), (688, 22707), (690, 22719),

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

Candidate Starts for Gibbin_28:

(1, 17614), (Start: 2 @17635 has 34 MA's), (6, 17782), (9, 17896), (11, 17995), (13, 18031), (15, 18043), (24, 18142), (41, 18274), (45, 18301), (46, 18304), (51, 18370), (56, 18412), (60, 18424), (66, 18448), (68, 18454), (79, 18517), (86, 18571), (88, 18574), (105, 18727), (106, 18730), (123, 18850), (127, 18877), (141, 18934), (151, 19003), (156, 19039), (159, 19060), (160, 19072), (162, 19084), (163, 19099), (173, 19135), (185, 19210), (202, 19315), (210, 19384), (211, 19396), (213, 19405), (246, 19696), (251, 19738), (253, 19759), (254, 19768), (257, 19792), (258, 19798), (260, 19819), (270, 19903), (277, 19999), (280, 20026), (284, 20059), (295, 20152), (301, 20182), (304, 20209), (311, 20260), (312, 20263), (316, 20287), (317, 20290), (320, 20299), (324, 20314), (326, 20338), (333, 20416), (334, 20428), (347, 20503), (349, 20506), (362, 20653), (364, 20668), (366, 20683), (376, 20782), (378, 20830), (380, 20878), (381, 20884), (386, 20956), (392, 21040), (397, 21082), (399, 21136), (404, 21178), (409, 21262), (415, 21385), (424, 21505), (430, 21556), (439, 21715), (444, 21829), (456, 21997), (459, 22084), (460, 22093), (470, 22225), (473, 22237), (480, 22321), (484, 22354), (504, 22630), (536, 23140), (539, 23185), (545, 23260), (567, 23560), (571, 23578), (590, 23857), (595, 23899), (615, 24145), (627, 24253), (630, 24292), (631, 24295), (633, 24334), (643, 24388), (644, 24397), (646, 24409), (649, 24427), (651, 24451), (655, 24472), (657, 24481), (664, 24520), (667, 24544), (681, 24709), (682, 24733), (688, 24799), (690, 24811),

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

Candidate Starts for Gretellyn_27:

(1, 17876), (Start: 2 @17897 has 34 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (51, 18632), (56, 18674), (60, 18686), (66, 18710), (68, 18716), (79, 18779), (86, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (138, 19187), (141, 19196), (151, 19265), (156, 19301), (159, 19322), (160, 19334), (162, 19346), (163, 19361), (173, 19397), (176, 19430), (179, 19442), (185, 19472), (202, 19577), (210, 19646), (211, 19658), (213, 19667), (246, 19958), (249, 19982), (251, 20000), (253, 20021), (254, 20030), (257, 20054), (258, 20060), (260, 20081), (270, 20165), (277, 20261), (280, 20288), (284, 20321), (288, 20342), (295, 20414), (301, 20444), (304, 20471), (311, 20522), (312, 20525), (316, 20549), (320, 20561), (324, 20576), (326, 20600), (333, 20678), (334, 20690), (347, 20765), (349, 20768), (362, 20915), (364, 20930), (366, 20945), (376, 21044), (378, 21092), (380, 21140), (381, 21146), (386, 21218), (392, 21302), (397, 21344), (399, 21398), (404, 21440), (409, 21524), (415, 21647), (424, 21767), (430, 21818), (439, 21977), (444, 22091), (456, 22259), (459, 22346), (460, 22355), (470, 22487), (473, 22499), (480, 22583), (504, 22892), (536, 23402), (539, 23447), (545, 23522), (567, 23822), (571, 23840), (590, 24119), (615, 24407), (627, 24515), (630, 24554), (631, 24557), (633, 24596), (643, 24650), (644, 24659), (646, 24671), (649, 24689), (651, 24713), (657, 24743), (664, 24782), (667, 24806), (681, 24971), (682, 24995), (688, 25061), (690, 25073),

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

Candidate Starts for Jalebi_26:

(1, 18052), (Start: 2 @18073 has 34 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (49, 18799), (51, 18808), (56, 18850), (60, 18862), (66, 18886), (68, 18892), (74, 18913), (79, 18955), (86, 19009), (88, 19012), (105, 19165), (106, 19168), (120, 19270), (123, 19288), (127, 19315), (138, 19363), (141, 19372), (151, 19441), (156, 19477), (159, 19498), (160, 19510), (162, 19522), (163, 19537), (173, 19573), (185, 19648),

(202, 19753), (210, 19822), (211, 19834), (213, 19843), (246, 20134), (249, 20158), (251, 20176), (253, 20197), (254, 20206), (257, 20230), (258, 20236), (260, 20257), (270, 20341), (277, 20437), (280, 20464), (284, 20497), (295, 20590), (301, 20620), (304, 20647), (311, 20698), (312, 20701), (316, 20725), (320, 20737), (324, 20752), (326, 20776), (333, 20854), (334, 20866), (347, 20941), (349, 20944), (362, 21091), (364, 21106), (366, 21121), (376, 21220), (378, 21268), (380, 21316), (381, 21322), (386, 21394), (392, 21478), (397, 21520), (399, 21574), (404, 21616), (409, 21700), (415, 21823), (424, 21943), (430, 21994), (439, 22153), (444, 22267), (456, 22435), (459, 22522), (460, 22531), (470, 22663), (473, 22675), (480, 22759), (484, 22792), (504, 23068), (536, 23578), (537, 23611), (539, 23623), (545, 23701), (567, 23989), (571, 24007), (590, 24286), (595, 24328), (615, 24574), (627, 24682), (630, 24721), (631, 24724), (633, 24763), (643, 24817), (644, 24826), (646, 24838), (649, 24856), (651, 24880), (657, 24910), (664, 24949), (667, 24973), (681, 25138), (682, 25162), (688, 25228), (690, 25240),

Gene: Jamemuya19_24 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for Jamemuya19_24:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (179, 16681), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007), (362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (565, 21049), (568, 21061), (590, 21355), (595, 21397), (615, 21643), (627, 21751), (630, 21790), (631, 21793), (633, 21832), (636, 21856), (643, 21886), (644, 21895), (646, 21907), (655, 21970), (657, 21979), (664, 22018), (667, 22042), (681, 22207), (682, 22231), (688, 22297), (690, 22309),

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

Candidate Starts for Konstantine_31:

(Start: 19 @17436 has 11 MA's), (25, 17499), (36, 17580), (38, 17598), (58, 17745), (62, 17754), (65, 17766), (77, 17829), (91, 17913), (112, 18099), (115, 18108), (150, 18318), (160, 18393), (177, 18495), (180, 18510), (186, 18540), (189, 18573), (192, 18591), (198, 18621), (199, 18624), (203, 18645), (204, 18654), (210, 18717), (213, 18738), (214, 18744), (216, 18768), (230, 18879), (232, 18897), (234, 18918), (236, 18945), (249, 19053), (262, 19146), (263, 19155), (267, 19200), (274, 19287), (282, 19356), (300, 19494), (302, 19509), (315, 19596), (334, 19743), (340, 19785), (343, 19794), (345, 19806), (348, 19815), (377, 20139), (380, 20196), (388, 20307), (395, 20382), (402, 20472), (416, 20715), (422, 20811), (436, 20931), (439, 20991), (442, 21039), (443, 21060), (447, 21120), (457, 21201), (466, 21351), (484, 21510), (485, 21531), (488, 21576), (497, 21630), (500, 21738), (514, 21834), (515, 21843), (519, 21873), (520, 21876), (540, 22191), (564, 22464), (566, 22473), (576, 22548), (577, 22581), (578, 22593), (579, 22602), (587, 22725), (599, 22845), (604, 22929), (610, 22995), (616, 23040), (618, 23067), (633, 23229), (634, 23232), (639, 23271), (640, 23283), (642, 23292), (668, 23499), (679, 23613), (684, 23658), (688, 23709), (689, 23712), (690, 23721), (691, 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), (67, 19918), (69, 19924), (71, 19930), (78, 19987), (80, 19993), (82, 19999), (104, 20197),

(108, 20227), (109, 20239), (114, 20275), (134, 20416), (152, 20512), (158, 20560), (173, 20638), (174, 20662), (180, 20695), (187, 20746), (193, 20779), (201, 20818), (211, 20908), (216, 20947), (217, 20959), (221, 21007), (225, 21040), (235, 21106), (243, 21175), (245, 21199), (247, 21217), (250, 21241), (261, 21322), (263, 21334), (274, 21469), (275, 21478), (285, 21562), (291, 21604), (301, 21682), (307, 21727), (330, 21883), (332, 21904), (334, 21946), (344, 22009), (360, 22165), (363, 22192), (366, 22213), (367, 22216), (369, 22255), (371, 22267), (379, 22402), (382, 22459), (391, 22585), (396, 22627), (398, 22678), (406, 22762), (415, 22933), (416, 22945), (423, 23053), (429, 23107), (431, 23119), (440, 23257), (467, 23620), (482, 23755), (489, 23839), (518, 24169), (521, 24202), (523, 24211), (551, 24721), (553, 24748), (558, 24796), (562, 24853), (575, 24952), (586, 25138), (603, 25324), (621, 25534), (633, 25675), (637, 25705), (650, 25807), (657, 25846), (660, 25861), (671, 25993), (673, 26017), (675, 26041), (683, 26101), (685, 26119), (686, 26152), (688, 26164), (689, 26167), (691, 26191),

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

Candidate Starts for Lambo_27:

(1, 17554), (Start: 2 @17575 has 34 MA's), (6, 17722), (9, 17836), (11, 17935), (13, 17971), (15, 17983), (24, 18082), (41, 18214), (49, 18301), (51, 18310), (56, 18352), (60, 18364), (66, 18388), (68, 18394), (79, 18457), (82, 18466), (86, 18511), (88, 18514), (105, 18667), (106, 18670), (120, 18772), (123, 18790), (127, 18817), (138, 18865), (141, 18874), (151, 18943), (156, 18979), (159, 19000), (160, 19012), (162, 19024), (163, 19039), (173, 19075), (185, 19150), (202, 19255), (210, 19324), (211, 19336), (213, 19345), (246, 19636), (251, 19678), (253, 19699), (254, 19708), (257, 19732), (258, 19738), (260, 19759), (270, 19843), (277, 19939), (280, 19966), (284, 19999), (295, 20092), (301, 20122), (304, 20149), (311, 20200), (312, 20203), (316, 20227), (320, 20239), (324, 20254), (326, 20278), (333, 20356), (334, 20368), (347, 20443), (362, 20593), (364, 20608), (366, 20623), (376, 20722), (378, 20770), (380, 20818), (381, 20824), (386, 20896), (392, 20980), (397, 21022), (399, 21076), (404, 21118), (409, 21202), (415, 21325), (424, 21445), (430, 21496), (444, 21769), (456, 21946), (459, 22033), (463, 22108), (470, 22174), (473, 22186), (480, 22270), (484, 22303), (485, 22324), (536, 23089), (537, 23122), (539, 23134), (545, 23212), (563, 23476), (565, 23488), (568, 23500), (595, 23836), (615, 24082), (624, 24169), (627, 24190), (630, 24229), (633, 24271), (641, 24316), (643, 24325), (644, 24334), (646, 24346), (655, 24409), (657, 24418), (664, 24457), (667, 24481), (681, 24646), (682, 24670), (687, 24727), (688, 24736), (690, 24748),

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

Candidate Starts for LavAbarElk_25:

(1, 15991), (Start: 2 @16012 has 34 MA's), (6, 16159), (9, 16273), (11, 16372), (13, 16408), (15, 16420), (24, 16519), (41, 16651), (45, 16678), (46, 16681), (51, 16747), (56, 16789), (60, 16801), (66, 16825), (68, 16831), (79, 16894), (86, 16948), (88, 16951), (105, 17104), (106, 17107), (120, 17209), (123, 17227), (127, 17254), (138, 17302), (141, 17311), (151, 17380), (156, 17416), (159, 17437), (160, 17449), (162, 17461), (163, 17476), (173, 17512), (185, 17587), (186, 17593), (202, 17692), (210, 17761), (211, 17773), (213, 17782), (246, 18073), (251, 18115), (253, 18136), (254, 18145), (257, 18169), (258, 18175), (260, 18196), (270, 18280), (277, 18376), (280, 18403), (284, 18436), (295, 18529), (301, 18559), (304, 18586), (311, 18637), (312, 18640), (316, 18664), (320, 18676), (324, 18691), (326, 18715), (333, 18793), (334, 18805), (347, 18880), (349, 18883), (362, 19030), (364, 19045), (366, 19060), (376, 19159), (378, 19207), (380, 19255), (381, 19261), (386, 19333), (392, 19417), (397, 19459), (399, 19513), (404, 19555), (409, 19639), (415, 19762), (424, 19882), (430, 19933), (439, 20092), (444, 20206), (456, 20374), (458, 20434), (459, 20461), (460, 20470), (470, 20602), (473, 20614), (480, 20698), (484, 20731), (504, 21007), (536, 21517), (537, 21550), (539, 21562), (545, 21640), (567, 21928), (571, 21946), (590, 22225), (595, 22267), (615, 22513), (627, 22621), (630, 22660), (631, 22663), (633, 22702), (643, 22756), (644, 22765), (646, 22777), (649, 22795), (651, 22819), (657, 22849), (664, 22888), (667, 22912), (681, 23077), (682, 23101), (688, 23167), (690, 23179),

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

Candidate Starts for Lila22_26:

(1, 17500), (Start: 2 @17521 has 34 MA's), (6, 17668), (9, 17782), (11, 17881), (13, 17917), (15, 17929), (24, 18028), (41, 18160), (51, 18256), (56, 18298), (60, 18310), (66, 18334), (68, 18340), (79, 18403), (86, 18457), (88, 18460), (105, 18613), (106, 18616), (120, 18718), (123, 18736), (127, 18763), (138, 18811), (141, 18820), (151, 18889), (156, 18925), (159, 18946), (160, 18958), (162, 18970), (163, 18985), (173, 19021), (185, 19096), (202, 19201), (210, 19270), (211, 19282), (213, 19291), (246, 19582), (251, 19624), (253, 19645), (254, 19654), (257, 19678), (258, 19684), (260, 19705), (270, 19789), (277, 19885), (280, 19912), (284, 19945), (288, 19966), (301, 20068), (311, 20146), (312, 20149), (316, 20173), (320, 20185), (324, 20200), (326, 20224), (333, 20302), (334, 20314), (349, 20392), (362, 20539), (364, 20554), (366, 20569), (376, 20668), (378, 20716), (380, 20764), (381, 20770), (386, 20842), (392, 20926), (397, 20968), (399, 21022), (404, 21064), (409, 21148), (415, 21271), (424, 21391), (430, 21442), (439, 21601), (444, 21715), (456, 21895), (459, 21982), (460, 21991), (470, 22123), (473, 22135), (480, 22219), (484, 22252), (504, 22528), (536, 23038), (537, 23071), (539, 23083), (545, 23161), (567, 23449), (571, 23467), (590, 23746), (595, 23788), (615, 24034), (627, 24142), (630, 24181), (631, 24184), (633, 24223), (643, 24277), (644, 24286), (646, 24298), (649, 24316), (651, 24340), (657, 24370), (664, 24409), (667, 24433), (678, 24583), (681, 24598), (682, 24622), (688, 24688), (690, 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), (59, 13321), (69, 13354), (75, 13384), (82, 13426), (97, 13552), (98, 13558), (102, 13606), (124, 13744), (128, 13771), (129, 13777), (157, 13945), (159, 13954), (164, 13996), (173, 14029), (183, 14086), (191, 14140), (212, 14281), (222, 14386), (236, 14494), (237, 14497), (240, 14512), (248, 14593), (253, 14641), (255, 14659), (261, 14692), (265, 14734), (270, 14767), (276, 14854), (280, 14890), (281, 14893), (287, 14938), (288, 14944), (293, 14989), (303, 15061), (309, 15112), (311, 15121), (314, 15139), (317, 15151), (319, 15157), (326, 15196), (329, 15220), (336, 15295), (341, 15337), (342, 15340), (349, 15373), (354, 15388), (355, 15415), (356, 15424), (366, 15556), (368, 15577), (371, 15601), (375, 15631), (377, 15691), (378, 15700), (394, 15931), (396, 15943), (398, 15994), (399, 16006), (400, 16015), (410, 16186), (414, 16237), (416, 16258), (420, 16330), (421, 16342), (449, 16846), (458, 17026), (477, 17326), (480, 17350), (484, 17383), (485, 17404), (487, 17446), (495, 17506), (506, 17671), (510, 17695), (535, 18184), (538, 18226), (539, 18235), (542, 18262), (556, 18505), (559, 18541), (569, 18634), (585, 18874), (591, 18919), (593, 18934), (597, 18988), (606, 19135), (607, 19144), (611, 19168), (615, 19192), (629, 19342), (634, 19396), (644, 19456), (646, 19468), (649, 19486), (654, 19528), (657, 19540), (662, 19570), (664, 19579), (666, 19591), (671, 19687), (677, 19750), (686, 19846), (687, 19849), (689, 19861), (692, 19891),

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

Candidate Starts for LittleFella_24:

(Start: 47 @15083 has 9 MA's), (57, 15185), (59, 15194), (69, 15227), (82, 15299), (83, 15320), (94, 15404), (96, 15419), (98, 15431), (100, 15437), (111, 15548), (122, 15602), (129, 15647), (132, 15656), (144, 15710), (145, 15716), (148, 15752), (154, 15782), (159, 15824), (161, 15845), (165, 15869), (167, 15878), (178, 15929), (190, 16004), (191, 16010), (194, 16028), (200, 16058), (236, 16364), (250, 16481), (256, 16538), (269, 16631), (276, 16724), (280, 16760), (285, 16796), (286, 16805), (287, 16808), (288, 16814), (290, 16826), (293, 16859), (297, 16895), (311, 16991), (314, 17009), (315, 17012), (319, 17027), (321, 17033), (323, 17036), (326, 17066), (336, 17165), (341, 17207), (342, 17210), (354, 17258), (355, 17285), (356, 17294), (357, 17303), (366, 17426), (371, 17471), (375, 17501), (377, 17558), (388, 17726), (396, 17810), (398, 17861), (400, 17882), (405, 17924), (412, 18062), (427, 18260), (438, 18386), (445, 18596), (448, 18662), (454, 18824), (461, 18989), (478, 19229), (479, 19238), (481, 19262), (485, 19304), (486, 19313), (495, 19406), (505, 19565), (506, 19571), (509, 19589), (510, 19595), (535, 20078), (542, 20156), (556, 20399), (569, 20528), (591, 20804), (593, 20819), (606, 21011), (607, 21020), (611, 21044), (615, 21068), (628, 21212), (629, 21218), (634, 21272), (646, 21344), (649, 21362), (654, 21404), (662, 21446), (664,

21455), (671, 21563), (676, 21623), (686, 21722), (687, 21725), (689, 21737), (692, 21767),

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

Candidate Starts for LuckyLeo_26:

(1, 16852), (Start: 2 @16873 has 34 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), (51, 17608), (60, 17662), (63, 17671), (66, 17686), (82, 17764), (85, 17800), (90, 17824), (111, 18019), (116, 18049), (135, 18154), (151, 18244), (155, 18268), (156, 18280), (159, 18301), (160, 18313), (163, 18340), (176, 18409), (183, 18445), (185, 18451), (188, 18481), (196, 18526), (200, 18547), (202, 18556), (205, 18580), (211, 18637), (223, 18757), (244, 18925), (251, 18979), (253, 19000), (255, 19018), (257, 19033), (260, 19060), (270, 19144), (280, 19267), (301, 19423), (304, 19450), (307, 19471), (311, 19501), (318, 19534), (324, 19555), (326, 19579), (327, 19582), (328, 19585), (330, 19606), (331, 19618), (333, 19657), (337, 19693), (347, 19744), (358, 19804), (359, 19837), (365, 19915), (366, 19924), (380, 20113), (381, 20119), (386, 20191), (387, 20221), (392, 20275), (397, 20317), (404, 20413), (409, 20497), (415, 20620), (424, 20740), (430, 20791), (456, 21244), (457, 21274), (459, 21331), (463, 21406), (470, 21472), (473, 21484), (480, 21568), (484, 21601), (485, 21622), (491, 21691), (536, 22387), (545, 22507), (546, 22510), (567, 22807), (571, 22825), (590, 23104), (594, 23131), (605, 23320), (615, 23392), (624, 23479), (627, 23500), (630, 23539), (633, 23581), (643, 23635), (644, 23644), (646, 23656), (655, 23719), (657, 23728), (664, 23767), (667, 23791), (672, 23893), (681, 23956), (682, 23980), (687, 24037), (688, 24046), (690, 24058),

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

Candidate Starts for Madi_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459, 16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (538, 17649), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 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), (67, 19587), (69, 19593), (71, 19599), (78, 19656), (80, 19662), (82, 19668), (104, 19866), (108, 19896), (109, 19908), (114, 19944), (134, 20085), (152, 20181), (158, 20229), (173, 20307), (174, 20331), (180, 20364), (187, 20415), (193, 20448), (201, 20487), (211, 20577), (216, 20616), (217, 20628), (221, 20676), (225, 20709), (235, 20775), (243, 20844), (245, 20868), (247, 20886), (250, 20910), (261, 20991), (263, 21003), (274, 21138), (275, 21147), (285, 21231), (291, 21273), (301, 21351), (307, 21396), (330, 21552), (332, 21573), (334, 21615), (344, 21678), (360, 21834), (363, 21861), (366, 21882), (367, 21885), (369, 21924), (371, 21936), (379, 22071), (382, 22128), (391, 22254), (396, 22296), (398, 22347), (406, 22431), (415, 22602), (416, 22614), (429, 22776), (431, 22788), (440, 22926), (467, 23289), (482, 23424), (489, 23508), (518, 23838), (521, 23871), (523, 23880), (526, 23934), (551, 24390), (553, 24417), (558, 24465), (562, 24522), (575, 24621), (586, 24807), (603, 24993), (621, 25203), (633, 25344), (637, 25374), (650, 25476), (657,

25515), (660, 25530), (671, 25662), (673, 25686), (675, 25710), (683, 25770), (685, 25788), (686, 25821), (688, 25833), (689, 25836), (691, 25860),

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

Candidate Starts for Megatron06_28:

(Start: 19 @16768 has 11 MA's), (25, 16831), (36, 16912), (38, 16930), (58, 17077), (62, 17086), (65, 17098), (77, 17161), (91, 17245), (112, 17431), (115, 17440), (121, 17497), (150, 17650), (160, 17725), (177, 17827), (180, 17842), (186, 17872), (189, 17905), (192, 17923), (198, 17953), (203, 17977), (204, 17986), (210, 18049), (213, 18070), (214, 18076), (216, 18100), (230, 18211), (232, 18229), (234, 18250), (236, 18277), (249, 18385), (262, 18478), (263, 18487), (267, 18532), (274, 18619), (282, 18688), (302, 18841), (315, 18928), (334, 19075), (340, 19117), (343, 19126), (345, 19138), (348, 19147), (377, 19471), (380, 19528), (395, 19714), (402, 19804), (416, 20047), (421, 20131), (422, 20143), (436, 20263), (439, 20323), (442, 20371), (443, 20392), (447, 20452), (457, 20533), (466, 20683), (475, 20761), (484, 20842), (485, 20863), (488, 20908), (497, 20962), (500, 21070), (514, 21166), (515, 21175), (519, 21205), (520, 21208), (540, 21523), (564, 21796), (566, 21805), (576, 21880), (577, 21913), (578, 21925), (579, 21934), (587, 22057), (599, 22177), (604, 22261), (610, 22327), (616, 22372), (618, 22399), (633, 22561), (634, 22564), (639, 22603), (640, 22615), (642, 22624), (668, 22831), (679, 22945), (684, 22990), (688, 23041), (689, 23044), (690, 23053), (691, 23068),

Gene: Mima20_25 Start: 17262, Stop: 24464, Start Num: 2

Candidate Starts for Mima20_25:

(1, 17241), (Start: 2 @17262 has 34 MA's), (6, 17409), (9, 17523), (11, 17622), (13, 17658), (15, 17670), (24, 17769), (41, 17901), (45, 17928), (46, 17931), (51, 17997), (56, 18039), (60, 18051), (66, 18075), (68, 18081), (79, 18144), (86, 18198), (88, 18201), (105, 18354), (106, 18357), (120, 18459), (123, 18477), (127, 18504), (141, 18561), (151, 18630), (156, 18666), (159, 18687), (160, 18699), (162, 18711), (163, 18726), (173, 18762), (185, 18837), (202, 18942), (210, 19011), (211, 19023), (213, 19032), (246, 19323), (251, 19365), (253, 19386), (254, 19395), (257, 19419), (258, 19425), (260, 19446), (270, 19530), (277, 19626), (280, 19653), (284, 19686), (295, 19779), (301, 19809), (304, 19836), (311, 19887), (312, 19890), (316, 19914), (320, 19926), (324, 19941), (326, 19965), (333, 20043), (334, 20055), (349, 20133), (362, 20280), (364, 20295), (366, 20310), (376, 20409), (378, 20457), (380, 20505), (381, 20511), (383, 20556), (386, 20583), (392, 20667), (397, 20709), (399, 20763), (404, 20805), (409, 20889), (415, 21012), (424, 21132), (430, 21183), (439, 21342), (444, 21456), (456, 21624), (459, 21711), (470, 21852), (473, 21864), (480, 21948), (484, 21981), (504, 22257), (536, 22767), (537, 22800), (539, 22812), (545, 22890), (567, 23178), (571, 23196), (590, 23475), (595, 23517), (615, 23763), (627, 23871), (630, 23910), (631, 23913), (633, 23952), (643, 24006), (644, 24015), (646, 24027), (649, 24045), (651, 24069), (664, 24138), (667, 24162), (681, 24327), (682, 24351), (688, 24417), (690, 24429),

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

Candidate Starts for MoiGyank_29:

(1, 17913), (Start: 2 @17934 has 34 MA's), (6, 18081), (9, 18195), (11, 18294), (13, 18330), (15, 18342), (24, 18441), (41, 18573), (45, 18600), (46, 18603), (51, 18669), (56, 18711), (60, 18723), (66, 18747), (68, 18753), (79, 18816), (86, 18870), (88, 18873), (105, 19026), (106, 19029), (123, 19149), (127, 19176), (141, 19233), (151, 19302), (156, 19338), (159, 19359), (160, 19371), (162, 19383), (163, 19398), (173, 19434), (185, 19509), (202, 19614), (210, 19683), (211, 19695), (213, 19704), (246, 19995), (251, 20037), (253, 20058), (254, 20067), (257, 20091), (258, 20097), (260, 20118), (270, 20202), (277, 20298), (280, 20325), (284, 20358), (295, 20451), (301, 20481), (304, 20508), (311, 20559), (312, 20562), (316, 20586), (320, 20598), (324, 20613), (326, 20637), (333, 20715), (334, 20727), (347, 20802), (349, 20805), (362, 20952), (364, 20967), (366, 20982), (376, 21081), (378, 21129), (380, 21177), (381, 21183), (386, 21255), (392, 21339), (397, 21381), (399, 21435), (404, 21477), (409, 21561), (415, 21684), (424, 21804), (430, 21855), (439, 22014), (444, 22128), (456, 22296), (459, 22383), (460, 22392), (468, 22515), (470, 22524), (473, 22536), (480, 22620),

(504, 22929), (536, 23439), (539, 23484), (545, 23559), (567, 23859), (571, 23877), (590, 24156), (595, 24198), (615, 24444), (627, 24552), (630, 24591), (631, 24594), (633, 24633), (643, 24687), (644, 24696), (646, 24708), (649, 24726), (651, 24750), (655, 24771), (657, 24780), (664, 24819), (667, 24843), (681, 25008), (682, 25032), (688, 25098), (690, 25110),

Gene: Nish23_27 Start: 16234, Stop: 22557, Start Num: 19

Candidate Starts for Nish23_27:

(Start: 19 @16234 has 11 MA's), (25, 16297), (36, 16378), (38, 16396), (58, 16543), (62, 16552), (65, 16564), (77, 16627), (91, 16711), (112, 16897), (115, 16906), (121, 16963), (150, 17116), (160, 17191), (177, 17293), (180, 17308), (186, 17338), (189, 17371), (192, 17389), (198, 17419), (203, 17443), (204, 17452), (210, 17515), (213, 17536), (214, 17542), (216, 17566), (230, 17677), (232, 17695), (234, 17716), (236, 17743), (249, 17851), (262, 17944), (263, 17953), (267, 17998), (274, 18085), (282, 18154), (302, 18307), (315, 18394), (334, 18541), (340, 18583), (343, 18592), (345, 18604), (348, 18613), (377, 18937), (380, 18994), (388, 19105), (395, 19180), (402, 19270), (416, 19513), (422, 19609), (436, 19729), (439, 19789), (442, 19837), (443, 19858), (447, 19918), (457, 19999), (466, 20149), (484, 20308), (485, 20329), (488, 20374), (497, 20428), (500, 20536), (514, 20632), (515, 20641), (519, 20671), (520, 20674), (540, 20989), (564, 21262), (566, 21271), (576, 21346), (577, 21379), (578, 21391), (579, 21400), (587, 21523), (599, 21643), (604, 21727), (610, 21793), (616, 21838), (618, 21865), (633, 22027), (634, 22030), (639, 22069), (640, 22081), (642, 22090), (668, 22297), (679, 22411), (684, 22456), (688, 22507), (689, 22510), (690, 22519), (691, 22534),

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

Candidate Starts for NorManre_28:

(1, 17120), (Start: 2 @17141 has 34 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (51, 17876), (56, 17918), (60, 17930), (66, 17954), (68, 17960), (79, 18023), (86, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (138, 18431), (141, 18440), (151, 18509), (156, 18545), (159, 18566), (160, 18578), (162, 18590), (163, 18605), (173, 18641), (176, 18674), (179, 18686), (185, 18716), (202, 18821), (210, 18890), (211, 18902), (213, 18911), (225, 19034), (246, 19202), (249, 19226), (251, 19244), (253, 19265), (254, 19274), (257, 19298), (258, 19304), (260, 19325), (270, 19409), (277, 19505), (280, 19532), (284, 19565), (295, 19658), (301, 19688), (304, 19715), (311, 19766), (312, 19769), (316, 19793), (320, 19805), (324, 19820), (326, 19844), (333, 19922), (334, 19934), (347, 20009), (349, 20012), (362, 20159), (364, 20174), (366, 20189), (376, 20288), (378, 20336), (380, 20384), (381, 20390), (386, 20462), (392, 20546), (397, 20588), (399, 20642), (404, 20684), (409, 20768), (415, 20891), (424, 21011), (430, 21062), (439, 21221), (444, 21335), (456, 21503), (459, 21590), (460, 21599), (470, 21731), (473, 21743), (480, 21827), (484, 21860), (504, 22136), (536, 22646), (539, 22691), (545, 22766), (567, 23066), (571, 23084), (590, 23363), (595, 23405), (615, 23651), (627, 23759), (630, 23798), (631, 23801), (633, 23840), (643, 23894), (644, 23903), (646, 23915), (649, 23933), (651, 23957), (657, 23987), (664, 24026), (667, 24050), (681, 24215), (682, 24239), (688, 24305), (690, 24317),

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

Candidate Starts for NovaSharks_26:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (179, 16681), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007),

(362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (565, 21049), (568, 21061), (583, 21304), (590, 21355), (595, 21397), (615, 21643), (627, 21751), (630, 21790), (631, 21793), (633, 21832), (636, 21856), (643, 21886), (644, 21895), (646, 21907), (655, 21970), (657, 21979), (664, 22018), (667, 22042), (681, 22207), (682, 22231), (688, 22297), (690, 22309),

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

Candidate Starts for Oaker_26:

(Start: 19 @16492 has 11 MA's), (25, 16555), (36, 16636), (38, 16654), (58, 16801), (62, 16810), (65, 16822), (77, 16885), (84, 16927), (91, 16969), (112, 17155), (115, 17164), (150, 17374), (160, 17449), (177, 17551), (180, 17566), (186, 17596), (189, 17629), (192, 17647), (198, 17677), (203, 17701), (204, 17710), (210, 17773), (213, 17794), (214, 17800), (216, 17824), (230, 17935), (232, 17953), (234, 17974), (236, 18001), (249, 18109), (262, 18202), (263, 18211), (267, 18256), (274, 18343), (282, 18412), (300, 18550), (302, 18565), (315, 18652), (334, 18799), (340, 18841), (343, 18850), (345, 18862), (348, 18871), (377, 19195), (380, 19252), (388, 19363), (395, 19438), (402, 19528), (416, 19771), (421, 19855), (422, 19867), (436, 19987), (439, 20047), (442, 20095), (443, 20116), (447, 20176), (457, 20257), (466, 20407), (484, 20566), (485, 20587), (488, 20632), (497, 20686), (500, 20794), (514, 20890), (515, 20899), (519, 20929), (520, 20932), (540, 21247), (564, 21520), (566, 21529), (576, 21604), (577, 21637), (578, 21649), (579, 21658), (587, 21781), (599, 21901), (604, 21985), (610, 22051), (616, 22096), (618, 22123), (633, 22285), (634, 22288), (639, 22327), (640, 22339), (642, 22348), (668, 22555), (679, 22669), (684, 22714), (688, 22765), (689, 22768), (690, 22777), (691, 22792),

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

Candidate Starts for OtterstedtS21_27:

(1, 17198), (Start: 2 @17219 has 34 MA's), (6, 17366), (9, 17480), (11, 17579), (13, 17615), (15, 17627), (24, 17726), (41, 17858), (45, 17885), (46, 17888), (51, 17954), (56, 17996), (60, 18008), (66, 18032), (68, 18038), (79, 18101), (86, 18155), (88, 18158), (105, 18311), (106, 18314), (120, 18416), (123, 18434), (127, 18461), (138, 18509), (141, 18518), (151, 18587), (156, 18623), (159, 18644), (160, 18656), (162, 18668), (163, 18683), (173, 18719), (185, 18794), (202, 18899), (210, 18968), (211, 18980), (213, 18989), (246, 19280), (251, 19322), (253, 19343), (254, 19352), (257, 19376), (258, 19382), (260, 19403), (270, 19487), (277, 19583), (280, 19610), (284, 19643), (288, 19664), (295, 19736), (301, 19766), (304, 19793), (311, 19844), (312, 19847), (316, 19871), (320, 19883), (324, 19898), (326, 19922), (333, 20000), (334, 20012), (362, 20237), (364, 20252), (366, 20267), (376, 20366), (378, 20414), (380, 20462), (381, 20468), (386, 20540), (392, 20624), (397, 20666), (399, 20720), (404, 20762), (409, 20846), (415, 20969), (424, 21089), (430, 21140), (439, 21299), (444, 21413), (456, 21581), (459, 21668), (460, 21677), (468, 21800), (470, 21809), (473, 21821), (480, 21905), (504, 22214), (536, 22724), (539, 22769), (545, 22844), (567, 23144), (571, 23162), (590, 23441), (595, 23483), (615, 23729), (627, 23837), (630, 23876), (631, 23879), (633, 23918), (643, 23972), (644, 23981), (646, 23993), (649, 24011), (651, 24035), (655, 24056), (657, 24065), (664, 24104), (667, 24128), (681, 24293), (682, 24317), (688, 24383), (690, 24395),

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

Candidate Starts for ParvusTarda_27:

(1, 16680), (Start: 2 @16701 has 34 MA's), (6, 16848), (9, 16962), (11, 17061), (13, 17097), (15, 17109), (24, 17208), (41, 17340), (45, 17367), (49, 17427), (51, 17436), (56, 17478), (60, 17490), (66, 17514), (68, 17520), (79, 17583), (82, 17592), (86, 17637), (88, 17640), (105, 17793), (106, 17796), (123, 17916), (127, 17943), (141, 18000), (151, 18069), (156, 18105), (159, 18126), (160, 18138), (162, 18150), (163, 18165), (173, 18201), (185, 18276), (202, 18381), (210, 18450), (211, 18462), (213, 18471), (246, 18762), (251, 18804), (253, 18825), (254, 18834), (257, 18858), (258, 18864),

(260, 18885), (266, 18948), (270, 18969), (277, 19065), (280, 19092), (284, 19125), (295, 19218), (301, 19248), (304, 19275), (311, 19326), (312, 19329), (313, 19335), (316, 19353), (320, 19365), (324, 19380), (326, 19404), (333, 19482), (334, 19494), (347, 19569), (349, 19572), (362, 19719), (364, 19734), (366, 19749), (376, 19848), (378, 19896), (380, 19944), (381, 19950), (386, 20022), (392, 20106), (397, 20148), (399, 20202), (404, 20244), (409, 20328), (415, 20451), (424, 20571), (430, 20622), (439, 20781), (444, 20895), (456, 21072), (459, 21159), (463, 21234), (470, 21300), (473, 21312), (480, 21396), (484, 21429), (485, 21450), (536, 22215), (537, 22248), (539, 22260), (545, 22338), (567, 22626), (571, 22644), (595, 22965), (615, 23211), (624, 23298), (627, 23319), (630, 23358), (633, 23400), (641, 23445), (643, 23454), (644, 23463), (646, 23475), (655, 23538), (657, 23547), (664, 23586), (667, 23610), (681, 23775), (682, 23799), (688, 23865), (690, 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), (67, 20468), (69, 20474), (71, 20480), (78, 20537), (80, 20543), (82, 20549), (104, 20747), (108, 20777), (109, 20789), (114, 20825), (134, 20966), (152, 21062), (158, 21110), (173, 21188), (174, 21212), (180, 21245), (187, 21296), (193, 21329), (201, 21368), (211, 21458), (216, 21497), (217, 21509), (221, 21557), (225, 21590), (235, 21656), (243, 21725), (245, 21749), (247, 21767), (250, 21791), (261, 21872), (263, 21884), (274, 22019), (275, 22028), (285, 22112), (301, 22232), (307, 22277), (330, 22433), (332, 22454), (334, 22496), (344, 22559), (360, 22715), (363, 22742), (366, 22763), (367, 22766), (369, 22805), (371, 22817), (379, 22952), (382, 23009), (391, 23135), (396, 23177), (398, 23228), (406, 23312), (415, 23483), (416, 23495), (423, 23603), (429, 23657), (431, 23669), (440, 23807), (467, 24170), (482, 24305), (489, 24389), (518, 24719), (521, 24752), (523, 24761), (526, 24815), (551, 25271), (553, 25298), (558, 25346), (562, 25403), (575, 25502), (586, 25688), (603, 25874), (621, 26084), (633, 26225), (637, 26255), (650, 26357), (660, 26411), (671, 26543), (673, 26567), (675, 26591), (683, 26651), (685, 26669), (686, 26702), (688, 26714), (689, 26717), (691, 26741),

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

Candidate Starts for Patos_28:

(1, 17120), (Start: 2 @17141 has 34 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (51, 17876), (56, 17918), (60, 17930), (66, 17954), (68, 17960), (79, 18023), (86, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (138, 18431), (141, 18440), (151, 18509), (156, 18545), (159, 18566), (160, 18578), (162, 18590), (163, 18605), (173, 18641), (176, 18674), (179, 18686), (185, 18716), (202, 18821), (210, 18890), (211, 18902), (213, 18911), (225, 19034), (246, 19202), (249, 19226), (251, 19244), (253, 19265), (254, 19274), (257, 19298), (258, 19304), (260, 19325), (270, 19409), (277, 19505), (280, 19532), (284, 19565), (295, 19658), (301, 19688), (304, 19715), (311, 19766), (312, 19769), (316, 19793), (320, 19805), (324, 19820), (326, 19844), (333, 19922), (334, 19934), (347, 20009), (349, 20012), (362, 20159), (364, 20174), (366, 20189), (376, 20288), (378, 20336), (380, 20384), (381, 20390), (386, 20462), (392, 20546), (397, 20588), (399, 20642), (404, 20684), (409, 20768), (415, 20891), (424, 21011), (430, 21062), (439, 21221), (444, 21335), (456, 21503), (459, 21590), (460, 21599), (470, 21731), (473, 21743), (480, 21827), (484, 21860), (504, 22136), (536, 22646), (539, 22691), (545, 22766), (567, 23066), (571, 23084), (590, 23363), (595, 23405), (615, 23651), (627, 23759), (630, 23798), (631, 23801), (633, 23840), (643, 23894), (644, 23903), (646, 23915), (649, 23933), (651, 23957), (657, 23987), (664, 24026), (667, 24050), (681, 24215), (682, 24239), (688, 24305), (690, 24317),

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

Candidate Starts for Phreeze_26:

(Start: 19 @16235 has 11 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (77, 16628), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (177, 17294), (180, 17309), (186, 17339), (189, 17372), (192, 17390), (198, 17420), (203, 17444), (204,

17453), (210, 17516), (213, 17537), (214, 17543), (216, 17567), (230, 17678), (232, 17696), (234, 17717), (236, 17744), (249, 17852), (262, 17945), (263, 17954), (267, 17999), (274, 18086), (282, 18155), (300, 18293), (302, 18308), (311, 18374), (315, 18395), (322, 18416), (334, 18542), (340, 18584), (343, 18593), (345, 18605), (348, 18614), (377, 18938), (380, 18995), (388, 19106), (395, 19181), (401, 19268), (402, 19271), (403, 19286), (416, 19514), (417, 19526), (422, 19610), (432, 19679), (436, 19730), (439, 19790), (442, 19838), (443, 19859), (447, 19919), (457, 20000), (466, 20150), (475, 20228), (484, 20309), (485, 20330), (488, 20375), (497, 20429), (500, 20537), (514, 20633), (515, 20642), (519, 20672), (520, 20675), (540, 20990), (564, 21263), (566, 21272), (573, 21329), (576, 21347), (577, 21380), (578, 21392), (579, 21401), (587, 21524), (599, 21644), (604, 21728), (610, 21794), (616, 21839), (618, 21866), (633, 22028), (634, 22031), (639, 22070), (642, 22091), (668, 22298), (679, 22412), (684, 22457), (688, 22508), (689, 22511), (690, 22520), (691, 22535),

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

Candidate Starts for Predator_30:

(Start: 19 @17750 has 11 MA's), (40, 17921), (50, 18005), (57, 18053), (77, 18143), (84, 18185), (87, 18206), (91, 18227), (94, 18266), (101, 18317), (107, 18374), (108, 18377), (110, 18389), (112, 18410), (143, 18581), (159, 18692), (160, 18704), (161, 18713), (169, 18755), (170, 18758), (186, 18851), (189, 18884), (206, 18989), (209, 19019), (215, 19073), (218, 19103), (219, 19106), (224, 19163), (228, 19187), (232, 19208), (234, 19229), (239, 19271), (246, 19340), (249, 19364), (253, 19403), (262, 19457), (263, 19466), (272, 19547), (274, 19598), (282, 19667), (291, 19733), (296, 19784), (302, 19820), (305, 19841), (315, 19907), (317, 19916), (325, 19946), (329, 19988), (338, 20084), (346, 20123), (352, 20135), (353, 20138), (384, 20591), (388, 20636), (399, 20783), (402, 20801), (407, 20876), (416, 21044), (417, 21056), (422, 21140), (446, 21443), (475, 21779), (481, 21839), (484, 21860), (485, 21881), (488, 21926), (490, 21929), (497, 21980), (499, 22067), (500, 22088), (503, 22109), (514, 22184), (515, 22193), (516, 22202), (517, 22205), (528, 22370), (533, 22463), (534, 22472), (544, 22592), (547, 22613), (549, 22658), (552, 22691), (554, 22721), (566, 22826), (572, 22856), (578, 22946), (579, 22955), (588, 23099), (599, 23198), (600, 23201), (602, 23231), (604, 23282), (609, 23345), (616, 23393), (618, 23420), (631, 23543), (633, 23582), (639, 23624), (668, 23852), (669, 23873), (671, 23897), (679, 23966), (684, 24014), (685, 24020), (688, 24065), (689, 24068), (690, 24077), (691, 24092),

Gene: Puissant_27 Start: 16698, Stop: 23021, Start Num: 19

Candidate Starts for Puissant_27:

(Start: 19 @16698 has 11 MA's), (27, 16797), (38, 16860), (50, 16953), (62, 17016), (65, 17028), (71, 17046), (73, 17058), (77, 17091), (84, 17133), (91, 17175), (112, 17361), (125, 17448), (133, 17484), (157, 17634), (166, 17694), (177, 17757), (180, 17772), (181, 17775), (186, 17802), (189, 17835), (197, 17877), (198, 17883), (203, 17907), (204, 17916), (206, 17940), (210, 17979), (213, 18000), (216, 18030), (230, 18141), (232, 18159), (234, 18180), (236, 18207), (249, 18315), (262, 18408), (263, 18417), (267, 18462), (274, 18549), (282, 18618), (286, 18651), (296, 18735), (302, 18771), (306, 18801), (315, 18858), (334, 19005), (338, 19035), (340, 19047), (343, 19056), (345, 19068), (348, 19077), (372, 19314), (377, 19401), (380, 19458), (388, 19569), (395, 19644), (402, 19734), (412, 19914), (416, 19977), (417, 19989), (422, 20073), (432, 20142), (436, 20193), (439, 20253), (442, 20301), (443, 20322), (447, 20382), (457, 20463), (475, 20691), (484, 20772), (485, 20793), (488, 20838), (497, 20892), (500, 21000), (514, 21096), (515, 21105), (540, 21453), (561, 21693), (564, 21726), (566, 21735), (572, 21765), (577, 21843), (579, 21864), (587, 21987), (589, 22014), (592, 22032), (596, 22056), (599, 22107), (602, 22140), (604, 22191), (616, 22302), (618, 22329), (633, 22491), (642, 22554), (645, 22578), (684, 22920), (685, 22926), (688, 22971), (689, 22974), (690, 22983), (691, 22998),

Gene: Pywacket_26 Start: 18058, Stop: 25260, Start Num: 2

Candidate Starts for Pywacket_26:

(1, 18037), (Start: 2 @18058 has 34 MA's), (6, 18205), (9, 18319), (11, 18418), (13, 18454), (15, 18466), (24, 18565), (41, 18697), (45, 18724), (46, 18727), (51, 18793), (56, 18835), (60, 18847), (66, 18871), (68, 18877), (79, 18940), (86, 18994), (88, 18997), (105, 19150), (106, 19153), (120, 19255), (123, 19273), (127, 19300), (138, 19348), (141, 19357), (151, 19426), (156, 19462), (159, 19483), (160, 19495), (162, 19507), (163, 19522), (173, 19558), (185, 19633), (202, 19738), (210, 19807), (211, 19819), (213, 19828), (246, 20119), (251, 20161), (253, 20182), (254, 20191), (257, 20215), (258, 20221), (260, 20242), (270, 20326), (277, 20422), (280, 20449), (284, 20482), (295, 20575), (301, 20605), (304, 20632), (311, 20683), (312, 20686), (313, 20692), (316, 20710), (320, 20722), (324, 20737), (326, 20761), (333, 20839), (334, 20851), (347, 20926), (349, 20929), (362, 21076), (364, 21091), (366, 21106), (376, 21205), (378, 21253), (380, 21301), (381, 21307), (386, 21379), (392, 21463), (397, 21505), (399, 21559), (404, 21601), (409, 21685), (415, 21808), (424, 21928), (430, 21979), (439, 22138), (444, 22252), (456, 22420), (459, 22507), (460, 22516), (468, 22639), (470, 22648), (473, 22660), (480, 22744), (504, 23053), (536, 23563), (537, 23596), (539, 23608), (545, 23686), (567, 23974), (571, 23992), (590, 24271), (595, 24313), (615, 24559), (627, 24667), (630, 24706), (631, 24709), (633, 24748), (643, 24802), (644, 24811), (646, 24823), (649, 24841), (651, 24865), (657, 24895), (664, 24934), (667, 24958), (681, 25123), (682, 25147), (688, 25213), (690, 25225),

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

Candidate Starts for Ranch_27:

(1, 16046), (Start: 2 @16067 has 34 MA's), (6, 16214), (9, 16328), (11, 16427), (13, 16463), (15, 16475), (24, 16574), (49, 16793), (51, 16802), (56, 16844), (60, 16856), (66, 16880), (68, 16886), (79, 16949), (86, 17003), (88, 17006), (106, 17162), (120, 17264), (123, 17282), (127, 17309), (138, 17357), (141, 17366), (156, 17471), (159, 17492), (160, 17504), (162, 17516), (163, 17531), (173, 17567), (185, 17642), (186, 17648), (202, 17747), (210, 17816), (211, 17828), (213, 17837), (244, 18116), (246, 18128), (251, 18170), (253, 18191), (254, 18200), (257, 18224), (258, 18230), (260, 18251), (270, 18335), (277, 18431), (280, 18458), (284, 18491), (288, 18512), (311, 18692), (312, 18695), (316, 18719), (320, 18731), (324, 18746), (326, 18770), (333, 18848), (334, 18860), (347, 18935), (349, 18938), (362, 19085), (364, 19100), (366, 19115), (376, 19214), (378, 19262), (380, 19310), (381, 19316), (386, 19388), (392, 19472), (397, 19514), (399, 19568), (404, 19610), (409, 19694), (415, 19817), (424, 19937), (430, 19988), (439, 20147), (444, 20261), (456, 20429), (459, 20516), (470, 20657), (473, 20669), (480, 20753), (484, 20786), (508, 21086), (536, 21572), (537, 21605), (539, 21617), (545, 21695), (565, 21971), (568, 21983), (590, 22277), (595, 22319), (615, 22565), (627, 22673), (630, 22712), (631, 22715), (633, 22754), (635, 22766), (643, 22808), (644, 22817), (646, 22829), (649, 22847), (651, 22871), (657, 22901), (664, 22940), (667, 22964), (681, 23129), (682, 23153), (688, 23219), (690, 23231),

Gene: RazorC_25 Start: 15528, Stop: 22736, Start Num: 3

Candidate Starts for RazorC_25:

(Start: 3 @15528 has 5 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (49, 16254), (51, 16263), (56, 16305), (60, 16317), (66, 16341), (68, 16347), (74, 16368), (79, 16410), (86, 16464), (88, 16467), (106, 16623), (120, 16725), (123, 16743), (127, 16770), (138, 16818), (141, 16827), (156, 16932), (159, 16953), (160, 16965), (162, 16977), (163, 16992), (173, 17028), (179, 17073), (185, 17103), (187, 17130), (202, 17208), (210, 17277), (211, 17289), (213, 17298), (244, 17577), (246, 17589), (251, 17631), (253, 17652), (254, 17661), (257, 17685), (258, 17691), (260, 17712), (270, 17796), (277, 17892), (280, 17919), (284, 17952), (295, 18045), (301, 18075), (311, 18153), (312, 18156), (316, 18180), (320, 18192), (324, 18207), (326, 18231), (333, 18309), (334, 18321), (347, 18396), (349, 18399), (362, 18546), (364, 18561), (366, 18576), (376, 18675), (378, 18723), (380, 18771), (381, 18777), (383, 18822), (386, 18849), (397, 18975), (399, 19029), (404, 19071), (409, 19155), (413, 19242), (415, 19278), (424, 19398), (430, 19449), (439, 19608), (444, 19722), (456, 19899), (459, 19986), (470, 20127), (473, 20139), (480, 20223), (536, 21042), (537, 21075), (539, 21087), (545, 21165), (565, 21441), (568, 21453), (583, 21696), (590, 21747), (595, 21789), (615, 22035), (627, 22143), (630, 22182),

(631, 22185), (633, 22224), (636, 22248), (643, 22278), (644, 22287), (646, 22299), (655, 22362), (657, 22371), (664, 22410), (667, 22434), (681, 22599), (682, 22623), (688, 22689), (690, 22701),

Gene: Riduram_24 Start: 15106, Stop: 22314, Start Num: 2

Candidate Starts for Riduram_24:

(1, 15085), (Start: 2 @15106 has 34 MA's), (6, 15253), (9, 15367), (11, 15466), (13, 15502), (15, 15514), (22, 15598), (24, 15613), (41, 15745), (45, 15772), (49, 15832), (51, 15841), (56, 15883), (60, 15895), (66, 15919), (68, 15925), (74, 15946), (79, 15988), (86, 16042), (88, 16045), (106, 16201), (120, 16303), (123, 16321), (127, 16348), (138, 16396), (141, 16405), (156, 16510), (159, 16531), (160, 16543), (162, 16555), (163, 16570), (173, 16606), (179, 16651), (185, 16681), (187, 16708), (202, 16786), (210, 16855), (211, 16867), (213, 16876), (244, 17155), (246, 17167), (251, 17209), (253, 17230), (254, 17239), (257, 17263), (258, 17269), (260, 17290), (270, 17374), (277, 17470), (280, 17497), (284, 17530), (295, 17623), (301, 17653), (311, 17731), (312, 17734), (316, 17758), (320, 17770), (324, 17785), (326, 17809), (333, 17887), (334, 17899), (347, 17974), (349, 17977), (362, 18124), (364, 18139), (366, 18154), (376, 18253), (378, 18301), (380, 18349), (381, 18355), (383, 18400), (386, 18427), (397, 18553), (399, 18607), (404, 18649), (409, 18733), (413, 18820), (415, 18856), (424, 18976), (430, 19027), (439, 19186), (444, 19300), (456, 19477), (459, 19564), (470, 19705), (473, 19717), (480, 19801), (536, 20620), (537, 20653), (539, 20665), (545, 20743), (565, 21019), (568, 21031), (583, 21274), (590, 21325), (595, 21367), (615, 21613), (627, 21721), (630, 21760), (631, 21763), (633, 21802), (636, 21826), (643, 21856), (644, 21865), (646, 21877), (655, 21940), (657, 21949), (664, 21988), (667, 22012), (681, 22177), (682, 22201), (688, 22267), (690, 22279),

Gene: Rota_26 Start: 17417, Stop: 24619, Start Num: 3

Candidate Starts for Rota_26:

(Start: 3 @17417 has 5 MA's), (6, 17564), (9, 17678), (11, 17777), (13, 17813), (15, 17825), (24, 17924), (41, 18056), (45, 18083), (46, 18086), (49, 18143), (51, 18152), (56, 18194), (60, 18206), (66, 18230), (68, 18236), (79, 18299), (86, 18353), (88, 18356), (105, 18509), (106, 18512), (120, 18614), (123, 18632), (127, 18659), (138, 18707), (141, 18716), (151, 18785), (156, 18821), (159, 18842), (160, 18854), (162, 18866), (163, 18881), (173, 18917), (185, 18992), (186, 18998), (202, 19097), (210, 19166), (211, 19178), (213, 19187), (244, 19466), (246, 19478), (251, 19520), (253, 19541), (254, 19550), (257, 19574), (258, 19580), (260, 19601), (266, 19664), (270, 19685), (277, 19781), (280, 19808), (284, 19841), (295, 19934), (301, 19964), (304, 19991), (311, 20042), (312, 20045), (316, 20069), (320, 20081), (324, 20096), (326, 20120), (333, 20198), (334, 20210), (347, 20285), (349, 20288), (362, 20435), (364, 20450), (366, 20465), (376, 20564), (378, 20612), (380, 20660), (381, 20666), (386, 20738), (392, 20822), (397, 20864), (399, 20918), (404, 20960), (409, 21044), (410, 21107), (415, 21167), (424, 21287), (430, 21338), (439, 21497), (444, 21611), (456, 21779), (459, 21866), (460, 21875), (470, 22007), (473, 22019), (480, 22103), (484, 22136), (491, 22226), (536, 22922), (537, 22955), (539, 22967), (545, 23045), (567, 23333), (569, 23342), (571, 23351), (590, 23630), (595, 23672), (615, 23918), (624, 24005), (627, 24026), (630, 24065), (633, 24107), (641, 24152), (643, 24161), (644, 24170), (646, 24182), (655, 24245), (657, 24254), (664, 24293), (667, 24317), (681, 24482), (682, 24506), (688, 24572), (690, 24584),

Gene: Rukungu_27 Start: 17766, Stop: 24968, Start Num: 2

Candidate Starts for Rukungu_27:

(1, 17745), (Start: 2 @17766 has 34 MA's), (6, 17913), (9, 18027), (11, 18126), (13, 18162), (15, 18174), (24, 18273), (41, 18405), (45, 18432), (46, 18435), (51, 18501), (56, 18543), (60, 18555), (66, 18579), (68, 18585), (79, 18648), (86, 18702), (88, 18705), (105, 18858), (106, 18861), (123, 18981), (127, 19008), (138, 19056), (141, 19065), (151, 19134), (156, 19170), (159, 19191), (160, 19203), (162, 19215), (163, 19230), (173, 19266), (185, 19341), (202, 19446), (210, 19515), (211, 19527), (213, 19536), (246, 19827), (249, 19851), (251, 19869), (253, 19890), (254, 19899), (257, 19923), (258, 19929), (260, 19950), (270, 20034), (277, 20130), (280, 20157), (284, 20190), (288, 20211), (301, 20313), (311, 20391), (312, 20394), (316, 20418), (320, 20430), (324, 20445), (326, 20469),

(333, 20547), (334, 20559), (347, 20634), (349, 20637), (362, 20784), (364, 20799), (366, 20814), (376, 20913), (378, 20961), (380, 21009), (381, 21015), (386, 21087), (392, 21171), (397, 21213), (399, 21267), (404, 21309), (409, 21393), (415, 21516), (424, 21636), (430, 21687), (439, 21846), (444, 21960), (456, 22128), (458, 22188), (459, 22215), (460, 22224), (470, 22356), (473, 22368), (480, 22452), (504, 22761), (506, 22773), (536, 23271), (537, 23304), (539, 23316), (545, 23394), (567, 23682), (571, 23700), (590, 23979), (615, 24267), (627, 24375), (630, 24414), (631, 24417), (633, 24456), (643, 24510), (644, 24519), (646, 24531), (649, 24549), (651, 24573), (657, 24603), (664, 24642), (667, 24666), (681, 24831), (682, 24855), (688, 24921), (690, 24933),

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

Candidate Starts for Rumi_26:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (179, 16681), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007), (362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (567, 21061), (583, 21307), (590, 21358), (595, 21400), (615, 21646), (627, 21754), (630, 21793), (631, 21796), (633, 21835), (635, 21847), (643, 21889), (644, 21898), (646, 21910), (649, 21928), (657, 21982), (664, 22021), (667, 22045), (681, 22210), (682, 22234), (688, 22300), (690, 22312),

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

Candidate Starts for Sadboi_27:

(1, 17876), (Start: 2 @17897 has 34 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (51, 18632), (56, 18674), (60, 18686), (66, 18710), (68, 18716), (79, 18779), (86, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (138, 19187), (141, 19196), (151, 19265), (156, 19301), (159, 19322), (160, 19334), (162, 19346), (163, 19361), (173, 19397), (176, 19430), (179, 19442), (185, 19472), (202, 19577), (210, 19646), (211, 19658), (213, 19667), (246, 19958), (249, 19982), (251, 20000), (253, 20021), (254, 20030), (257, 20054), (258, 20060), (260, 20081), (270, 20165), (277, 20261), (280, 20288), (284, 20321), (288, 20342), (295, 20414), (301, 20444), (304, 20471), (311, 20522), (312, 20525), (316, 20549), (320, 20561), (324, 20576), (326, 20600), (333, 20678), (334, 20690), (347, 20765), (349, 20768), (362, 20915), (364, 20930), (366, 20945), (376, 21044), (378, 21092), (380, 21140), (381, 21146), (386, 21218), (392, 21302), (397, 21344), (399, 21398), (404, 21440), (409, 21524), (415, 21647), (424, 21767), (430, 21818), (439, 21977), (444, 22091), (456, 22259), (459, 22346), (460, 22355), (470, 22487), (473, 22499), (480, 22583), (504, 22892), (536, 23402), (539, 23447), (545, 23522), (567, 23822), (571, 23840), (590, 24119), (615, 24407), (627, 24515), (630, 24554), (631, 24557), (633, 24596), (643, 24650), (644, 24659), (646, 24671), (649, 24689), (651, 24713), (657, 24743), (664, 24782), (667, 24806), (681, 24971), (682, 24995), (688, 25061), (690, 25073),

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

Candidate Starts for Sampudon_27:

(1, 18052), (Start: 2 @18073 has 34 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (49, 18799), (51, 18808), (56, 18850), (60, 18862), (66, 18886), (68, 18892), (74, 18913), (79, 18955), (86, 19009), (88, 19012), (105, 19165),

(106, 19168), (120, 19270), (123, 19288), (127, 19315), (138, 19363), (141, 19372), (151, 19441), (156, 19477), (159, 19498), (160, 19510), (162, 19522), (163, 19537), (173, 19573), (185, 19648), (202, 19753), (210, 19822), (211, 19834), (213, 19843), (246, 20134), (249, 20158), (251, 20176), (253, 20197), (254, 20206), (257, 20230), (258, 20236), (260, 20257), (270, 20341), (277, 20437), (280, 20464), (284, 20497), (295, 20590), (301, 20620), (304, 20647), (311, 20698), (312, 20701), (316, 20725), (320, 20737), (324, 20752), (326, 20776), (333, 20854), (334, 20866), (347, 20941), (349, 20944), (362, 21091), (364, 21106), (366, 21121), (376, 21220), (378, 21268), (380, 21316), (381, 21322), (386, 21394), (392, 21478), (397, 21520), (399, 21574), (404, 21616), (409, 21700), (415, 21823), (424, 21943), (430, 21994), (439, 22153), (444, 22267), (456, 22435), (459, 22522), (460, 22531), (470, 22663), (473, 22675), (480, 22759), (484, 22792), (504, 23068), (536, 23578), (537, 23611), (539, 23623), (545, 23701), (567, 23989), (571, 24007), (590, 24286), (595, 24328), (615, 24574), (627, 24682), (630, 24721), (631, 24724), (633, 24763), (643, 24817), (644, 24826), (646, 24838), (649, 24856), (651, 24880), (657, 24910), (664, 24949), (667, 24973), (681, 25138), (682, 25162), (688, 25228), (690, 25240),

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

Candidate Starts for Sienna_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459, 16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (538, 17649), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 19308),

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

Candidate Starts for Stormer_26:

(1, 15115), (Start: 2 @15136 has 34 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (179, 16681), (185, 16711), (187, 16738), (202, 16816), (210, 16885), (211, 16897), (213, 16906), (244, 17185), (246, 17197), (251, 17239), (253, 17260), (254, 17269), (257, 17293), (258, 17299), (260, 17320), (270, 17404), (277, 17500), (280, 17527), (284, 17560), (295, 17653), (301, 17683), (311, 17761), (312, 17764), (316, 17788), (320, 17800), (324, 17815), (326, 17839), (333, 17917), (334, 17929), (347, 18004), (349, 18007), (362, 18154), (364, 18169), (366, 18184), (376, 18283), (378, 18331), (380, 18379), (381, 18385), (383, 18430), (386, 18457), (397, 18583), (399, 18637), (404, 18679), (409, 18763), (413, 18850), (415, 18886), (424, 19006), (430, 19057), (439, 19216), (444, 19330), (456, 19507), (459, 19594), (470, 19735), (473, 19747), (480, 19831), (536, 20650), (537, 20683), (539, 20695), (545, 20773), (567, 21061), (583, 21307), (590, 21358), (595, 21400), (615, 21646), (627, 21754), (630, 21793), (631, 21796), (633, 21835), (635, 21847), (643, 21889), (644, 21898), (646, 21910), (649, 21928), (657, 21982), (664, 22021), (667, 22045), (681, 22210), (682, 22234), (688, 22300), (690, 22312),

Gene: SuperSonics_33 Start: 19293, Stop: 25940, Start Num: 20

Candidate Starts for SuperSonics_33:

(Start: 20 @19293 has 5 MA's), (29, 19386), (31, 19398), (32, 19407), (34, 19428), (37, 19440), (42, 19482), (55, 19587), (67, 19644), (69, 19650), (71, 19656), (78, 19713), (80, 19719), (82, 19725), (104, 19923), (108, 19953), (109, 19965), (114, 20001), (134, 20142), (152, 20238), (158, 20286), (173, 20364), (174, 20388), (180, 20421), (187, 20472), (193, 20505), (201, 20544), (211, 20634), (216, 20673), (217, 20685), (221, 20733), (225, 20766), (235, 20832), (243, 20901), (245, 20925), (247, 20943), (250, 20967), (261, 21048), (263, 21060), (274, 21195), (275, 21204), (285, 21288), (301, 21408), (307, 21453), (330, 21609), (332, 21630), (334, 21672), (344, 21735), (360, 21891), (363, 21918), (366, 21939), (367, 21942), (369, 21981), (371, 21993), (379, 22128), (382, 22185), (391, 22311), (396, 22353), (398, 22404), (406, 22488), (415, 22659), (416, 22671), (423, 22779), (429, 22833), (431, 22845), (440, 22983), (467, 23346), (482, 23481), (489, 23565), (518, 23895), (521, 23928), (523, 23937), (551, 24447), (553, 24474), (558, 24522), (562, 24579), (575, 24678), (586, 24864), (603, 25050), (621, 25260), (633, 25401), (637, 25431), (650, 25533), (657, 25572), (660, 25587), (671, 25719), (673, 25743), (675, 25767), (683, 25827), (685, 25845), (686, 25878), (688, 25890), (689, 25893), (691, 25917),

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

Candidate Starts for Suzy_22:

(39, 13731), (Start: 47 @13782 has 9 MA's), (69, 13926), (82, 13998), (83, 14019), (96, 14118), (98, 14130), (100, 14136), (129, 14346), (132, 14355), (145, 14415), (152, 14472), (159, 14523), (160, 14535), (173, 14598), (191, 14709), (194, 14727), (227, 14991), (233, 15033), (234, 15036), (236, 15063), (240, 15081), (248, 15162), (266, 15315), (268, 15324), (269, 15330), (271, 15345), (276, 15423), (292, 15540), (293, 15558), (299, 15603), (304, 15642), (306, 15654), (308, 15669), (311, 15690), (315, 15711), (317, 15720), (319, 15726), (323, 15735), (326, 15765), (332, 15813), (341, 15906), (342, 15909), (349, 15942), (354, 15957), (366, 16125), (371, 16170), (373, 16179), (375, 16200), (377, 16254), (391, 16464), (396, 16506), (400, 16578), (418, 16887), (423, 16935), (426, 16956), (434, 17064), (455, 17511), (459, 17631), (465, 17769), (478, 17910), (483, 17961), (485, 17985), (486, 17994), (495, 18087), (506, 18252), (510, 18276), (512, 18291), (525, 18513), (535, 18771), (538, 18813), (539, 18822), (542, 18849), (556, 19092), (559, 19128), (573, 19266), (574, 19281), (581, 19377), (584, 19455), (591, 19497), (593, 19512), (597, 19566), (604, 19680), (606, 19713), (607, 19722), (611, 19746), (614, 19767), (615, 19770), (626, 19878), (628, 19914), (629, 19920), (636, 19995), (644, 20034), (652, 20097), (661, 20139), (662, 20148), (664, 20157), (665, 20160), (666, 20169), (670, 20262), (671, 20265), (677, 20328), (686, 20424), (687, 20427), (689, 20439), (690, 20448), (692, 20469),

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

Candidate Starts for Terapin_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (191, 13476), (194, 13494), (198, 13515), (227, 13758), (231, 13767), (233, 13800), (234, 13803), (236, 13830), (254, 13986), (269, 14097), (270, 14103), (276, 14190), (287, 14274), (292, 14307), (293, 14325), (299, 14370), (304, 14409), (306, 14421), (308, 14436), (311, 14457), (315, 14478), (317, 14487), (319, 14493), (323, 14502), (326, 14532), (342, 14676), (349, 14709), (354, 14724), (366, 14892), (371, 14937), (373, 14946), (375, 14967), (377, 15021), (391, 15231), (396, 15273), (400, 15345), (418, 15654), (423, 15702), (426, 15723), (434, 15831), (449, 16212), (452, 16287), (459, 16473), (474, 16704), (478, 16752), (483, 16803), (485, 16827), (486, 16836), (495, 16929), (506, 17094), (510, 17118), (512, 17133), (535, 17607), (542, 17685), (556, 17928), (559, 17964), (569, 18057), (581, 18216), (591, 18336), (593, 18351), (597, 18405), (604, 18519), (606, 18552), (607, 18561), (611, 18585), (615, 18609), (628, 18753), (629, 18759), (638, 18846), (644, 18873), (646, 18885), (649, 18903), (654, 18945), (661, 18978), (662, 18987), (664, 18996), (666, 19008), (671, 19104), (676, 19164), (677, 19167), (686, 19263), (687, 19266), (689, 19278), (690, 19287), (692, 19308),

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

Candidate Starts for Thumb_26:

(Start: 19 @16235 has 11 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (71, 16583), (77, 16628), (84, 16670), (89, 16700), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (177, 17294), (180, 17309), (186, 17339), (189, 17372), (192, 17390), (198, 17420), (203, 17444), (204, 17453), (206, 17477), (210, 17516), (213, 17537), (214, 17543), (216, 17567), (230, 17678), (232, 17696), (234, 17717), (236, 17744), (249, 17852), (262, 17945), (263, 17954), (264, 17966), (267, 17999), (274, 18086), (282, 18155), (300, 18293), (302, 18308), (311, 18374), (315, 18395), (322, 18416), (334, 18542), (340, 18584), (343, 18593), (345, 18605), (348, 18614), (377, 18938), (380, 18995), (388, 19106), (395, 19181), (401, 19268), (402, 19271), (403, 19286), (416, 19514), (417, 19526), (422, 19610), (432, 19679), (436, 19730), (439, 19790), (442, 19838), (443, 19859), (447, 19919), (457, 20000), (466, 20150), (475, 20228), (484, 20309), (485, 20330), (488, 20375), (497, 20429), (500, 20537), (514, 20633), (515, 20642), (519, 20672), (520, 20675), (540, 20990), (564, 21263), (566, 21272), (572, 21302), (576, 21347), (577, 21380), (578, 21392), (579, 21401), (587, 21524), (599, 21644), (602, 21677), (604, 21728), (610, 21794), (613, 21815), (616, 21839), (618, 21866), (633, 22028), (634, 22031), (639, 22070), (642, 22091), (668, 22298), (679, 22412), (684, 22457), (688, 22508), (689, 22511), (690, 22520), (691, 22535),

Gene: Tillicus_26 Start: 16467, Stop: 23687, Start Num: 2

Candidate Starts for Tillicus_26:

(1, 16446), (Start: 2 @16467 has 34 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), (51, 17202), (60, 17256), (63, 17265), (66, 17280), (82, 17358), (85, 17394), (90, 17418), (111, 17613), (116, 17643), (135, 17748), (151, 17838), (155, 17862), (156, 17874), (159, 17895), (163, 17934), (175, 18000), (176, 18003), (183, 18039), (185, 18045), (186, 18051), (188, 18075), (196, 18120), (202, 18150), (203, 18156), (205, 18174), (211, 18231), (223, 18351), (244, 18519), (251, 18573), (253, 18594), (255, 18612), (257, 18627), (260, 18654), (270, 18738), (280, 18861), (301, 19017), (304, 19044), (307, 19065), (311, 19095), (318, 19128), (324, 19149), (326, 19173), (327, 19176), (328, 19179), (330, 19200), (331, 19212), (333, 19251), (337, 19287), (347, 19338), (358, 19398), (359, 19431), (365, 19509), (366, 19518), (380, 19707), (381, 19713), (386, 19785), (387, 19815), (392, 19869), (397, 19911), (404, 20007), (409, 20091), (415, 20214), (424, 20334), (430, 20385), (456, 20838), (457, 20868), (459, 20925), (463, 21000), (470, 21066), (473, 21078), (480, 21162), (484, 21195), (485, 21216), (491, 21285), (536, 21981), (539, 22026), (545, 22101), (567, 22401), (571, 22419), (594, 22725), (605, 22914), (615, 22986), (624, 23073), (627, 23094), (630, 23133), (633, 23175), (641, 23220), (643, 23229), (644, 23238), (646, 23250), (649, 23268), (656, 23319), (663, 23355), (664, 23361), (667, 23385), (672, 23487), (678, 23535), (681, 23550), (682, 23574), (687, 23631), (688, 23640), (690, 23652),

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

Candidate Starts for Wojtek_26:

(1, 16753), (Start: 2 @16774 has 34 MA's), (6, 16921), (9, 17035), (11, 17134), (13, 17170), (15, 17182), (24, 17281), (41, 17413), (49, 17500), (51, 17509), (56, 17551), (60, 17563), (66, 17587), (68, 17593), (79, 17656), (86, 17710), (88, 17713), (105, 17866), (106, 17869), (120, 17971), (123, 17989), (127, 18016), (138, 18064), (141, 18073), (151, 18142), (156, 18178), (159, 18199), (160, 18211), (162, 18223), (163, 18238), (185, 18349), (202, 18454), (210, 18523), (211, 18535), (213, 18544), (246, 18835), (251, 18877), (253, 18898), (254, 18907), (257, 18931), (258, 18937), (260, 18958), (266, 19021), (270, 19042), (277, 19138), (280, 19165), (284, 19198), (301, 19321), (304, 19348), (311, 19399), (312, 19402), (316, 19426), (320, 19438), (324, 19453), (326, 19477), (333, 19555), (334, 19567), (347, 19642), (349, 19645), (362, 19792), (364, 19807), (366, 19822), (376, 19921), (378, 19969), (380, 20017), (381, 20023), (383, 20068), (386, 20095), (392, 20179), (397, 20221), (399, 20275), (404, 20317), (409, 20401), (415, 20524), (424, 20644), (430, 20695), (439, 20854), (456, 21148), (457, 21178), (459, 21235), (463, 21310), (470, 21376), (473, 21388), (480, 21472), (484, 21505), (485, 21526), (536, 22291), (537, 22324), (539, 22336), (545, 22414), (565, 22690),

(568, 22702), (590, 22996), (595, 23038), (615, 23284), (624, 23371), (627, 23392), (630, 23431), (633, 23473), (641, 23518), (643, 23527), (644, 23536), (646, 23548), (655, 23611), (657, 23620), (664, 23659), (667, 23683), (681, 23848), (682, 23872), (687, 23929), (688, 23938), (690, 23950),

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

Candidate Starts for Xenia2_27:

(1, 16791), (Start: 2 @16812 has 34 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), (49, 17538), (54, 17559), (56, 17589), (64, 17619), (66, 17625), (72, 17640), (76, 17682), (79, 17694), (82, 17703), (83, 17727), (86, 17748), (90, 17763), (92, 17781), (95, 17817), (99, 17844), (105, 17904), (117, 18006), (118, 18009), (120, 18030), (123, 18048), (126, 18063), (129, 18084), (131, 18093), (137, 18129), (141, 18141), (148, 18195), (155, 18234), (156, 18246), (159, 18267), (164, 18309), (167, 18321), (172, 18339), (174, 18363), (185, 18417), (199, 18507), (202, 18522), (211, 18603), (220, 18678), (226, 18741), (244, 18891), (251, 18945), (253, 18966), (254, 18975), (259, 19014), (262, 19032), (270, 19107), (284, 19263), (285, 19266), (311, 19473), (326, 19551), (333, 19629), (339, 19683), (351, 19725), (358, 19776), (365, 19887), (366, 19896), (370, 19938), (374, 19971), (376, 19995), (380, 20085), (381, 20091), (386, 20163), (387, 20193), (397, 20289), (404, 20385), (408, 20457), (409, 20469), (415, 20592), (424, 20712), (451, 21183), (460, 21330), (469, 21456), (471, 21465), (472, 21471), (473, 21474), (475, 21504), (476, 21528), (478, 21537), (480, 21558), (485, 21612), (487, 21654), (505, 21873), (508, 21891), (527, 22167), (531, 22266), (536, 22377), (537, 22410), (539, 22422), (545, 22500), (570, 22800), (571, 22803), (598, 23187), (615, 23370), (643, 23613), (655, 23697), (661, 23727), (681, 23934), (682, 23958), (687, 24015),

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

Candidate Starts for Yikes_28:

(1, 18137), (Start: 2 @18158 has 34 MA's), (6, 18305), (9, 18419), (11, 18518), (13, 18554), (15, 18566), (24, 18665), (41, 18797), (45, 18824), (46, 18827), (51, 18893), (56, 18935), (60, 18947), (66, 18971), (68, 18977), (79, 19040), (86, 19094), (88, 19097), (105, 19250), (106, 19253), (120, 19355), (123, 19373), (127, 19400), (138, 19448), (141, 19457), (151, 19526), (156, 19562), (159, 19583), (160, 19595), (162, 19607), (163, 19622), (173, 19658), (185, 19733), (202, 19838), (210, 19907), (211, 19919), (213, 19928), (246, 20219), (251, 20261), (253, 20282), (254, 20291), (257, 20315), (258, 20321), (260, 20342), (270, 20426), (277, 20522), (280, 20549), (284, 20582), (295, 20675), (301, 20705), (304, 20732), (311, 20783), (312, 20786), (316, 20810), (320, 20822), (324, 20837), (326, 20861), (333, 20939), (334, 20951), (349, 21029), (362, 21176), (364, 21191), (366, 21206), (376, 21305), (378, 21353), (380, 21401), (381, 21407), (386, 21479), (392, 21563), (397, 21605), (399, 21659), (404, 21701), (409, 21785), (415, 21908), (424, 22028), (430, 22079), (439, 22238), (444, 22352), (456, 22520), (459, 22607), (460, 22616), (468, 22739), (470, 22748), (473, 22760), (480, 22844), (504, 23153), (536, 23663), (537, 23696), (539, 23708), (545, 23786), (567, 24074), (571, 24092), (590, 24371), (595, 24413), (615, 24659), (627, 24767), (630, 24806), (631, 24809), (633, 24848), (643, 24902), (644, 24911), (646, 24923), (649, 24941), (651, 24965), (657, 24995), (664, 25034), (667, 25058), (681, 25223), (682, 25247), (688, 25313), (690, 25325),

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

Candidate Starts for Zany_26:

(Start: 3 @17679 has 5 MA's), (6, 17826), (9, 17940), (11, 18039), (13, 18075), (15, 18087), (24, 18186), (41, 18318), (51, 18414), (56, 18456), (60, 18468), (66, 18492), (68, 18498), (79, 18561), (86, 18615), (88, 18618), (105, 18771), (106, 18774), (120, 18876), (123, 18894), (127, 18921), (138, 18969), (141, 18978), (151, 19047), (156, 19083), (159, 19104), (160, 19116), (162, 19128), (163, 19143), (173, 19179), (185, 19254), (202, 19359), (210, 19428), (211, 19440), (213, 19449), (246, 19740), (251, 19782), (253, 19803), (254, 19812), (257, 19836), (258, 19842), (260, 19863), (270, 19947), (277, 20043), (280, 20070), (284, 20103), (295, 20196), (301, 20226), (304, 20253), (311, 20304), (312, 20307), (316, 20331), (320, 20343), (324, 20358), (326, 20382), (333, 20460), (334, 20472), (347, 20547), (349, 20550), (362, 20697), (364, 20712), (366, 20727), (376, 20826), (378,

20874), (380, 20922), (381, 20928), (386, 21000), (392, 21084), (397, 21126), (399, 21180), (404, 21222), (409, 21306), (415, 21429), (424, 21549), (430, 21600), (439, 21759), (444, 21873), (456, 22041), (458, 22101), (459, 22128), (460, 22137), (470, 22269), (473, 22281), (480, 22365), (504, 22674), (506, 22686), (536, 23184), (537, 23217), (539, 23229), (545, 23307), (567, 23595), (571, 23613), (590, 23892), (615, 24180), (627, 24288), (630, 24327), (631, 24330), (633, 24369), (643, 24423), (644, 24432), (646, 24444), (649, 24462), (651, 24486), (655, 24507), (657, 24516), (664, 24555), (667, 24579), (681, 24744), (682, 24768), (688, 24834), (690, 24846),