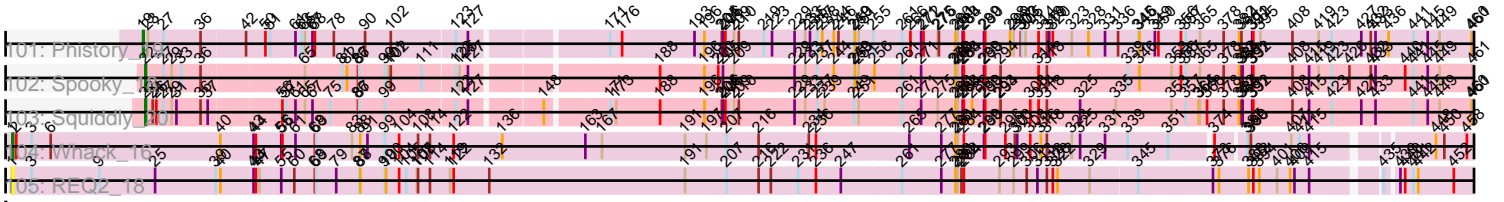


Zoomed Pham 162971



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 162971 Report

This analysis was run 04/28/24 on database version 559.

Pham number 162971 has 125 members, 18 are drafts.

Phages represented in each track:

- Track 1 : AikoCarson_15
- Track 2 : Agatha_16
- Track 3 : Nodigi_18
- Track 4 : Cozz_16
- Track 5 : Quasar_16
- Track 6 : Elliott_16, PsychoKiller_16
- Track 7 : SteamedHams_18
- Track 8 : Feastonyeet_15, BigChungus_15
- Track 9 : Amok_15
- Track 10 : Mayweather_17
- Track 11 : GiKK_19
- Track 12 : Vine_17
- Track 13 : SweatNTears_18
- Track 14 : Nina_17
- Track 15 : Orla_18
- Track 16 : CherryonLim_17
- Track 17 : Lauer_15
- Track 18 : Buttrmilkdreams_16
- Track 19 : Yummy_17, Horseradish_17
- Track 20 : Tolls_18
- Track 21 : Button_17
- Track 22 : PotPie_17
- Track 23 : Hexbug_18
- Track 24 : SheckWes_15
- Track 25 : Jamzy_19
- Track 26 : KayGee_15
- Track 27 : Biskit_17, SketchMex_15
- Track 28 : Survivors_18
- Track 29 : GoldHunter_17
- Track 30 : SummitAcademy_15
- Track 31 : Dre3_16, Gibbous_16
- Track 32 : MunkgeeRoachy_17
- Track 33 : HippoPololi_18
- Track 34 : MAnor_16
- Track 35 : Cleo_16
- Track 36 : Nibbles_18
- Track 37 : BillDoor_18

- Track 38 : Sopespian_16
- Track 39 : Troje_16
- Track 40 : RedBaron_17
- Track 41 : MScarn_18
- Track 42 : Elinal_17
- Track 43 : Pons_16
- Track 44 : Typhonomachy_17
- Track 45 : Yarn_15, AndPeggy_15
- Track 46 : Zareef_20
- Track 47 : Axym_16
- Track 48 : MaVan_18
- Track 49 : Emalyn_15
- Track 50 : GTE2_14
- Track 51 : Margaret_19
- Track 52 : Burnsey_16
- Track 53 : Azira_18
- Track 54 : Fribs8_17
- Track 55 : PhrostedPhlake_18
- Track 56 : Wocket_18
- Track 57 : Malachai_18, Begonia_18
- Track 58 : Murp_17
- Track 59 : MintFen_17, Melba_17, BlingBling_17, Barco_17
- Track 60 : CaptainKirk2_17, Delian_17, UmaThurman_17
- Track 61 : Pipp_17
- Track 62 : Wisp_16
- Track 63 : Mellie_16
- Track 64 : Gambino_19, Azula_19, MissRona_19, Blueberry_19
- Track 65 : Frokostdame_17
- Track 66 : Petra_19
- Track 67 : CarolAnn_17
- Track 68 : Guacamole_17, JasperJr_17
- Track 69 : ZiggyZoo_16, Obliviate_16
- Track 70 : Samba_17
- Track 71 : PrincePatrick_17
- Track 72 : Walrus_18
- Track 73 : Blino_17
- Track 74 : William_17
- Track 75 : Archis_18
- Track 76 : Hitter_17
- Track 77 : Jalammah_19
- Track 78 : JuJu_17
- Track 79 : KappaFarmDelta_17
- Track 80 : Lysidious_18
- Track 81 : Utz_17
- Track 82 : PCoral7_17
- Track 83 : Zarbodnamra_17
- Track 84 : Fairfaxidum_17
- Track 85 : Fenry_16
- Track 86 : Toast_17
- Track 87 : Budski_18
- Track 88 : Malisha_19
- Track 89 : Periwinkle_20
- Track 90 : Lutum_18, Kenna_17

- Track 91 : Whitney_19
- Track 92 : CheeseTouch_18
- Track 93 : Leroy_18
- Track 94 : Horus_18
- Track 95 : Getalong_19
- Track 96 : BENtherdunthat_18, Asapag_18
- Track 97 : LitninMcQueen_18, Phabuloso_18
- Track 98 : Frickyeah_18
- Track 99 : Kamaru_18
- Track 100 : Holliday_18
- Track 101 : Phistory_19
- Track 102 : Spooky_18
- Track 103 : Squiddly_20
- Track 104 : Whack_16
- Track 105 : REQ2_18

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

The start number called the most often in the published annotations is 8, it was called in 36 of the 107 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis_18, Azula_19, Barco_17, Begonia_18, BlingBling_17, Blino_17, Blueberry_19, CaptainKirk2_17, CarolAnn_17, Delian_17, Fairfaxidum_17, Fenry_16, Gambino_19, Guacamole_17, Hitter_17, Jalammah_19, JasperJr_17, JuJu_17, KappaFarmDelta_17, Lysidious_18, Malachai_18, Melba_17, Mellie_16, MintFen_17, MissRona_19, Murp_17, Obliviate_16, PCoral7_17, PhrostedPhlake_18, PrincePatrick_17, Samba_17, UmaThurman_17, Utz_17, William_17, Wocket_18, Zarbodnamra_17, ZiggyZoo_16,

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

- Frokostdame_17, Petra_19, Pipp_17, Toast_17, Walrus_18, Wisp_16,

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

- Agatha_16, AikoCarson_15, Amok_15, AndPeggy_15, Asapag_18, Axym_16, Azira_18, BENtherdunthat_18, BigChungus_15, BillDoor_18, Biskit_17, Budski_18, Burnsey_16, Button_17, Buttrmilkdreams_16, CheeseTouch_18, CherryonLim_17, Cleo_16, Cozz_16, Dre3_16, Elinal_17, Elliott_16, Emalyn_15, Feastonyeet_15, Fribs8_17, Frickyeah_18, GTE2_14, Getalong_19, GiKK_19, Gibbous_16, GoldHunter_17, Hexbug_18, HippoPololi_18, Holliday_18, Horseradish_17, Horus_18, Jamzy_19, Kamaru_18, KayGee_15, Kenna_17, Lauer_15, Leroy_18, LitninMcQueen_18, Lutum_18, MAnor_16, MScarn_18, MaVan_18, Malisha_19, Margaret_19, Mayweather_17, MunkgeeRoachy_17, Nibbles_18, Nina_17, Nodigi_18, Orla_18, Periwinkle_20, Phabuloso_18, Phistory_19, Pons_16, PotPie_17, PsychoKiller_16, Quasar_16, REQ2_18, RedBaron_17, SheckWes_15, SketchMex_15, Sopespian_16, Spooky_18, Squiddly_20, SteamedHams_18, SummitAcademy_15, Survivors_18, SweatNTears_18, Tolls_18, Troje_16, Typhonomachy_17, Vine_17, Whack_16, Whitney_19, Yarn_15, Yummy_17, Zareef_20,

Summary by start number:

Start 1:

- Found in 2 of 125 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2_18 (singleton), Whack_16 (singleton),

Start 5:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipp_17 (CV),

Start 7:

- Found in 5 of 125 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Toast_17 (CV),

Start 8:

- Found in 43 of 125 (34.4%) of genes in pham
- Manual Annotations of this start: 36 of 107
- Called 86.0% of time when present
- Phage (with cluster) where this start called: Archis_18 (CV), Azula_19 (CV), Barco_17 (CV), Begonia_18 (CV), BlingBling_17 (CV), Blino_17 (CV), Blueberry_19 (CV), CaptainKirk2_17 (CV), CarolAnn_17 (CV), Delian_17 (CV), Fairfaxidum_17 (CV), Fenry_16 (CV), Gambino_19 (CV), Guacamole_17 (CV), Hitter_17 (CV), Jalammah_19 (CV), JasperJr_17 (CV), JuJu_17 (CV), KappaFarmDelta_17 (CV), Lysidious_18 (CV), Malachai_18 (CV), Melba_17 (CV), Mellie_16 (CV), MintFen_17 (CV), MissRona_19 (CV), Murp_17 (CV), Obliviate_16 (CV), PCoral7_17 (CV), PhrostedPhlake_18 (CV), PrincePatrick_17 (CV), Samba_17 (CV), UmaThurman_17 (CV), Utz_17 (CV), William_17 (CV), Wocket_18 (CV), Zarbodnamra_17 (CV), ZiggyZoo_16 (CV),

Start 11:

- Found in 34 of 125 (27.2%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Frokostdame_17 (CV),

Start 12:

- Found in 36 of 125 (28.8%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Walrus_18 (CV),

Start 14:

- Found in 38 of 125 (30.4%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Petra_19 (CV), Wisp_16 (CV),

Start 19:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phistory_19 (DN1),

Start 20:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle_20 (DN1),

Start 21:

- Found in 13 of 125 (10.4%) of genes in pham
- Manual Annotations of this start: 9 of 107
- Called 69.2% of time when present
- Phage (with cluster) where this start called: Asapag_18 (DN1), BENtherdunthat_18 (DN1), CheeseTouch_18 (DN1), Holliday_18 (DN1), Kenna_17 (DN1), Leroy_18 (DN1), LitninMcQueen_18 (DN1), Lutum_18 (DN1), Phabuloso_18 (DN1),

Start 22:

- Found in 27 of 125 (21.6%) of genes in pham
- Manual Annotations of this start: 5 of 107
- Called 18.5% of time when present
- Phage (with cluster) where this start called: Getalong_19 (DN1), Malisha_19 (DN), Spooky_18 (DN2), Squiddly_20 (DN2), Whitney_19 (DN1),

Start 25:

- Found in 37 of 125 (29.6%) of genes in pham
- Manual Annotations of this start: 24 of 107
- Called 94.6% of time when present
- Phage (with cluster) where this start called: Agatha_16 (CT), Axym_16 (CT), Azira_18 (CT), BigChungus_15 (CT), Burnsey_16 (CT), CherryonLim_17 (CT), Cleo_16 (CT), Cozz_16 (CT), Dre3_16 (CT), Elinal_17 (CT), Elliott_16 (CT), Feastonyeet_15 (CT), Fribs8_17 (CT), Gibbous_16 (CT), GoldHunter_17 (CT), HippoPololi_18 (CT), Lauer_15 (CT), MAnor_16 (CT), MaVan_18 (CT), Mayweather_17 (CT), MunkgeeRoachy_17 (CT), Nibbles_18 (CT), Nina_17 (CT), Pons_16 (CT), PotPie_17 (CT), PsychoKiller_16 (CT), Quasar_16 (CT), RedBaron_17 (CT), SheckWes_15 (CT), Sopespian_16 (CT), SummitAcademy_15 (CT), Survivors_18 (CT), Typhonmachy_17 (CT), Vine_17 (CT), Zareef_20 (CT),

Start 26:

- Found in 9 of 125 (7.2%) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Kamaru_18 (DN1),

Start 27:

- Found in 20 of 125 (16.0%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Frickyeah_18 (DN1), Horus_18 (DN1),

Start 37:

- Found in 18 of 125 (14.4%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Budski_18 (DN),

Start 40:

- Found in 39 of 125 (31.2%) of genes in pham
- No Manual Annotations of this start.
- Called 2.6% of time when present
- Phage (with cluster) where this start called: KayGee_15 (CT),

Start 72:

- Found in 24 of 125 (19.2%) of genes in pham
- Manual Annotations of this start: 22 of 107
- Called 91.7% of time when present
- Phage (with cluster) where this start called: AikoCarson_15 (CT), Amok_15 (CT), AndPeggy_15 (CT), BillDoor_18 (CT), Biskit_17 (CT), Buttrmlkdreams_16 (CT), Emalyn_15 (CT), GiKK_19 (CT), Hexbug_18 (CT), Horseradish_17 (CT), Jamzy_19 (CT), MScarn_18 (CT), Margaret_19 (CT), Nodigi_18 (CT), Orla_18 (CT), SketchMex_15 (CT), SteamedHams_18 (CT), SweatNTears_18 (CT), Tolls_18 (CT), Troje_16 (CT), Yarn_15 (CT), Yummy_17 (CT),

Start 76:

- Found in 23 of 125 (18.4%) of genes in pham
- Manual Annotations of this start: 1 of 107
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Button_17 (CT),

Start 98:

- Found in 40 of 125 (32.0%) of genes in pham
- No Manual Annotations of this start.
- Called 2.5% of time when present
- Phage (with cluster) where this start called: GTE2_14 (CT),

Summary by clusters:

There are 6 clusters represented in this pham: DN, singleton, DN1, DN2, CV, CT,

Info for manual annotations of cluster CT:

- Start number 25 was manually annotated 24 times for cluster CT.
- Start number 72 was manually annotated 22 times for cluster CT.
- Start number 76 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster CV:

- Start number 5 was manually annotated 1 time for cluster CV.
- Start number 7 was manually annotated 1 time for cluster CV.
- Start number 8 was manually annotated 36 times for cluster CV.
- Start number 11 was manually annotated 1 time for cluster CV.
- Start number 12 was manually annotated 1 time for cluster CV.
- Start number 14 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster DN:

- Start number 22 was manually annotated 1 time for cluster DN.
- Start number 37 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 19 was manually annotated 1 time for cluster DN1.
- Start number 20 was manually annotated 1 time for cluster DN1.
- Start number 21 was manually annotated 9 times for cluster DN1.
- Start number 22 was manually annotated 2 times for cluster DN1.
- Start number 27 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 22 was manually annotated 2 times for cluster DN2.

Gene Information:

Gene: Agatha_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Agatha_16:

(Start: 22 @9605 has 5 MA's), (Start: 25 @9629 has 24 MA's), (28, 9656), (40, 9785), (43, 9860), (68, 10013), (69, 10016), (84, 10112), (87, 10121), (93, 10151), (95, 10157), (97, 10172), (98, 10175), (102, 10196), (111, 10268), (114, 10289), (125, 10355), (127, 10376), (144, 10493), (170, 10655), (176, 10694), (184, 10769), (200, 10928), (205, 10940), (209, 10967), (214, 11012), (215, 11024), (229, 11114), (232, 11132), (235, 11153), (238, 11183), (244, 11207), (246, 11219), (249, 11258), (253, 11291), (266, 11393), (267, 11396), (271, 11420), (281, 11513), (284, 11528), (288, 11567), (301, 11663), (310, 11705), (317, 11735), (318, 11738), (329, 11846), (330, 11849), (333, 11900), (347, 11975), (356, 12077), (364, 12122), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (396, 12278), (400, 12308), (408, 12356), (410, 12362), (414, 12389), (434, 12524), (448, 12641), (451, 12674), (453, 12695), (454, 12698), (466, 12764), (467, 12770), (468, 12785), (484, 12905), (486, 12914), (498, 12998), (553, 13319), (581, 13538), (588, 13574), (616, 13787), (651, 13979), (661, 14027), (664, 14048), (680, 14156), (689, 14222), (691, 14240), (702, 14345), (707, 14375), (708, 14384), (712, 14414), (724, 14480), (727, 14528), (736, 14588), (749, 14675), (758, 14738),

Gene: AikoCarson_15 Start: 9357, Stop: 14072, Start Num: 72

Candidate Starts for AikoCarson_15:

(Start: 72 @9357 has 22 MA's), (Start: 76 @9384 has 1 MA's), (98, 9513), (110, 9600), (113, 9615), (118, 9660), (121, 9672), (125, 9690), (128, 9717), (141, 9789), (145, 9831), (147, 9846), (148, 9849), (155, 9873), (157, 9891), (160, 9909), (166, 9954), (168, 9963), (174, 9990), (178, 10023), (187, 10083), (190, 10122), (193, 10161), (195, 10176), (209, 10245), (213, 10272), (228, 10368), (230, 10386), (241, 10449), (264, 10617), (266, 10623), (280, 10737), (281, 10743), (284, 10758), (314, 10947), (318, 10968), (321, 10986), (322, 10995), (333, 11130), (347, 11205), (349, 11241), (352, 11280), (353, 11283), (356, 11307), (360, 11337), (364, 11352), (369, 11376), (378, 11415), (382, 11454), (384, 11460), (414, 11619), (447, 11868), (448, 11871), (451, 11904), (453, 11925), (466, 11994), (467, 12000), (477, 12099), (486, 12144), (498, 12231), (526, 12366), (553, 12558), (561, 12627), (565, 12651), (585, 12792), (613, 13005), (616, 13026), (624, 13083), (671, 13386), (679, 13443), (680, 13461), (689, 13527), (696, 13599), (702, 13650), (706, 13674), (707, 13680), (708, 13689), (712, 13719), (724, 13785), (727, 13833), (736, 13893), (750, 13983), (758, 14043),

Gene: Amok_15 Start: 9357, Stop: 14069, Start Num: 72

Candidate Starts for Amok_15:

(Start: 72 @9357 has 22 MA's), (Start: 76 @9384 has 1 MA's), (98, 9513), (110, 9600), (113, 9615), (118, 9660), (121, 9672), (125, 9690), (128, 9717), (141, 9789), (145, 9831), (147, 9846), (148, 9849), (155, 9873), (157, 9891), (160, 9909), (163, 9930), (166, 9954), (168, 9963), (174, 9990), (178, 10023), (179, 10032), (190, 10122), (193, 10161), (195, 10176), (209, 10245), (213, 10272), (228, 10368), (230, 10386), (241, 10449), (264, 10617), (266, 10623), (280, 10737), (281, 10743), (284, 10758), (314, 10947), (318, 10968), (321, 10986), (322, 10995), (333, 11130), (342, 11184), (347, 11205), (349, 11241), (352, 11280), (353, 11283), (356, 11307), (360, 11337), (364, 11352), (369, 11376), (378, 11415), (382, 11454), (384, 11460), (408, 11586), (413, 11616), (414, 11619), (416, 11637), (417, 11640), (447, 11868), (448, 11871), (451, 11904), (453, 11925), (466, 11994), (467, 12000), (498, 12231), (526, 12366), (553, 12558), (561, 12627), (565, 12651), (585, 12792), (613, 13005), (616, 13026), (624, 13080), (671, 13383), (679, 13440), (680, 13458), (689, 13524), (696, 13596), (702, 13647), (707, 13677), (708, 13686), (712, 13716), (724, 13782), (727, 13830), (736, 13890), (750, 13980), (758, 14040),

Gene: AndPeggy_15 Start: 9645, Stop: 14432, Start Num: 72

Candidate Starts for AndPeggy_15:

(Start: 72 @9645 has 22 MA's), (Start: 76 @9672 has 1 MA's), (89, 9750), (98, 9801), (110, 9888), (113, 9903), (121, 9960), (125, 9978), (128, 10005), (129, 10008), (141, 10077), (147, 10134), (157, 10179), (160, 10197), (166, 10242), (174, 10278), (178, 10311), (185, 10359), (186, 10362), (190, 10410), (193, 10449), (195, 10464), (228, 10656), (230, 10674), (245, 10758), (264, 10905), (270, 10932), (280, 11025), (281, 11031), (284, 11046), (288, 11085), (289, 11097), (298, 11163), (314, 11235), (317, 11253), (318, 11256), (322, 11283), (349, 11529), (356, 11595), (364, 11640), (368, 11661), (369, 11664), (370, 11667), (378, 11703), (382, 11742), (384, 11748), (392, 11775), (413, 11904), (414, 11907), (416, 11925), (435, 12048), (437, 12063), (451, 12192), (453, 12213), (462, 12255), (466, 12282), (467, 12288), (483, 12420), (486, 12432), (498, 12519), (505, 12561), (512, 12597), (538, 12723), (544, 12762), (559, 12891), (567, 12948), (573, 12990), (585, 13083), (592, 13158), (601, 13221), (613, 13302), (616, 13323), (640, 13500), (642, 13506), (668, 13725), (679, 13803), (680, 13821), (682, 13827), (689, 13887), (691, 13905), (694, 13938), (702, 14010), (708, 14049), (712, 14079), (724, 14145), (727, 14193), (736, 14253), (750, 14343), (758, 14403),

Gene: Archis_18 Start: 10485, Stop: 16007, Start Num: 8

Candidate Starts for Archis_18:

(Start: 8 @10485 has 36 MA's), (Start: 11 @10500 has 1 MA's), (Start: 12 @10506 has 1 MA's), (Start: 14 @10536 has 1 MA's), (15, 10545), (16, 10548), (18, 10590), (34, 10701), (35, 10722), (41, 10842), (48, 10884), (59, 10950), (61, 10968), (64, 10989), (65, 10992), (67, 11010), (73, 11034), (85, 11118), (87, 11124), (95, 11160), (97, 11175), (99, 11184), (124, 11352), (127, 11379), (144, 11496), (171, 11667), (176, 11697), (196, 11901), (205, 11946), (209, 11973), (210, 11985), (225, 12075), (229, 12120), (233, 12147), (237, 12177), (249, 12264), (250, 12267), (254, 12306), (263, 12390), (271, 12426), (275, 12468), (280, 12513), (281, 12519), (283, 12531), (284, 12534), (290, 12588), (294, 12627), (297, 12648), (298, 12651), (301, 12669), (302, 12678), (307, 12696), (312, 12717), (314, 12723), (318, 12744), (322, 12771), (328, 12849), (363, 13038), (371, 13062), (376, 13074), (377, 13077), (386, 13092), (391, 13107), (392, 13110), (400, 13161), (413, 13242), (414, 13245), (420, 13278), (423, 13308), (425, 13332), (469, 13665), (475, 13713), (479, 13758), (481, 13761), (482, 13776), (490, 13821), (492, 13830), (494, 13839), (501, 13890), (514, 13962), (520, 13980), (525, 14001), (540, 14100), (541, 14103), (545, 14136), (550, 14202), (552, 14220), (555, 14235), (558, 14268), (564, 14319), (570, 14370), (576, 14418), (596, 14613), (597, 14616), (610, 14688), (611, 14691), (619, 14757), (620, 14760), (622, 14778), (627, 14838), (634, 14895), (637, 14913), (645, 14994), (646, 14997), (647, 15012), (669, 15171), (674, 15225), (681, 15291), (687, 15345), (688, 15357), (689, 15363), (693, 15393), (702, 15486), (706, 15510), (709, 15528), (712, 15552), (713, 15558), (717, 15579), (724, 15618), (738, 15759), (749, 15822), (753, 15840), (759, 15897), (762, 15990),

Gene: Asapag_18 Start: 9881, Stop: 15508, Start Num: 21

Candidate Starts for Asapag_18:

(Start: 21 @9881 has 9 MA's), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964), (188, 11060), (196, 11168), (204, 11210), (205, 11213), (206, 11219), (209, 11240), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (366, 12404), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506), (390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (415, 12668), (419, 12692), (423, 12725), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (465, 13112), (474, 13193), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (524, 13484), (525, 13487), (540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (591, 14027), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (625, 14261), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14858), (699, 14945), (704, 14972), (705, 14975), (718, 15050), (722, 15074), (725, 15113), (728, 15149), (732, 15170), (741, 15257), (748, 15299), (754, 15332), (755, 15344), (760, 15422), (763, 15488),

Gene: Axym_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Axym_16:

(Start: 22 @9605 has 5 MA's), (Start: 25 @9629 has 24 MA's), (28, 9656), (40, 9785), (43, 9860), (68, 10013), (69, 10016), (84, 10112), (87, 10121), (93, 10151), (95, 10157), (97, 10172), (98, 10175), (102, 10196), (111, 10268), (114, 10289), (125, 10355), (127, 10376), (144, 10493), (170, 10655), (176, 10694), (184, 10769), (200, 10928), (205, 10940), (209, 10967), (214, 11012), (215, 11024), (229, 11114), (232, 11132), (235, 11153), (238, 11183), (244, 11207), (246, 11219), (249, 11258), (253, 11291), (266, 11393), (267, 11396), (271, 11420), (281, 11513), (284, 11528), (288, 11567), (294, 11621), (301, 11663), (303, 11675), (310, 11705), (317, 11735), (318, 11738), (329, 11846), (330, 11849), (333, 11900), (347, 11975), (354, 12065), (356, 12077), (364, 12122), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (396, 12278), (400, 12308), (408, 12356), (410, 12362), (414, 12389), (434, 12524), (448, 12641), (451, 12674), (453, 12695), (454, 12698), (466, 12764), (467, 12770), (468, 12785), (484, 12905), (486, 12914), (498, 12998), (553, 13319), (581, 13538), (588, 13574), (616, 13787), (651, 13979), (661, 14027), (664, 14048), (680, 14156), (689, 14222), (691, 14240), (697, 14300), (702, 14345), (707, 14375), (708, 14384), (712, 14414), (724, 14480), (727, 14528), (736, 14588), (749, 14675), (758, 14738),

Gene: Azira_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for Azira_18:

(Start: 22 @10598 has 5 MA's), (Start: 25 @10619 has 24 MA's), (28, 10646), (40, 10775), (48, 10871), (56, 10922), (66, 10979), (70, 11012), (71, 11015), (84, 11102), (88, 11114), (97, 11162), (98, 11165), (99, 11171), (105, 11225), (106, 11231), (114, 11279), (125, 11345), (127, 11366), (184, 11759), (185, 11762), (193, 11864), (205, 11930), (206, 11936), (209, 11957), (237, 12161), (239, 12179), (242, 12185), (244, 12197), (246, 12209), (249, 12248), (251, 12260), (256, 12296), (260, 12353), (264, 12377), (266, 12383), (281, 12503), (284, 12518), (288, 12557), (297, 12632), (303, 12665), (307, 12680), (308, 12686), (309, 12692), (318, 12728), (329, 12836), (336, 12908), (346, 12962), (356, 13067), (364, 13112), (369, 13136), (380, 13196), (381, 13208), (382, 13214), (390, 13241), (391, 13244), (392, 13247), (406, 13340), (408, 13346), (416, 13397), (425, 13466), (431, 13499), (434, 13514), (435, 13520), (441, 13577), (443, 13589), (447, 13628), (448, 13631), (450, 13652), (451, 13664), (453, 13685), (454, 13688), (462, 13727), (463, 13739), (466, 13754), (484,

13895), (498, 13991), (510, 14057), (513, 14078), (516, 14084), (553, 14321), (558, 14351), (561, 14390), (580, 14525), (584, 14555), (588, 14576), (609, 14735), (613, 14768), (651, 14981), (657, 14999), (661, 15005), (680, 15134), (689, 15200), (694, 15251), (702, 15323), (708, 15362), (712, 15392), (719, 15425), (724, 15458), (733, 15530), (740, 15602), (749, 15656), (751, 15662), (758, 15719),

Gene: Azula_19 Start: 10619, Stop: 16108, Start Num: 8

Candidate Starts for Azula_19:

(Start: 8 @10619 has 36 MA's), (Start: 11 @10634 has 1 MA's), (Start: 12 @10640 has 1 MA's), (Start: 14 @10670 has 1 MA's), (15, 10679), (16, 10682), (18, 10724), (34, 10835), (35, 10856), (41, 10976), (48, 11018), (59, 11084), (61, 11102), (64, 11123), (65, 11126), (67, 11144), (73, 11168), (85, 11252), (95, 11294), (97, 11309), (99, 11318), (124, 11486), (127, 11513), (144, 11630), (171, 11801), (176, 11831), (196, 12035), (205, 12080), (209, 12107), (210, 12119), (212, 12131), (225, 12209), (229, 12254), (233, 12281), (237, 12311), (249, 12398), (250, 12401), (254, 12440), (260, 12503), (261, 12512), (271, 12560), (275, 12602), (280, 12647), (281, 12653), (284, 12668), (290, 12722), (294, 12761), (297, 12782), (298, 12785), (301, 12803), (307, 12830), (312, 12851), (314, 12857), (318, 12878), (321, 12896), (322, 12905), (359, 13178), (377, 13232), (391, 13262), (392, 13265), (400, 13316), (413, 13397), (414, 13400), (420, 13433), (423, 13463), (425, 13487), (436, 13553), (469, 13820), (475, 13868), (477, 13901), (479, 13913), (481, 13916), (490, 13976), (492, 13985), (494, 13994), (501, 14045), (514, 14117), (520, 14135), (525, 14156), (540, 14255), (541, 14258), (545, 14291), (550, 14357), (552, 14375), (555, 14390), (558, 14423), (564, 14474), (570, 14525), (579, 14594), (596, 14768), (597, 14771), (610, 14843), (611, 14846), (619, 14912), (620, 14915), (622, 14933), (627, 14993), (634, 15050), (637, 15068), (645, 15149), (646, 15152), (647, 15167), (669, 15338), (674, 15392), (685, 15464), (686, 15473), (690, 15509), (698, 15569), (699, 15587), (703, 15605), (711, 15650), (716, 15683), (730, 15794), (738, 15863), (749, 15926), (753, 15944), (762, 16094),

Gene: BENtherdunthat_18 Start: 9881, Stop: 15508, Start Num: 21

Candidate Starts for BENtherdunthat_18:

(Start: 21 @9881 has 9 MA's), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964), (188, 11060), (196, 11168), (204, 11210), (205, 11213), (206, 11219), (209, 11240), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (366, 12404), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506), (390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (415, 12668), (419, 12692), (423, 12725), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (465, 13112), (474, 13193), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (524, 13484), (525, 13487), (540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (591, 14027), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (625, 14261), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14858), (699, 14945), (704, 14972), (705, 14975), (718, 15050), (722, 15074), (725, 15113), (728, 15149), (732, 15170), (741, 15257), (748, 15299), (754, 15332), (755, 15344), (760, 15422), (763, 15488),

Gene: Barco_17 Start: 10274, Stop: 15796, Start Num: 8

Candidate Starts for Barco_17:

(Start: 8 @10274 has 36 MA's), (Start: 11 @10289 has 1 MA's), (Start: 12 @10295 has 1 MA's), (Start: 14 @10325 has 1 MA's), (15, 10334), (16, 10337), (18, 10379), (34, 10490), (35, 10511), (41, 10631), (48, 10673), (59, 10739), (61, 10757), (64, 10778), (65, 10781), (67, 10799), (73, 10823), (85, 10907), (86, 10910), (95, 10949), (97, 10964), (99, 10973), (124, 11141), (127, 11168), (144, 11285), (171, 11456), (176, 11486), (196, 11690), (205, 11735), (209, 11762), (210, 11774), (225, 11864), (229, 11909), (233, 11936), (237, 11966), (249, 12053), (250, 12056), (254, 12095), (263, 12179), (271, 12215), (275, 12257), (280, 12302), (281, 12308), (283, 12320), (284, 12323), (290, 12377), (294, 12416), (297, 12437), (298, 12440), (301, 12458), (302, 12467), (307, 12485), (312, 12506), (314, 12512), (318, 12533), (322, 12560), (328, 12638), (363, 12827), (371, 12851), (376, 12863), (377, 12866), (386, 12881), (391, 12896), (392, 12899), (400, 12950), (413, 13031), (414, 13034), (420, 13067), (423, 13097), (425, 13121), (469, 13454), (475, 13502), (479, 13547), (481, 13550), (482, 13565), (490, 13610), (492, 13619), (494, 13628), (501, 13679), (514, 13751), (520, 13769), (525, 13790), (540, 13889), (541, 13892), (545, 13925), (550, 13991), (552, 14009), (555, 14024), (558, 14057), (564, 14108), (570, 14159), (576, 14207), (596, 14402), (597, 14405), (610, 14477), (611, 14480), (619, 14546), (620, 14549), (622, 14567), (627, 14627), (634, 14684), (637, 14702), (645, 14783), (646, 14786), (647, 14801), (674, 15014), (681, 15080), (687, 15134), (688, 15146), (689, 15152), (702, 15275), (706, 15299), (709, 15317), (712, 15341), (713, 15347), (717, 15368), (724, 15407), (738, 15548), (740, 15560), (749, 15611), (753, 15629), (762, 15779),

Gene: Begonia_18 Start: 10785, Stop: 16274, Start Num: 8

Candidate Starts for Begonia_18:

(Start: 8 @10785 has 36 MA's), (13, 10824), (Start: 14 @10836 has 1 MA's), (15, 10845), (16, 10848), (18, 10890), (34, 11001), (35, 11022), (41, 11142), (48, 11184), (59, 11250), (61, 11268), (63, 11283), (64, 11289), (65, 11292), (67, 11310), (73, 11334), (85, 11418), (95, 11460), (97, 11475), (99, 11484), (124, 11652), (127, 11679), (139, 11754), (144, 11796), (152, 11844), (171, 11967), (176, 11997), (196, 12201), (205, 12246), (209, 12273), (210, 12285), (225, 12375), (229, 12420), (233, 12447), (237, 12477), (249, 12564), (254, 12606), (271, 12726), (275, 12768), (280, 12813), (281, 12819), (283, 12831), (284, 12834), (290, 12888), (294, 12927), (297, 12948), (298, 12951), (301, 12969), (307, 12996), (314, 13023), (318, 13044), (322, 13071), (327, 13143), (359, 13344), (363, 13359), (371, 13383), (377, 13398), (391, 13428), (392, 13431), (400, 13482), (413, 13563), (414, 13566), (420, 13599), (423, 13629), (425, 13653), (436, 13719), (469, 13986), (475, 14034), (479, 14079), (481, 14082), (482, 14097), (490, 14142), (492, 14151), (494, 14160), (501, 14211), (514, 14283), (520, 14301), (525, 14322), (540, 14421), (541, 14424), (545, 14457), (550, 14523), (552, 14541), (555, 14556), (558, 14589), (564, 14640), (570, 14691), (596, 14934), (597, 14937), (611, 15012), (619, 15078), (620, 15081), (622, 15099), (627, 15159), (645, 15315), (646, 15318), (647, 15333), (674, 15552), (683, 15609), (685, 15624), (690, 15672), (695, 15717), (714, 15837), (716, 15846), (723, 15885), (730, 15957), (738, 16026), (740, 16038), (749, 16089), (753, 16107), (759, 16164), (762, 16257),

Gene: BigChungus_15 Start: 9403, Stop: 14511, Start Num: 25

Candidate Starts for BigChungus_15:

(Start: 25 @9403 has 24 MA's), (40, 9559), (54, 9688), (58, 9718), (68, 9787), (71, 9799), (78, 9835), (84, 9886), (87, 9895), (95, 9931), (99, 9955), (106, 10015), (116, 10069), (120, 10108), (122, 10114), (125, 10129), (127, 10150), (154, 10321), (163, 10384), (170, 10429), (180, 10510), (196, 10669), (200, 10702), (205, 10714), (209, 10741), (215, 10798), (221, 10828), (224, 10840), (236, 10942), (237, 10945), (249, 11032), (256, 11080), (271, 11194), (281, 11287), (284, 11302), (286, 11323), (290, 11356), (292, 11386), (295, 11398), (301, 11437), (306, 11461), (307, 11464), (313, 11488), (318, 11512), (328, 11617), (339, 11695), (346, 11725), (347, 11728), (349, 11764), (353, 11806), (356, 11830), (358, 11845), (360, 11860), (364, 11875), (369, 11899), (378, 11938), (379, 11953), (380, 11959), (390, 12004), (392, 12010), (412, 12136), (418, 12166), (422, 12202), (423, 12205), (429, 12253), (433, 12274), (434, 12277), (442, 12349), (448, 12394), (451, 12427), (453, 12448), (463, 12502), (473, 12577), (486, 12661), (498, 12748), (553, 13066), (558, 13096), (575, 13234), (583, 13285), (588, 13315), (609, 13480), (613, 13510), (644, 13690), (653, 13741), (661, 13783),

(664, 13804), (680, 13900), (686, 13948), (689, 13966), (702, 14089), (706, 14113), (708, 14128), (712, 14158), (717, 14185), (719, 14191), (724, 14224), (731, 14293), (733, 14296), (736, 14332), (750, 14422),

Gene: BillDoor_18 Start: 9610, Stop: 14400, Start Num: 72

Candidate Starts for BillDoor_18:

(Start: 72 @9610 has 22 MA's), (Start: 76 @9637 has 1 MA's), (89, 9715), (98, 9766), (110, 9853), (113, 9868), (121, 9925), (125, 9943), (128, 9970), (129, 9973), (141, 10042), (147, 10099), (157, 10144), (160, 10162), (166, 10207), (174, 10243), (178, 10276), (185, 10324), (186, 10327), (190, 10375), (193, 10414), (195, 10429), (228, 10621), (230, 10639), (245, 10723), (264, 10870), (270, 10897), (280, 10990), (281, 10996), (284, 11011), (288, 11050), (289, 11062), (298, 11128), (314, 11200), (317, 11218), (318, 11221), (322, 11248), (333, 11383), (347, 11458), (349, 11494), (356, 11560), (364, 11605), (368, 11626), (369, 11629), (370, 11632), (378, 11668), (382, 11707), (384, 11713), (392, 11740), (413, 11869), (414, 11872), (416, 11890), (435, 12013), (437, 12028), (451, 12157), (453, 12178), (462, 12220), (466, 12247), (467, 12253), (483, 12385), (486, 12397), (498, 12484), (505, 12526), (512, 12562), (538, 12688), (544, 12727), (559, 12856), (567, 12913), (573, 12958), (585, 13051), (592, 13126), (601, 13189), (613, 13270), (616, 13291), (640, 13468), (642, 13474), (668, 13693), (679, 13771), (680, 13789), (682, 13795), (689, 13855), (691, 13873), (694, 13906), (702, 13978), (708, 14017), (712, 14047), (724, 14113), (727, 14161), (736, 14221), (750, 14311), (758, 14371),

Gene: Biskit_17 Start: 9616, Stop: 14415, Start Num: 72

Candidate Starts for Biskit_17:

(Start: 72 @9616 has 22 MA's), (Start: 76 @9643 has 1 MA's), (98, 9772), (113, 9874), (118, 9919), (121, 9931), (125, 9949), (128, 9976), (129, 9979), (131, 9994), (140, 10045), (141, 10048), (147, 10105), (148, 10108), (157, 10150), (160, 10168), (166, 10213), (174, 10249), (178, 10282), (182, 10315), (183, 10327), (190, 10381), (193, 10420), (195, 10435), (198, 10444), (201, 10471), (211, 10522), (218, 10564), (221, 10582), (224, 10591), (230, 10645), (241, 10708), (244, 10723), (251, 10786), (264, 10876), (270, 10903), (280, 10996), (281, 11002), (284, 11017), (288, 11056), (298, 11134), (304, 11167), (314, 11206), (317, 11224), (318, 11227), (322, 11254), (325, 11311), (328, 11332), (334, 11395), (339, 11431), (342, 11443), (347, 11464), (349, 11500), (353, 11542), (354, 11554), (356, 11566), (364, 11611), (365, 11614), (368, 11632), (369, 11635), (370, 11638), (382, 11713), (384, 11719), (392, 11746), (401, 11806), (404, 11821), (412, 11872), (413, 11875), (414, 11878), (416, 11896), (430, 11995), (433, 12010), (434, 12013), (451, 12163), (453, 12184), (462, 12226), (466, 12253), (467, 12259), (483, 12391), (486, 12403), (498, 12490), (505, 12532), (512, 12568), (529, 12643), (538, 12694), (544, 12733), (551, 12811), (559, 12862), (567, 12919), (585, 13057), (592, 13132), (613, 13276), (616, 13297), (640, 13474), (642, 13480), (680, 13804), (682, 13810), (689, 13870), (691, 13888), (694, 13921), (702, 13993), (708, 14032), (712, 14062), (724, 14128), (727, 14176), (736, 14236), (750, 14326), (758, 14386),

Gene: BlingBling_17 Start: 10274, Stop: 15796, Start Num: 8

Candidate Starts for BlingBling_17:

(Start: 8 @10274 has 36 MA's), (Start: 11 @10289 has 1 MA's), (Start: 12 @10295 has 1 MA's), (Start: 14 @10325 has 1 MA's), (15, 10334), (16, 10337), (18, 10379), (34, 10490), (35, 10511), (41, 10631), (48, 10673), (59, 10739), (61, 10757), (64, 10778), (65, 10781), (67, 10799), (73, 10823), (85, 10907), (86, 10910), (95, 10949), (97, 10964), (99, 10973), (124, 11141), (127, 11168), (144, 11285), (171, 11456), (176, 11486), (196, 11690), (205, 11735), (209, 11762), (210, 11774), (225, 11864), (229, 11909), (233, 11936), (237, 11966), (249, 12053), (250, 12056), (254, 12095), (263, 12179), (271, 12215), (275, 12257), (280, 12302), (281, 12308), (283, 12320), (284, 12323), (290, 12377), (294, 12416), (297, 12437), (298, 12440), (301, 12458), (302, 12467), (307, 12485), (312, 12506), (314, 12512), (318, 12533), (322, 12560), (328, 12638), (363, 12827), (371, 12851), (376, 12863), (377, 12866), (386, 12881), (391, 12896), (392, 12899), (400, 12950), (413, 13031), (414, 13034), (420, 13067), (423, 13097), (425, 13121), (469, 13454), (475, 13502), (479, 13547), (481, 13550), (482,

13565), (490, 13610), (492, 13619), (494, 13628), (501, 13679), (514, 13751), (520, 13769), (525, 13790), (540, 13889), (541, 13892), (545, 13925), (550, 13991), (552, 14009), (555, 14024), (558, 14057), (564, 14108), (570, 14159), (576, 14207), (596, 14402), (597, 14405), (610, 14477), (611, 14480), (619, 14546), (620, 14549), (622, 14567), (627, 14627), (634, 14684), (637, 14702), (645, 14783), (646, 14786), (647, 14801), (674, 15014), (681, 15080), (687, 15134), (688, 15146), (689, 15152), (702, 15275), (706, 15299), (709, 15317), (712, 15341), (713, 15347), (717, 15368), (724, 15407), (738, 15548), (740, 15560), (749, 15611), (753, 15629), (762, 15779),

Gene: Blino_17 Start: 10173, Stop: 15764, Start Num: 8

Candidate Starts for Blino_17:

(Start: 8 @10173 has 36 MA's), (Start: 11 @10188 has 1 MA's), (Start: 14 @10224 has 1 MA's), (15, 10233), (16, 10236), (18, 10278), (34, 10389), (35, 10410), (41, 10530), (59, 10638), (61, 10656), (64, 10677), (65, 10680), (67, 10698), (87, 10812), (95, 10848), (97, 10863), (99, 10872), (124, 11040), (127, 11067), (144, 11184), (171, 11355), (176, 11385), (196, 11589), (205, 11634), (229, 11808), (233, 11835), (237, 11865), (249, 11952), (250, 11955), (254, 11994), (260, 12057), (271, 12114), (275, 12156), (280, 12201), (281, 12207), (283, 12219), (284, 12222), (290, 12276), (294, 12315), (297, 12336), (298, 12339), (301, 12357), (307, 12384), (312, 12405), (314, 12411), (318, 12432), (322, 12459), (324, 12507), (328, 12537), (350, 12693), (351, 12717), (353, 12726), (355, 12747), (372, 12828), (391, 12924), (392, 12927), (393, 12933), (399, 12975), (400, 12978), (403, 12999), (413, 13059), (414, 13062), (420, 13095), (423, 13125), (436, 13215), (469, 13482), (475, 13530), (479, 13575), (481, 13578), (482, 13593), (490, 13638), (492, 13647), (494, 13656), (501, 13707), (514, 13779), (520, 13797), (525, 13818), (540, 13917), (541, 13920), (545, 13953), (550, 14019), (552, 14037), (555, 14052), (558, 14085), (564, 14136), (570, 14187), (576, 14235), (596, 14430), (597, 14433), (610, 14505), (611, 14508), (619, 14574), (620, 14577), (622, 14595), (627, 14655), (637, 14730), (646, 14814), (647, 14829), (674, 15042), (683, 15099), (685, 15114), (690, 15162), (695, 15207), (714, 15327), (716, 15336), (723, 15375), (730, 15447), (738, 15516), (749, 15579), (753, 15597), (759, 15654), (762, 15747),

Gene: Blueberry_19 Start: 10619, Stop: 16108, Start Num: 8

Candidate Starts for Blueberry_19:

(Start: 8 @10619 has 36 MA's), (Start: 11 @10634 has 1 MA's), (Start: 12 @10640 has 1 MA's), (Start: 14 @10670 has 1 MA's), (15, 10679), (16, 10682), (18, 10724), (34, 10835), (35, 10856), (41, 10976), (48, 11018), (59, 11084), (61, 11102), (64, 11123), (65, 11126), (67, 11144), (73, 11168), (85, 11252), (95, 11294), (97, 11309), (99, 11318), (124, 11486), (127, 11513), (144, 11630), (171, 11801), (176, 11831), (196, 12035), (205, 12080), (209, 12107), (210, 12119), (212, 12131), (225, 12209), (229, 12254), (233, 12281), (237, 12311), (249, 12398), (250, 12401), (254, 12440), (260, 12503), (261, 12512), (271, 12560), (275, 12602), (280, 12647), (281, 12653), (284, 12668), (290, 12722), (294, 12761), (297, 12782), (298, 12785), (301, 12803), (307, 12830), (312, 12851), (314, 12857), (318, 12878), (321, 12896), (322, 12905), (359, 13178), (377, 13232), (391, 13262), (392, 13265), (400, 13316), (413, 13397), (414, 13400), (420, 13433), (423, 13463), (425, 13487), (436, 13553), (469, 13820), (475, 13868), (477, 13901), (479, 13913), (481, 13916), (490, 13976), (492, 13985), (494, 13994), (501, 14045), (514, 14117), (520, 14135), (525, 14156), (540, 14255), (541, 14258), (545, 14291), (550, 14357), (552, 14375), (555, 14390), (558, 14423), (564, 14474), (570, 14525), (579, 14594), (596, 14768), (597, 14771), (610, 14843), (611, 14846), (619, 14912), (620, 14915), (622, 14933), (627, 14993), (634, 15050), (637, 15068), (645, 15149), (646, 15152), (647, 15167), (669, 15338), (674, 15392), (685, 15464), (686, 15473), (690, 15509), (698, 15569), (699, 15587), (703, 15605), (711, 15650), (716, 15683), (730, 15794), (738, 15863), (749, 15926), (753, 15944), (762, 16094),

Gene: Budski_18 Start: 10015, Stop: 15501, Start Num: 37

Candidate Starts for Budski_18:

(Start: 21 @9868 has 9 MA's), (26, 9895), (Start: 27 @9913 has 1 MA's), (29, 9934), (33, 9955), (36, 10000), (Start: 37 @10015 has 1 MA's), (42, 10099), (50, 10141), (51, 10153), (61, 10216), (63,

10231), (65, 10240), (67, 10258), (68, 10264), (78, 10312), (102, 10447), (123, 10597), (127, 10627), (160, 10846), (171, 10921), (176, 10951), (196, 11155), (204, 11197), (205, 11200), (206, 11206), (209, 11227), (220, 11308), (229, 11374), (233, 11401), (235, 11413), (237, 11431), (238, 11443), (244, 11467), (246, 11479), (249, 11518), (250, 11521), (251, 11530), (254, 11560), (258, 11605), (268, 11665), (271, 11680), (274, 11710), (275, 11722), (280, 11767), (281, 11773), (284, 11788), (287, 11818), (289, 11839), (290, 11842), (298, 11905), (302, 11932), (303, 11935), (304, 11938), (305, 11944), (311, 11968), (312, 11971), (314, 11977), (316, 11983), (318, 11998), (321, 12016), (327, 12097), (331, 12145), (332, 12151), (336, 12178), (356, 12337), (357, 12349), (365, 12385), (378, 12445), (382, 12484), (384, 12490), (385, 12493), (391, 12514), (392, 12517), (408, 12616), (415, 12655), (419, 12679), (423, 12712), (426, 12757), (432, 12811), (440, 12898), (441, 12919), (445, 12955), (449, 12985), (460, 13063), (461, 13066), (462, 13075), (465, 13099), (474, 13180), (475, 13186), (479, 13231), (481, 13234), (482, 13249), (490, 13294), (492, 13303), (494, 13312), (495, 13315), (512, 13420), (523, 13468), (525, 13474), (540, 13573), (541, 13576), (543, 13588), (555, 13705), (558, 13738), (564, 13789), (566, 13801), (569, 13819), (574, 13879), (586, 13960), (589, 13981), (591, 14014), (598, 14077), (602, 14095), (620, 14209), (623, 14239), (625, 14248), (628, 14287), (629, 14290), (631, 14320), (634, 14341), (652, 14494), (660, 14545), (666, 14608), (667, 14614), (673, 14665), (692, 14851), (699, 14938), (704, 14965), (705, 14968), (718, 15043), (722, 15067), (725, 15106), (728, 15142), (732, 15163), (741, 15250), (748, 15292), (754, 15325), (755, 15337), (760, 15415), (763, 15481),

Gene: Burnsey_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Burnsey_16:

(Start: 22 @9606 has 5 MA's), (Start: 25 @9630 has 24 MA's), (28, 9657), (40, 9786), (43, 9861), (68, 10014), (69, 10017), (84, 10113), (87, 10122), (93, 10152), (95, 10158), (97, 10173), (98, 10176), (102, 10197), (114, 10290), (125, 10356), (127, 10377), (144, 10494), (170, 10656), (176, 10695), (184, 10770), (200, 10929), (205, 10941), (209, 10968), (214, 11013), (215, 11025), (229, 11115), (232, 11133), (235, 11154), (238, 11184), (244, 11208), (246, 11220), (249, 11259), (253, 11292), (266, 11394), (267, 11397), (271, 11421), (281, 11514), (284, 11529), (288, 11568), (301, 11664), (309, 11703), (310, 11706), (318, 11739), (329, 11847), (330, 11850), (333, 11901), (347, 11976), (356, 12078), (364, 12123), (368, 12144), (369, 12147), (370, 12150), (382, 12225), (392, 12258), (396, 12279), (400, 12309), (408, 12357), (410, 12363), (414, 12390), (434, 12525), (448, 12642), (451, 12675), (453, 12696), (454, 12699), (466, 12765), (467, 12771), (468, 12786), (484, 12906), (486, 12915), (498, 12999), (553, 13320), (581, 13539), (588, 13575), (616, 13788), (651, 13980), (661, 14028), (664, 14049), (680, 14157), (689, 14223), (691, 14241), (697, 14301), (702, 14346), (707, 14376), (708, 14385), (712, 14415), (724, 14481), (727, 14529), (736, 14589), (749, 14676), (758, 14739),

Gene: Button_17 Start: 9644, Stop: 13834, Start Num: 76

Candidate Starts for Button_17:

(Start: 72 @9617 has 22 MA's), (Start: 76 @9644 has 1 MA's), (115, 9890), (125, 9953), (133, 10010), (138, 10037), (142, 10079), (151, 10142), (153, 10157), (156, 10175), (159, 10193), (161, 10205), (165, 10238), (172, 10280), (175, 10295), (189, 10400), (190, 10424), (192, 10463), (199, 10487), (203, 10514), (208, 10544), (211, 10565), (220, 10619), (224, 10634), (242, 10763), (257, 10895), (259, 10904), (264, 10940), (284, 11081), (286, 11102), (290, 11135), (291, 11153), (293, 11171), (301, 11216), (314, 11270), (318, 11291), (326, 11354), (344, 11402), (346, 11414), (349, 11453), (375, 11507), (382, 11534), (384, 11540), (391, 11564), (392, 11567), (401, 11627), (406, 11660), (414, 11699), (416, 11717), (417, 11720), (423, 11762), (424, 11774), (428, 11807), (433, 11831), (437, 11855), (438, 11858), (450, 11972), (451, 11984), (455, 12014), (457, 12023), (459, 12029), (480, 12182), (491, 12242), (493, 12251), (494, 12257), (499, 12293), (535, 12425), (553, 12563), (557, 12587), (582, 12785), (583, 12788), (604, 12950), (607, 12974), (609, 12977), (639, 13079), (650, 13184), (683, 13256), (686, 13280), (688, 13292), (691, 13316), (693, 13328), (701, 13412), (702, 13418), (709, 13460), (712, 13481), (719, 13514), (724, 13547), (726, 13568), (727, 13595), (736, 13655), (739, 13682), (740, 13691), (742, 13703), (758, 13805),

Gene: Buttrmlkdreams_16 Start: 9601, Stop: 14397, Start Num: 72

Candidate Starts for Buttrmlkdreams_16:

(Start: 72 @9601 has 22 MA's), (Start: 76 @9628 has 1 MA's), (78, 9634), (98, 9757), (113, 9859), (118, 9904), (121, 9916), (125, 9934), (128, 9961), (129, 9964), (131, 9979), (140, 10030), (141, 10033), (147, 10090), (148, 10093), (157, 10135), (160, 10153), (166, 10198), (174, 10234), (178, 10267), (182, 10300), (183, 10312), (190, 10366), (193, 10405), (195, 10420), (198, 10429), (201, 10456), (211, 10507), (221, 10567), (224, 10576), (230, 10630), (241, 10693), (244, 10708), (264, 10861), (270, 10888), (278, 10969), (280, 10981), (281, 10987), (284, 11002), (287, 11032), (288, 11041), (298, 11119), (304, 11152), (314, 11191), (317, 11209), (318, 11212), (322, 11239), (325, 11296), (328, 11317), (334, 11380), (342, 11428), (347, 11449), (349, 11485), (353, 11527), (356, 11551), (364, 11596), (365, 11599), (368, 11617), (369, 11620), (370, 11623), (382, 11698), (384, 11704), (392, 11731), (401, 11791), (412, 11857), (413, 11860), (414, 11863), (416, 11881), (430, 11980), (433, 11995), (434, 11998), (451, 12148), (453, 12169), (462, 12211), (466, 12238), (467, 12244), (486, 12388), (498, 12475), (505, 12517), (512, 12553), (529, 12628), (538, 12679), (544, 12718), (559, 12847), (567, 12904), (585, 13042), (592, 13117), (613, 13261), (616, 13282), (640, 13456), (642, 13462), (680, 13786), (682, 13792), (689, 13852), (694, 13903), (702, 13975), (708, 14014), (712, 14044), (724, 14110), (727, 14158), (736, 14218), (750, 14308), (758, 14368),

Gene: CaptainKirk2_17 Start: 10277, Stop: 15820, Start Num: 8

Candidate Starts for CaptainKirk2_17:

(Start: 8 @10277 has 36 MA's), (Start: 11 @10292 has 1 MA's), (Start: 12 @10298 has 1 MA's), (Start: 14 @10328 has 1 MA's), (15, 10337), (16, 10340), (18, 10382), (34, 10493), (35, 10514), (59, 10742), (61, 10760), (63, 10775), (64, 10781), (65, 10784), (67, 10802), (73, 10826), (85, 10910), (86, 10913), (95, 10952), (97, 10967), (99, 10976), (124, 11144), (127, 11171), (176, 11489), (196, 11693), (205, 11738), (206, 11744), (209, 11765), (210, 11777), (225, 11867), (229, 11912), (233, 11939), (237, 11969), (249, 12056), (250, 12059), (254, 12098), (271, 12218), (275, 12260), (280, 12305), (281, 12311), (284, 12326), (290, 12380), (294, 12419), (297, 12440), (298, 12443), (301, 12461), (302, 12470), (312, 12509), (314, 12515), (318, 12536), (322, 12563), (346, 12770), (359, 12836), (371, 12875), (377, 12890), (391, 12920), (392, 12923), (400, 12974), (413, 13055), (414, 13058), (420, 13091), (423, 13121), (425, 13145), (469, 13478), (475, 13526), (479, 13571), (481, 13574), (482, 13589), (490, 13634), (492, 13643), (494, 13652), (501, 13703), (514, 13775), (520, 13793), (525, 13814), (540, 13913), (541, 13916), (545, 13949), (550, 14015), (552, 14033), (555, 14048), (558, 14081), (564, 14132), (570, 14183), (576, 14231), (596, 14426), (597, 14429), (610, 14501), (611, 14504), (619, 14570), (620, 14573), (622, 14591), (627, 14651), (634, 14708), (637, 14726), (645, 14807), (646, 14810), (647, 14825), (669, 14984), (674, 15038), (681, 15104), (687, 15158), (688, 15170), (689, 15176), (702, 15299), (706, 15323), (709, 15341), (712, 15365), (713, 15371), (717, 15392), (724, 15431), (738, 15572), (740, 15584), (749, 15635), (753, 15653), (762, 15803),

Gene: CarolAnn_17 Start: 10172, Stop: 15763, Start Num: 8

Candidate Starts for CarolAnn_17:

(Start: 8 @10172 has 36 MA's), (Start: 11 @10187 has 1 MA's), (Start: 14 @10223 has 1 MA's), (15, 10232), (16, 10235), (18, 10277), (34, 10388), (35, 10409), (41, 10529), (59, 10637), (61, 10655), (64, 10676), (65, 10679), (67, 10697), (87, 10811), (95, 10847), (97, 10862), (99, 10871), (124, 11039), (127, 11066), (144, 11183), (171, 11354), (176, 11384), (196, 11588), (205, 11633), (229, 11807), (233, 11834), (237, 11864), (241, 11885), (249, 11951), (250, 11954), (254, 11993), (260, 12056), (271, 12113), (275, 12155), (280, 12200), (281, 12206), (283, 12218), (284, 12221), (290, 12275), (294, 12314), (297, 12335), (298, 12338), (301, 12356), (307, 12383), (312, 12404), (314, 12410), (318, 12431), (322, 12458), (324, 12506), (328, 12536), (350, 12692), (351, 12716), (353, 12725), (355, 12746), (372, 12827), (391, 12923), (392, 12926), (393, 12932), (399, 12974), (400, 12977), (403, 12998), (413, 13058), (414, 13061), (420, 13094), (423, 13124), (436, 13214), (469, 13481), (475, 13529), (479, 13574), (481, 13577), (482, 13592), (490, 13637), (492, 13646), (494, 13655), (501, 13706), (514, 13778), (520, 13796), (525, 13817), (540, 13916), (541, 13919), (545, 13952),

(550, 14018), (552, 14036), (555, 14051), (558, 14084), (564, 14135), (570, 14186), (576, 14234), (596, 14429), (597, 14432), (610, 14504), (611, 14507), (619, 14573), (620, 14576), (622, 14594), (627, 14654), (637, 14729), (646, 14813), (647, 14828), (674, 15041), (683, 15098), (685, 15113), (690, 15161), (695, 15206), (714, 15326), (716, 15335), (723, 15374), (730, 15446), (738, 15515), (749, 15578), (753, 15596), (759, 15653), (762, 15746),

Gene: CheeseTouch_18 Start: 9868, Stop: 15501, Start Num: 21

Candidate Starts for CheeseTouch_18:

(Start: 21 @9868 has 9 MA's), (Start: 27 @9913 has 1 MA's), (29, 9934), (33, 9955), (36, 10000), (Start: 37 @10015 has 1 MA's), (42, 10099), (50, 10141), (51, 10153), (61, 10216), (63, 10231), (65, 10240), (67, 10258), (68, 10264), (78, 10312), (102, 10447), (123, 10597), (127, 10627), (171, 10921), (176, 10951), (193, 11134), (196, 11155), (205, 11200), (206, 11206), (209, 11227), (220, 11308), (229, 11374), (233, 11401), (235, 11413), (237, 11431), (238, 11443), (244, 11467), (246, 11479), (249, 11518), (251, 11530), (254, 11560), (258, 11605), (268, 11665), (271, 11680), (274, 11710), (275, 11722), (280, 11767), (281, 11773), (283, 11785), (284, 11788), (286, 11809), (289, 11839), (290, 11842), (298, 11905), (302, 11932), (303, 11935), (304, 11938), (305, 11944), (311, 11968), (312, 11971), (314, 11977), (316, 11983), (318, 11998), (321, 12016), (327, 12097), (331, 12145), (332, 12151), (336, 12178), (356, 12337), (357, 12349), (365, 12385), (366, 12391), (376, 12433), (378, 12445), (382, 12484), (384, 12490), (385, 12493), (390, 12511), (391, 12514), (392, 12517), (397, 12541), (408, 12616), (415, 12655), (419, 12679), (423, 12712), (433, 12823), (436, 12856), (441, 12919), (445, 12955), (449, 12985), (460, 13063), (461, 13066), (462, 13075), (465, 13099), (475, 13186), (479, 13231), (481, 13234), (482, 13249), (490, 13294), (492, 13303), (494, 13312), (495, 13315), (512, 13420), (523, 13468), (525, 13474), (540, 13573), (541, 13576), (543, 13588), (555, 13705), (558, 13738), (564, 13789), (569, 13819), (574, 13879), (586, 13960), (589, 13981), (590, 13984), (591, 14014), (598, 14077), (600, 14086), (602, 14095), (620, 14209), (623, 14239), (628, 14287), (629, 14290), (631, 14320), (634, 14341), (660, 14539), (666, 14602), (667, 14608), (673, 14659), (692, 14851), (699, 14938), (704, 14965), (705, 14968), (718, 15043), (722, 15067), (725, 15106), (728, 15142), (732, 15163), (741, 15250), (748, 15292), (754, 15325), (755, 15337), (760, 15415), (763, 15481),

Gene: CherryonLim_17 Start: 10133, Stop: 15220, Start Num: 25

Candidate Starts for CherryonLim_17:

(Start: 25 @10133 has 24 MA's), (40, 10289), (54, 10418), (64, 10490), (68, 10517), (78, 10565), (80, 10574), (84, 10616), (86, 10622), (87, 10625), (95, 10661), (99, 10685), (103, 10712), (116, 10799), (120, 10838), (122, 10844), (125, 10859), (127, 10880), (136, 10934), (154, 11051), (163, 11114), (170, 11159), (180, 11240), (196, 11402), (199, 11411), (200, 11435), (205, 11447), (209, 11474), (210, 11486), (215, 11531), (221, 11561), (224, 11573), (236, 11675), (237, 11678), (249, 11765), (252, 11792), (262, 11882), (267, 11903), (271, 11927), (277, 11978), (281, 12020), (284, 12035), (285, 12044), (286, 12056), (290, 12089), (295, 12131), (305, 12191), (306, 12194), (307, 12197), (308, 12203), (313, 12221), (318, 12245), (323, 12308), (325, 12329), (328, 12350), (335, 12398), (339, 12428), (345, 12455), (346, 12458), (353, 12539), (354, 12551), (356, 12563), (358, 12578), (364, 12608), (368, 12629), (369, 12632), (380, 12692), (383, 12713), (390, 12737), (392, 12743), (405, 12827), (412, 12869), (418, 12899), (423, 12938), (429, 12986), (433, 13007), (434, 13010), (435, 13016), (442, 13082), (448, 13127), (451, 13160), (453, 13181), (463, 13235), (484, 13385), (486, 13394), (498, 13481), (534, 13658), (553, 13799), (558, 13829), (575, 13967), (588, 14048), (609, 14201), (613, 14231), (648, 14441), (651, 14450), (653, 14456), (661, 14492), (680, 14609), (682, 14615), (686, 14657), (689, 14675), (702, 14798), (706, 14822), (708, 14837), (712, 14867), (717, 14894), (719, 14900), (724, 14933), (731, 15002), (733, 15005), (736, 15041), (746, 15113), (750, 15131),

Gene: Cleo_16 Start: 9909, Stop: 15023, Start Num: 25

Candidate Starts for Cleo_16:

(Start: 22 @9888 has 5 MA's), (Start: 25 @9909 has 24 MA's), (28, 9936), (40, 10065), (45, 10149), (48, 10161), (56, 10212), (62, 10245), (66, 10269), (70, 10302), (84, 10392), (97, 10452), (98, 10455), (106, 10521), (112, 10557), (114, 10569), (123, 10626), (125, 10635), (127, 10656), (177, 10995), (185, 11052), (193, 11154), (205, 11220), (206, 11226), (209, 11247), (229, 11394), (237, 11451), (239, 11469), (243, 11484), (246, 11499), (249, 11538), (260, 11643), (264, 11667), (266, 11673), (279, 11784), (281, 11793), (284, 11808), (288, 11847), (301, 11943), (307, 11970), (308, 11976), (309, 11982), (317, 12015), (318, 12018), (329, 12126), (331, 12165), (336, 12198), (340, 12228), (341, 12231), (346, 12252), (347, 12255), (356, 12357), (364, 12402), (369, 12426), (370, 12429), (390, 12531), (391, 12534), (392, 12537), (400, 12588), (408, 12636), (410, 12642), (416, 12687), (434, 12804), (435, 12810), (441, 12867), (448, 12921), (450, 12942), (451, 12954), (453, 12975), (454, 12978), (466, 13044), (467, 13050), (484, 13185), (496, 13251), (498, 13278), (512, 13356), (553, 13596), (558, 13626), (580, 13800), (584, 13830), (588, 13851), (599, 13959), (606, 13995), (613, 14043), (661, 14280), (679, 14391), (680, 14409), (689, 14475), (694, 14526), (702, 14598), (707, 14628), (708, 14637), (709, 14640), (712, 14667), (717, 14694), (724, 14733), (727, 14781), (736, 14841), (740, 14877), (749, 14931),

Gene: Cozz_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Cozz_16:

(Start: 22 @9606 has 5 MA's), (Start: 25 @9630 has 24 MA's), (28, 9657), (40, 9786), (43, 9861), (68, 10014), (69, 10017), (84, 10113), (87, 10122), (93, 10152), (95, 10158), (97, 10173), (98, 10176), (102, 10197), (111, 10269), (114, 10290), (125, 10356), (127, 10377), (144, 10494), (170, 10656), (176, 10695), (184, 10770), (200, 10929), (205, 10941), (209, 10968), (214, 11013), (215, 11025), (229, 11115), (232, 11133), (235, 11154), (238, 11184), (244, 11208), (246, 11220), (249, 11259), (253, 11292), (266, 11394), (267, 11397), (271, 11421), (281, 11514), (284, 11529), (288, 11568), (301, 11664), (309, 11703), (310, 11706), (318, 11739), (329, 11847), (330, 11850), (333, 11901), (347, 11976), (356, 12078), (364, 12123), (368, 12144), (369, 12147), (370, 12150), (382, 12225), (392, 12258), (396, 12279), (408, 12357), (410, 12363), (414, 12390), (434, 12525), (448, 12642), (451, 12675), (453, 12696), (466, 12765), (467, 12771), (468, 12786), (484, 12906), (486, 12915), (498, 12999), (553, 13320), (581, 13539), (588, 13575), (616, 13788), (651, 13980), (661, 14028), (664, 14049), (680, 14157), (689, 14223), (691, 14241), (697, 14301), (702, 14346), (707, 14376), (708, 14385), (712, 14415), (724, 14481), (727, 14529), (736, 14589), (749, 14676), (758, 14739),

Gene: Delian_17 Start: 10277, Stop: 15820, Start Num: 8

Candidate Starts for Delian_17:

(Start: 8 @10277 has 36 MA's), (Start: 11 @10292 has 1 MA's), (Start: 12 @10298 has 1 MA's), (Start: 14 @10328 has 1 MA's), (15, 10337), (16, 10340), (18, 10382), (34, 10493), (35, 10514), (59, 10742), (61, 10760), (63, 10775), (64, 10781), (65, 10784), (67, 10802), (73, 10826), (85, 10910), (86, 10913), (95, 10952), (97, 10967), (99, 10976), (124, 11144), (127, 11171), (176, 11489), (196, 11693), (205, 11738), (206, 11744), (209, 11765), (210, 11777), (225, 11867), (229, 11912), (233, 11939), (237, 11969), (249, 12056), (250, 12059), (254, 12098), (271, 12218), (275, 12260), (280, 12305), (281, 12311), (284, 12326), (290, 12380), (294, 12419), (297, 12440), (298, 12443), (301, 12461), (302, 12470), (312, 12509), (314, 12515), (318, 12536), (322, 12563), (346, 12770), (359, 12836), (371, 12875), (377, 12890), (391, 12920), (392, 12923), (400, 12974), (413, 13055), (414, 13058), (420, 13091), (423, 13121), (425, 13145), (469, 13478), (475, 13526), (479, 13571), (481, 13574), (482, 13589), (490, 13634), (492, 13643), (494, 13652), (501, 13703), (514, 13775), (520, 13793), (525, 13814), (540, 13913), (541, 13916), (545, 13949), (550, 14015), (552, 14033), (555, 14048), (558, 14081), (564, 14132), (570, 14183), (576, 14231), (596, 14426), (597, 14429), (610, 14501), (611, 14504), (619, 14570), (620, 14573), (622, 14591), (627, 14651), (634, 14708), (637, 14726), (645, 14807), (646, 14810), (647, 14825), (669, 14984), (674, 15038), (681, 15104), (687, 15158), (688, 15170), (689, 15176), (702, 15299), (706, 15323), (709, 15341), (712, 15365), (713, 15371), (717, 15392), (724, 15431), (738, 15572), (740, 15584), (749, 15635), (753, 15653), (762, 15803),

Gene: Dre3_16 Start: 9856, Stop: 14970, Start Num: 25

Candidate Starts for Dre3_16:

(Start: 22 @9835 has 5 MA's), (Start: 25 @9856 has 24 MA's), (28, 9883), (40, 10012), (45, 10096), (48, 10108), (56, 10159), (62, 10192), (66, 10216), (70, 10249), (84, 10339), (97, 10399), (98, 10402), (106, 10468), (112, 10504), (114, 10516), (123, 10573), (125, 10582), (127, 10603), (177, 10942), (185, 10999), (193, 11101), (205, 11167), (206, 11173), (209, 11194), (229, 11341), (237, 11398), (239, 11416), (243, 11431), (246, 11446), (249, 11485), (260, 11590), (264, 11614), (266, 11620), (279, 11731), (281, 11740), (284, 11755), (288, 11794), (301, 11890), (307, 11917), (308, 11923), (309, 11929), (317, 11962), (318, 11965), (329, 12073), (331, 12112), (336, 12145), (340, 12175), (341, 12178), (346, 12199), (347, 12202), (356, 12304), (364, 12349), (369, 12373), (370, 12376), (383, 12454), (390, 12478), (391, 12481), (392, 12484), (400, 12535), (408, 12583), (410, 12589), (416, 12634), (434, 12751), (435, 12757), (441, 12814), (448, 12868), (450, 12889), (451, 12901), (453, 12922), (454, 12925), (466, 12991), (467, 12997), (484, 13132), (496, 13198), (498, 13225), (512, 13303), (553, 13543), (558, 13573), (580, 13747), (584, 13777), (588, 13798), (599, 13906), (613, 13990), (661, 14227), (679, 14338), (680, 14356), (689, 14422), (694, 14473), (702, 14545), (708, 14584), (709, 14587), (712, 14614), (717, 14641), (724, 14680), (727, 14728), (736, 14788), (740, 14824), (749, 14878),

Gene: Elinal_17 Start: 9384, Stop: 14468, Start Num: 25

Candidate Starts for Elinal_17:

(Start: 25 @9384 has 24 MA's), (40, 9540), (54, 9669), (58, 9699), (68, 9768), (71, 9780), (80, 9825), (84, 9867), (87, 9876), (95, 9912), (99, 9936), (116, 10050), (120, 10089), (122, 10095), (123, 10101), (125, 10110), (127, 10131), (154, 10302), (163, 10365), (170, 10410), (180, 10491), (196, 10650), (200, 10683), (205, 10695), (209, 10722), (215, 10779), (221, 10809), (224, 10821), (236, 10923), (237, 10926), (249, 11013), (256, 11061), (271, 11175), (281, 11268), (284, 11283), (286, 11304), (290, 11337), (292, 11367), (295, 11379), (301, 11418), (306, 11442), (307, 11445), (313, 11469), (318, 11493), (328, 11598), (335, 11646), (339, 11676), (343, 11691), (346, 11706), (349, 11745), (353, 11787), (354, 11799), (356, 11811), (358, 11826), (360, 11841), (364, 11856), (369, 11880), (378, 11919), (379, 11934), (380, 11940), (383, 11961), (390, 11985), (392, 11991), (412, 12117), (418, 12147), (424, 12198), (429, 12234), (433, 12255), (434, 12258), (442, 12330), (448, 12375), (451, 12408), (453, 12429), (463, 12483), (473, 12558), (486, 12642), (498, 12729), (536, 12915), (553, 13047), (558, 13077), (575, 13215), (583, 13266), (588, 13296), (609, 13452), (613, 13482), (644, 13662), (653, 13713), (661, 13740), (664, 13761), (680, 13857), (686, 13905), (689, 13923), (702, 14046), (706, 14070), (708, 14085), (712, 14115), (717, 14142), (719, 14148), (724, 14181), (731, 14250), (733, 14253), (736, 14289), (750, 14379),

Gene: Elliott_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Elliott_16:

(Start: 22 @9605 has 5 MA's), (Start: 25 @9629 has 24 MA's), (28, 9656), (40, 9785), (43, 9860), (68, 10013), (69, 10016), (84, 10112), (87, 10121), (93, 10151), (95, 10157), (97, 10172), (98, 10175), (102, 10196), (111, 10268), (114, 10289), (125, 10355), (127, 10376), (144, 10493), (170, 10655), (176, 10694), (184, 10769), (200, 10928), (205, 10940), (209, 10967), (214, 11012), (215, 11024), (229, 11114), (232, 11132), (235, 11153), (238, 11183), (244, 11207), (246, 11219), (249, 11258), (253, 11291), (266, 11393), (267, 11396), (271, 11420), (281, 11513), (284, 11528), (288, 11567), (309, 11702), (310, 11705), (318, 11738), (329, 11846), (330, 11849), (333, 11900), (347, 11975), (356, 12077), (364, 12122), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (396, 12278), (400, 12308), (408, 12356), (410, 12362), (414, 12389), (434, 12524), (448, 12641), (451, 12674), (453, 12695), (466, 12764), (467, 12770), (468, 12785), (484, 12905), (486, 12914), (498, 12998), (553, 13319), (581, 13538), (588, 13574), (616, 13787), (651, 13979), (661, 14027), (664, 14048), (680, 14156), (689, 14222), (691, 14240), (702, 14345), (707, 14375), (708, 14384), (712, 14414), (724, 14480), (727, 14528), (736, 14588), (749, 14675), (758, 14738),

Gene: Emalyn_15 Start: 9356, Stop: 14068, Start Num: 72

Candidate Starts for Emalyn_15:

(Start: 72 @9356 has 22 MA's), (98, 9512), (110, 9599), (113, 9614), (118, 9659), (121, 9671), (125, 9689), (128, 9716), (141, 9788), (145, 9830), (147, 9845), (148, 9848), (155, 9872), (157, 9890), (160, 9908), (163, 9929), (166, 9953), (168, 9962), (174, 9989), (178, 10022), (179, 10031), (190, 10121), (193, 10160), (195, 10175), (209, 10244), (213, 10271), (228, 10367), (230, 10385), (241, 10448), (264, 10616), (266, 10622), (280, 10736), (281, 10742), (284, 10757), (314, 10946), (318, 10967), (321, 10985), (322, 10994), (333, 11129), (347, 11204), (349, 11240), (352, 11279), (353, 11282), (356, 11306), (360, 11336), (364, 11351), (369, 11375), (378, 11414), (382, 11453), (384, 11459), (414, 11618), (447, 11867), (448, 11870), (451, 11903), (453, 11924), (466, 11993), (467, 11999), (498, 12230), (526, 12365), (553, 12557), (561, 12626), (565, 12650), (585, 12791), (613, 13004), (616, 13025), (624, 13079), (671, 13382), (679, 13439), (680, 13457), (689, 13523), (696, 13595), (702, 13646), (706, 13670), (707, 13676), (708, 13685), (712, 13715), (724, 13781), (727, 13829), (736, 13889), (750, 13979), (758, 14039),

Gene: Fairfaxidum_17 Start: 10343, Stop: 15964, Start Num: 8

Candidate Starts for Fairfaxidum_17:

(Start: 7 @10307 has 1 MA's), (Start: 8 @10343 has 36 MA's), (Start: 12 @10364 has 1 MA's), (13, 10382), (16, 10406), (18, 10448), (32, 10547), (34, 10559), (35, 10580), (38, 10637), (42, 10709), (45, 10730), (50, 10751), (53, 10772), (54, 10775), (60, 10823), (61, 10826), (65, 10850), (67, 10868), (78, 10922), (87, 10982), (95, 11018), (96, 11024), (127, 11237), (156, 11423), (171, 11525), (173, 11540), (176, 11555), (181, 11612), (205, 11804), (223, 11924), (233, 12005), (237, 12035), (244, 12071), (249, 12122), (254, 12164), (271, 12284), (277, 12335), (280, 12371), (281, 12377), (284, 12392), (290, 12446), (294, 12485), (298, 12509), (301, 12527), (308, 12560), (312, 12575), (314, 12581), (317, 12599), (318, 12602), (322, 12629), (323, 12665), (353, 12896), (357, 12932), (358, 12935), (365, 12968), (383, 13070), (392, 13103), (402, 13166), (408, 13202), (414, 13238), (418, 13262), (421, 13289), (433, 13370), (441, 13436), (444, 13454), (456, 13559), (462, 13592), (469, 13658), (470, 13667), (475, 13706), (477, 13739), (479, 13751), (481, 13754), (482, 13769), (485, 13778), (490, 13814), (492, 13823), (494, 13832), (510, 13928), (523, 13988), (524, 13991), (525, 13994), (527, 14015), (541, 14096), (546, 14138), (555, 14225), (558, 14258), (560, 14267), (564, 14309), (579, 14423), (596, 14597), (610, 14672), (611, 14675), (614, 14705), (615, 14708), (618, 14732), (619, 14741), (620, 14744), (627, 14822), (634, 14879), (647, 14996), (654, 15047), (674, 15185), (681, 15251), (688, 15317), (689, 15323), (691, 15341), (700, 15434), (702, 15446), (710, 15494), (712, 15512), (713, 15518), (717, 15539), (724, 15578), (738, 15719), (749, 15782), (759, 15857), (762, 15950),

Gene: Feastonyeet_15 Start: 9403, Stop: 14511, Start Num: 25

Candidate Starts for Feastonyeet_15:

(Start: 25 @9403 has 24 MA's), (40, 9559), (54, 9688), (58, 9718), (68, 9787), (71, 9799), (78, 9835), (84, 9886), (87, 9895), (95, 9931), (99, 9955), (106, 10015), (116, 10069), (120, 10108), (122, 10114), (125, 10129), (127, 10150), (154, 10321), (163, 10384), (170, 10429), (180, 10510), (196, 10669), (200, 10702), (205, 10714), (209, 10741), (215, 10798), (221, 10828), (224, 10840), (236, 10942), (237, 10945), (249, 11032), (256, 11080), (271, 11194), (281, 11287), (284, 11302), (286, 11323), (290, 11356), (292, 11386), (295, 11398), (301, 11437), (306, 11461), (307, 11464), (313, 11488), (318, 11512), (328, 11617), (339, 11695), (346, 11725), (347, 11728), (349, 11764), (353, 11806), (356, 11830), (358, 11845), (360, 11860), (364, 11875), (369, 11899), (378, 11938), (379, 11953), (380, 11959), (390, 12004), (392, 12010), (412, 12136), (418, 12166), (422, 12202), (423, 12205), (429, 12253), (433, 12274), (434, 12277), (442, 12349), (448, 12394), (451, 12427), (453, 12448), (463, 12502), (473, 12577), (486, 12661), (498, 12748), (553, 13066), (558, 13096), (575, 13234), (583, 13285), (588, 13315), (609, 13480), (613, 13510), (644, 13690), (653, 13741), (661, 13783), (664, 13804), (680, 13900), (686, 13948), (689, 13966), (702, 14089), (706, 14113), (708, 14128), (712, 14158), (717, 14185), (719, 14191), (724, 14224), (731, 14293), (733, 14296), (736, 14332), (750, 14422),

Gene: Fenry_16 Start: 10023, Stop: 15515, Start Num: 8

Candidate Starts for Ferry_16:

(Start: 8 @10023 has 36 MA's), (Start: 11 @10038 has 1 MA's), (Start: 12 @10044 has 1 MA's), (Start: 14 @10074 has 1 MA's), (15, 10083), (16, 10086), (18, 10128), (34, 10239), (35, 10260), (41, 10380), (59, 10488), (61, 10506), (63, 10521), (64, 10527), (65, 10530), (67, 10548), (73, 10572), (85, 10656), (87, 10662), (95, 10698), (97, 10713), (99, 10722), (124, 10890), (127, 10917), (160, 11130), (176, 11235), (196, 11439), (205, 11484), (209, 11511), (210, 11523), (225, 11613), (229, 11658), (233, 11685), (237, 11715), (249, 11802), (250, 11805), (254, 11844), (271, 11964), (275, 12006), (280, 12051), (281, 12057), (283, 12069), (284, 12072), (290, 12126), (294, 12165), (297, 12186), (298, 12189), (301, 12207), (312, 12255), (314, 12261), (318, 12282), (322, 12309), (327, 12381), (346, 12516), (361, 12588), (363, 12597), (367, 12609), (371, 12621), (377, 12636), (391, 12666), (392, 12669), (400, 12720), (413, 12801), (414, 12804), (420, 12837), (423, 12867), (425, 12891), (436, 12957), (464, 13173), (469, 13224), (475, 13272), (479, 13317), (481, 13320), (482, 13335), (490, 13380), (492, 13389), (494, 13398), (501, 13449), (514, 13521), (520, 13539), (525, 13560), (540, 13659), (541, 13662), (545, 13695), (550, 13761), (552, 13779), (555, 13794), (558, 13827), (564, 13878), (570, 13929), (596, 14172), (597, 14175), (610, 14247), (611, 14250), (619, 14316), (620, 14319), (622, 14337), (627, 14397), (645, 14553), (646, 14556), (647, 14571), (669, 14742), (674, 14796), (683, 14853), (685, 14868), (690, 14916), (695, 14961), (714, 15081), (716, 15090), (723, 15129), (730, 15201), (738, 15270), (740, 15282), (749, 15333), (753, 15351), (762, 15501),

Gene: Fribs8_17 Start: 10424, Stop: 15559, Start Num: 25

Candidate Starts for Fribs8_17:

(Start: 25 @10424 has 24 MA's), (28, 10451), (40, 10580), (48, 10676), (56, 10727), (62, 10760), (66, 10784), (70, 10817), (84, 10907), (97, 10967), (98, 10970), (105, 11030), (106, 11036), (114, 11084), (125, 11150), (127, 11171), (135, 11207), (185, 11567), (193, 11669), (200, 11723), (202, 11726), (205, 11735), (206, 11741), (209, 11762), (229, 11909), (237, 11966), (239, 11984), (244, 12002), (246, 12014), (249, 12053), (256, 12101), (260, 12158), (264, 12182), (266, 12188), (279, 12299), (281, 12308), (284, 12323), (288, 12362), (297, 12437), (307, 12485), (308, 12491), (318, 12533), (329, 12641), (331, 12680), (336, 12713), (356, 12872), (364, 12917), (369, 12941), (383, 13022), (390, 13046), (391, 13049), (392, 13052), (395, 13070), (400, 13103), (406, 13145), (414, 13184), (421, 13235), (434, 13319), (435, 13325), (441, 13382), (443, 13394), (448, 13436), (450, 13457), (451, 13469), (453, 13490), (454, 13493), (466, 13559), (468, 13580), (484, 13700), (496, 13766), (498, 13793), (506, 13838), (510, 13859), (513, 13880), (553, 14123), (558, 14153), (561, 14192), (580, 14327), (584, 14357), (588, 14378), (613, 14570), (651, 14783), (656, 14801), (661, 14816), (679, 14927), (680, 14945), (689, 15011), (694, 15062), (700, 15122), (702, 15134), (708, 15173), (709, 15176), (712, 15203), (719, 15236), (724, 15269), (749, 15467), (751, 15473), (758, 15530),

Gene: Frickyeah_18 Start: 9926, Stop: 15508, Start Num: 27

Candidate Starts for Frickyeah_18:

(Start: 21 @9881 has 9 MA's), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964), (188, 11060), (196, 11168), (205, 11213), (206, 11219), (209, 11240), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (258, 11618), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (366, 12404), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506), (390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (415, 12668), (419, 12692), (423, 12725), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (465, 13112), (474, 13193), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (524, 13484), (525, 13487),

(540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (591, 14027), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (625, 14261), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14858), (699, 14945), (704, 14972), (705, 14975), (718, 15050), (722, 15074), (725, 15113), (728, 15149), (732, 15170), (741, 15257), (748, 15299), (754, 15332), (755, 15344), (760, 15422), (763, 15488),

Gene: Frokostdame_17 Start: 10288, Stop: 15762, Start Num: 11

Candidate Starts for Frokostdame_17:

(Start: 8 @10273 has 36 MA's), (10, 10285), (Start: 11 @10288 has 1 MA's), (Start: 12 @10294 has 1 MA's), (Start: 14 @10324 has 1 MA's), (15, 10333), (18, 10378), (34, 10489), (35, 10510), (41, 10630), (48, 10672), (59, 10738), (61, 10756), (64, 10777), (65, 10780), (67, 10798), (73, 10822), (85, 10906), (95, 10948), (97, 10963), (99, 10972), (124, 11140), (127, 11167), (144, 11284), (154, 11338), (160, 11380), (176, 11485), (196, 11689), (205, 11734), (206, 11740), (209, 11761), (210, 11773), (225, 11863), (229, 11908), (233, 11935), (237, 11965), (249, 12052), (250, 12055), (254, 12094), (260, 12157), (261, 12166), (271, 12214), (275, 12256), (281, 12307), (284, 12322), (290, 12376), (294, 12415), (297, 12436), (298, 12439), (301, 12457), (307, 12484), (312, 12505), (314, 12511), (318, 12532), (321, 12550), (322, 12559), (359, 12832), (367, 12859), (371, 12871), (377, 12886), (391, 12916), (392, 12919), (400, 12970), (406, 13012), (413, 13051), (414, 13054), (420, 13087), (423, 13117), (425, 13141), (436, 13207), (469, 13474), (475, 13522), (477, 13555), (479, 13567), (481, 13570), (482, 13585), (490, 13630), (492, 13639), (494, 13648), (501, 13699), (514, 13771), (520, 13789), (525, 13810), (540, 13909), (541, 13912), (545, 13945), (550, 14011), (552, 14029), (555, 14044), (558, 14077), (564, 14128), (570, 14179), (596, 14422), (597, 14425), (610, 14497), (611, 14500), (619, 14566), (620, 14569), (622, 14587), (627, 14647), (634, 14704), (637, 14722), (645, 14803), (646, 14806), (647, 14821), (669, 14992), (674, 15046), (685, 15118), (686, 15127), (690, 15163), (698, 15223), (699, 15241), (703, 15259), (711, 15304), (716, 15337), (730, 15448), (738, 15517), (749, 15580), (753, 15598), (762, 15748),

Gene: GTE2_14 Start: 9463, Stop: 14106, Start Num: 98

Candidate Starts for GTE2_14:

(Start: 72 @9307 has 22 MA's), (Start: 76 @9334 has 1 MA's), (89, 9412), (98, 9463), (110, 9550), (113, 9565), (121, 9622), (125, 9640), (128, 9667), (129, 9670), (141, 9739), (147, 9796), (157, 9841), (160, 9859), (166, 9904), (174, 9940), (178, 9973), (185, 10021), (186, 10024), (190, 10072), (193, 10111), (195, 10126), (228, 10318), (230, 10336), (245, 10420), (264, 10567), (270, 10594), (280, 10687), (281, 10693), (284, 10708), (288, 10747), (298, 10825), (314, 10897), (317, 10915), (318, 10918), (333, 11080), (347, 11155), (349, 11191), (356, 11257), (364, 11302), (368, 11323), (369, 11326), (370, 11329), (378, 11365), (382, 11404), (384, 11410), (390, 11431), (392, 11437), (401, 11497), (413, 11566), (414, 11569), (416, 11587), (435, 11710), (437, 11725), (451, 11854), (453, 11875), (461, 11908), (466, 11944), (467, 11950), (483, 12082), (486, 12094), (498, 12181), (529, 12334), (538, 12385), (544, 12424), (559, 12553), (567, 12610), (573, 12655), (585, 12748), (592, 12823), (601, 12886), (613, 12967), (616, 12988), (640, 13174), (642, 13180), (668, 13399), (679, 13477), (680, 13495), (682, 13501), (689, 13561), (691, 13579), (694, 13612), (702, 13684), (708, 13723), (712, 13753), (724, 13819), (727, 13867), (736, 13927), (750, 14017), (758, 14077),

Gene: Gambino_19 Start: 10619, Stop: 16108, Start Num: 8

Candidate Starts for Gambino_19:

(Start: 8 @10619 has 36 MA's), (Start: 11 @10634 has 1 MA's), (Start: 12 @10640 has 1 MA's), (Start: 14 @10670 has 1 MA's), (15, 10679), (16, 10682), (18, 10724), (34, 10835), (35, 10856), (41, 10976), (48, 11018), (59, 11084), (61, 11102), (64, 11123), (65, 11126), (67, 11144), (73, 11168), (85, 11252), (95, 11294), (97, 11309), (99, 11318), (124, 11486), (127, 11513), (144, 11630), (171, 11801), (176, 11831), (196, 12035), (205, 12080), (209, 12107), (210, 12119), (212, 12131), (225, 12209), (229, 12254), (233, 12281), (237, 12311), (249, 12398), (250, 12401), (254, 12440), (260, 12503), (261, 12512), (271, 12560), (275, 12602), (280, 12647), (281, 12653), (284, 12668), (290, 12722), (294,

12761), (297, 12782), (298, 12785), (301, 12803), (307, 12830), (312, 12851), (314, 12857), (318, 12878), (321, 12896), (322, 12905), (359, 13178), (377, 13232), (391, 13262), (392, 13265), (400, 13316), (413, 13397), (414, 13400), (420, 13433), (423, 13463), (425, 13487), (436, 13553), (469, 13820), (475, 13868), (477, 13901), (479, 13913), (481, 13916), (490, 13976), (492, 13985), (494, 13994), (501, 14045), (514, 14117), (520, 14135), (525, 14156), (540, 14255), (541, 14258), (545, 14291), (550, 14357), (552, 14375), (555, 14390), (558, 14423), (564, 14474), (570, 14525), (579, 14594), (596, 14768), (597, 14771), (610, 14843), (611, 14846), (619, 14912), (620, 14915), (622, 14933), (627, 14993), (634, 15050), (637, 15068), (645, 15149), (646, 15152), (647, 15167), (669, 15338), (674, 15392), (685, 15464), (686, 15473), (690, 15509), (698, 15569), (699, 15587), (703, 15605), (711, 15650), (716, 15683), (730, 15794), (738, 15863), (749, 15926), (753, 15944), (762, 16094),

Gene: Getalong_19 Start: 10672, Stop: 16305, Start Num: 22

Candidate Starts for Getalong_19:

(Start: 22 @10672 has 5 MA's), (Start: 27 @10717 has 1 MA's), (29, 10738), (33, 10759), (36, 10804), (Start: 37 @10819 has 1 MA's), (42, 10903), (50, 10945), (51, 10957), (61, 11020), (63, 11035), (65, 11044), (67, 11062), (68, 11068), (78, 11116), (102, 11251), (123, 11401), (127, 11431), (160, 11650), (171, 11725), (176, 11755), (196, 11959), (205, 12004), (206, 12010), (209, 12031), (212, 12055), (220, 12112), (229, 12178), (233, 12205), (235, 12217), (237, 12235), (238, 12247), (244, 12271), (246, 12283), (249, 12322), (250, 12325), (251, 12334), (254, 12364), (258, 12409), (268, 12469), (271, 12484), (274, 12514), (275, 12526), (280, 12571), (281, 12577), (284, 12592), (287, 12622), (289, 12643), (290, 12646), (298, 12709), (302, 12736), (303, 12739), (304, 12742), (305, 12748), (311, 12772), (312, 12775), (314, 12781), (316, 12787), (318, 12802), (321, 12820), (323, 12865), (331, 12949), (332, 12955), (336, 12982), (349, 13075), (350, 13084), (356, 13141), (357, 13153), (365, 13189), (366, 13195), (376, 13237), (378, 13249), (382, 13288), (384, 13294), (385, 13297), (390, 13315), (391, 13318), (392, 13321), (408, 13420), (415, 13459), (419, 13483), (423, 13516), (433, 13627), (436, 13660), (441, 13723), (445, 13759), (449, 13789), (460, 13867), (461, 13870), (462, 13879), (465, 13903), (475, 13990), (479, 14035), (481, 14038), (482, 14053), (490, 14098), (492, 14107), (494, 14116), (495, 14119), (512, 14224), (523, 14272), (525, 14278), (540, 14377), (541, 14380), (543, 14392), (555, 14509), (558, 14542), (564, 14593), (569, 14623), (574, 14683), (586, 14764), (589, 14785), (590, 14788), (591, 14818), (598, 14881), (600, 14890), (602, 14899), (620, 15013), (623, 15043), (628, 15091), (629, 15094), (631, 15124), (634, 15145), (660, 15343), (666, 15406), (667, 15412), (673, 15463), (692, 15655), (699, 15742), (704, 15769), (705, 15772), (718, 15847), (722, 15871), (725, 15910), (728, 15946), (732, 15967), (741, 16054), (748, 16096), (754, 16129), (755, 16141), (763, 16285),

Gene: GiKK_19 Start: 9920, Stop: 14137, Start Num: 72

Candidate Starts for GiKK_19:

(Start: 72 @9920 has 22 MA's), (Start: 76 @9947 has 1 MA's), (115, 10193), (125, 10256), (133, 10313), (138, 10340), (142, 10382), (151, 10445), (153, 10460), (156, 10478), (159, 10496), (161, 10508), (165, 10541), (172, 10583), (175, 10598), (188, 10694), (189, 10703), (192, 10766), (194, 10781), (203, 10817), (211, 10868), (217, 10901), (218, 10910), (231, 10991), (240, 11057), (242, 11066), (243, 11075), (247, 11096), (262, 11231), (264, 11243), (284, 11384), (286, 11405), (290, 11438), (291, 11456), (293, 11474), (301, 11519), (314, 11573), (316, 11579), (318, 11594), (326, 11657), (344, 11705), (347, 11720), (349, 11756), (375, 11810), (382, 11837), (383, 11840), (384, 11843), (391, 11867), (392, 11870), (401, 11930), (413, 11999), (414, 12002), (416, 12020), (421, 12053), (427, 12104), (433, 12134), (437, 12158), (438, 12161), (451, 12287), (453, 12308), (455, 12317), (457, 12326), (459, 12332), (480, 12485), (493, 12554), (494, 12560), (499, 12596), (534, 12725), (553, 12866), (557, 12890), (561, 12935), (582, 13088), (583, 13091), (609, 13283), (613, 13313), (650, 13487), (683, 13559), (688, 13595), (691, 13619), (693, 13631), (696, 13673), (701, 13715), (702, 13721), (706, 13745), (709, 13763), (712, 13784), (717, 13811), (719, 13817), (724, 13850), (726, 13871), (727, 13898), (733, 13922), (736, 13958), (742, 14006), (758, 14108),

Gene: Gibbous_16 Start: 9856, Stop: 14970, Start Num: 25

Candidate Starts for Gibbous_16:

(Start: 22 @9835 has 5 MA's), (Start: 25 @9856 has 24 MA's), (28, 9883), (40, 10012), (45, 10096), (48, 10108), (56, 10159), (62, 10192), (66, 10216), (70, 10249), (84, 10339), (97, 10399), (98, 10402), (106, 10468), (112, 10504), (114, 10516), (123, 10573), (125, 10582), (127, 10603), (177, 10942), (185, 10999), (193, 11101), (205, 11167), (206, 11173), (209, 11194), (229, 11341), (237, 11398), (239, 11416), (243, 11431), (246, 11446), (249, 11485), (260, 11590), (264, 11614), (266, 11620), (279, 11731), (281, 11740), (284, 11755), (288, 11794), (301, 11890), (307, 11917), (308, 11923), (309, 11929), (317, 11962), (318, 11965), (329, 12073), (331, 12112), (336, 12145), (340, 12175), (341, 12178), (346, 12199), (347, 12202), (356, 12304), (364, 12349), (369, 12373), (370, 12376), (383, 12454), (390, 12478), (391, 12481), (392, 12484), (400, 12535), (408, 12583), (410, 12589), (416, 12634), (434, 12751), (435, 12757), (441, 12814), (448, 12868), (450, 12889), (451, 12901), (453, 12922), (454, 12925), (466, 12991), (467, 12997), (484, 13132), (496, 13198), (498, 13225), (512, 13303), (553, 13543), (558, 13573), (580, 13747), (584, 13777), (588, 13798), (599, 13906), (613, 13990), (661, 14227), (679, 14338), (680, 14356), (689, 14422), (694, 14473), (702, 14545), (708, 14584), (709, 14587), (712, 14614), (717, 14641), (724, 14680), (727, 14728), (736, 14788), (740, 14824), (749, 14878),

Gene: GoldHunter_17 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for GoldHunter_17:

(Start: 22 @9606 has 5 MA's), (Start: 25 @9630 has 24 MA's), (28, 9657), (40, 9786), (43, 9861), (68, 10014), (69, 10017), (84, 10113), (87, 10122), (93, 10152), (95, 10158), (97, 10173), (98, 10176), (102, 10197), (111, 10269), (114, 10290), (125, 10356), (127, 10377), (144, 10494), (170, 10656), (176, 10695), (184, 10770), (200, 10929), (205, 10941), (209, 10968), (214, 11013), (215, 11025), (229, 11115), (232, 11133), (235, 11154), (238, 11184), (244, 11208), (246, 11220), (249, 11259), (253, 11292), (266, 11394), (267, 11397), (271, 11421), (281, 11514), (284, 11529), (288, 11568), (294, 11622), (301, 11664), (310, 11706), (317, 11736), (318, 11739), (329, 11847), (330, 11850), (333, 11901), (347, 11976), (354, 12066), (356, 12078), (364, 12123), (368, 12144), (369, 12147), (370, 12150), (382, 12225), (392, 12258), (396, 12279), (400, 12309), (408, 12357), (410, 12363), (414, 12390), (434, 12525), (448, 12642), (451, 12675), (453, 12696), (454, 12699), (466, 12765), (467, 12771), (468, 12786), (484, 12906), (486, 12915), (498, 12999), (553, 13320), (581, 13539), (588, 13575), (616, 13788), (651, 13980), (661, 14028), (664, 14049), (680, 14157), (689, 14223), (691, 14241), (697, 14301), (702, 14346), (707, 14376), (708, 14385), (712, 14415), (724, 14481), (727, 14529), (736, 14589), (749, 14676), (758, 14739),

Gene: Guacamole_17 Start: 10278, Stop: 15800, Start Num: 8

Candidate Starts for Guacamole_17:

(Start: 8 @10278 has 36 MA's), (Start: 11 @10293 has 1 MA's), (Start: 12 @10299 has 1 MA's), (Start: 14 @10329 has 1 MA's), (15, 10338), (16, 10341), (18, 10383), (34, 10494), (35, 10515), (41, 10635), (48, 10677), (59, 10743), (61, 10761), (64, 10782), (65, 10785), (67, 10803), (73, 10827), (85, 10911), (86, 10914), (95, 10953), (97, 10968), (99, 10977), (124, 11145), (127, 11172), (144, 11289), (152, 11337), (171, 11460), (176, 11490), (196, 11694), (205, 11739), (209, 11766), (210, 11778), (225, 11868), (229, 11913), (233, 11940), (237, 11970), (249, 12057), (250, 12060), (254, 12099), (263, 12183), (271, 12219), (275, 12261), (280, 12306), (281, 12312), (283, 12324), (284, 12327), (290, 12381), (294, 12420), (297, 12441), (298, 12444), (301, 12462), (302, 12471), (307, 12489), (312, 12510), (314, 12516), (318, 12537), (322, 12564), (328, 12642), (363, 12831), (371, 12855), (376, 12867), (377, 12870), (386, 12885), (391, 12900), (392, 12903), (400, 12954), (413, 13035), (414, 13038), (420, 13071), (423, 13101), (425, 13125), (446, 13284), (469, 13458), (475, 13506), (479, 13551), (481, 13554), (482, 13569), (490, 13614), (492, 13623), (494, 13632), (501, 13683), (514, 13755), (520, 13773), (525, 13794), (540, 13893), (541, 13896), (545, 13929), (550, 13995), (552, 14013), (555, 14028), (558, 14061), (564, 14112), (570, 14163), (576, 14211), (596, 14406), (597, 14409), (610, 14481), (611, 14484), (619, 14550), (620, 14553), (622, 14571), (627, 14631), (634, 14688), (637, 14706), (645, 14787), (646, 14790), (647, 14805), (674, 15018), (681, 15084), (687,

15138), (688, 15150), (689, 15156), (702, 15279), (706, 15303), (709, 15321), (712, 15345), (713, 15351), (717, 15372), (724, 15411), (738, 15552), (740, 15564), (749, 15615), (753, 15633), (762, 15783),

Gene: Hexbug_18 Start: 10603, Stop: 14823, Start Num: 72

Candidate Starts for Hexbug_18:

(Start: 72 @10603 has 22 MA's), (Start: 76 @10630 has 1 MA's), (125, 10939), (133, 10996), (137, 11020), (142, 11065), (143, 11068), (146, 11110), (151, 11128), (153, 11143), (156, 11161), (158, 11170), (165, 11224), (175, 11281), (186, 11362), (190, 11410), (192, 11449), (194, 11464), (199, 11473), (203, 11500), (208, 11530), (209, 11533), (211, 11551), (231, 11674), (240, 11740), (248, 11803), (259, 11890), (271, 11959), (283, 12064), (284, 12067), (286, 12088), (290, 12121), (291, 12139), (293, 12157), (297, 12181), (301, 12202), (302, 12211), (314, 12256), (315, 12259), (318, 12277), (344, 12388), (346, 12400), (347, 12403), (349, 12439), (364, 12481), (375, 12493), (382, 12520), (392, 12553), (404, 12628), (413, 12682), (414, 12685), (416, 12703), (423, 12748), (427, 12787), (428, 12793), (433, 12817), (436, 12838), (437, 12841), (438, 12844), (451, 12970), (453, 12991), (455, 13000), (457, 13009), (459, 13015), (480, 13168), (489, 13213), (493, 13237), (494, 13243), (499, 13279), (505, 13312), (511, 13336), (526, 13387), (535, 13432), (553, 13570), (558, 13600), (609, 13981), (650, 14173), (683, 14245), (688, 14281), (691, 14305), (693, 14317), (696, 14359), (702, 14407), (712, 14470), (719, 14503), (724, 14536), (726, 14557), (727, 14584), (733, 14608), (736, 14644), (739, 14671), (740, 14680), (742, 14692), (758, 14794),

Gene: HippoPololi_18 Start: 10513, Stop: 15630, Start Num: 25

Candidate Starts for HippoPololi_18:

(Start: 22 @10492 has 5 MA's), (Start: 25 @10513 has 24 MA's), (28, 10540), (40, 10669), (45, 10753), (52, 10792), (56, 10816), (66, 10873), (69, 10900), (70, 10906), (84, 10996), (97, 11056), (98, 11059), (106, 11125), (114, 11173), (125, 11239), (127, 11260), (177, 11599), (184, 11653), (185, 11656), (193, 11758), (202, 11815), (204, 11821), (205, 11824), (206, 11830), (209, 11851), (225, 11953), (237, 12055), (239, 12073), (249, 12142), (256, 12190), (260, 12247), (264, 12271), (266, 12277), (281, 12397), (284, 12412), (288, 12451), (297, 12526), (301, 12547), (307, 12574), (308, 12580), (317, 12619), (318, 12622), (329, 12730), (336, 12802), (346, 12856), (356, 12961), (364, 13006), (369, 13030), (383, 13111), (391, 13138), (392, 13141), (400, 13192), (408, 13240), (410, 13246), (416, 13291), (434, 13408), (435, 13414), (441, 13471), (448, 13525), (450, 13546), (451, 13558), (453, 13579), (454, 13582), (466, 13648), (467, 13654), (484, 13789), (486, 13798), (496, 13855), (498, 13882), (516, 13975), (553, 14203), (556, 14224), (558, 14233), (580, 14407), (584, 14437), (588, 14458), (613, 14650), (635, 14740), (661, 14887), (664, 14908), (680, 15016), (684, 15049), (689, 15082), (694, 15133), (702, 15205), (708, 15244), (709, 15247), (712, 15274), (719, 15307), (724, 15340), (726, 15361), (727, 15388), (740, 15484), (749, 15538),

Gene: Hitter_17 Start: 10274, Stop: 15796, Start Num: 8

Candidate Starts for Hitter_17:

(Start: 8 @10274 has 36 MA's), (Start: 11 @10289 has 1 MA's), (Start: 12 @10295 has 1 MA's), (Start: 14 @10325 has 1 MA's), (15, 10334), (16, 10337), (18, 10379), (34, 10490), (35, 10511), (59, 10739), (61, 10757), (63, 10772), (64, 10778), (65, 10781), (67, 10799), (73, 10823), (85, 10907), (87, 10913), (95, 10949), (97, 10964), (99, 10973), (124, 11141), (127, 11168), (144, 11285), (171, 11456), (176, 11486), (196, 11690), (205, 11735), (229, 11909), (233, 11936), (237, 11966), (249, 12053), (254, 12095), (263, 12179), (271, 12215), (275, 12257), (280, 12302), (281, 12308), (283, 12320), (284, 12323), (290, 12377), (294, 12416), (297, 12437), (298, 12440), (301, 12458), (302, 12467), (307, 12485), (312, 12506), (314, 12512), (318, 12533), (322, 12560), (328, 12638), (363, 12827), (371, 12851), (376, 12863), (377, 12866), (386, 12881), (391, 12896), (392, 12899), (400, 12950), (413, 13031), (414, 13034), (420, 13067), (423, 13097), (425, 13121), (469, 13454), (475, 13502), (479, 13547), (481, 13550), (482, 13565), (490, 13610), (492, 13619), (494, 13628), (501, 13679), (514, 13751), (520, 13769), (525, 13790), (540, 13889), (541, 13892), (545, 13925), (550, 13991), (552, 14009), (555, 14024), (558, 14057), (564, 14108), (570, 14159), (596, 14402), (597, 14405), (610,

14477), (611, 14480), (619, 14546), (620, 14549), (622, 14567), (627, 14627), (634, 14684), (637, 14702), (645, 14783), (646, 14786), (647, 14801), (674, 15014), (681, 15080), (682, 15086), (688, 15146), (689, 15152), (702, 15275), (706, 15299), (709, 15317), (712, 15341), (713, 15347), (717, 15368), (724, 15407), (738, 15548), (740, 15560), (749, 15611), (753, 15629), (762, 15779),

Gene: Holliday_18 Start: 9868, Stop: 15501, Start Num: 21

Candidate Starts for Holliday_18:

(Start: 21 @9868 has 9 MA's), (26, 9895), (Start: 27 @9913 has 1 MA's), (29, 9934), (33, 9955), (36, 10000), (Start: 37 @10015 has 1 MA's), (42, 10099), (50, 10141), (51, 10153), (61, 10216), (63, 10231), (65, 10240), (67, 10258), (68, 10264), (78, 10312), (102, 10447), (123, 10597), (127, 10627), (160, 10846), (171, 10921), (176, 10951), (196, 11155), (204, 11197), (205, 11200), (206, 11206), (209, 11227), (220, 11308), (229, 11374), (233, 11401), (235, 11413), (237, 11431), (238, 11443), (244, 11467), (246, 11479), (249, 11518), (250, 11521), (251, 11530), (254, 11560), (258, 11605), (268, 11665), (271, 11680), (274, 11710), (275, 11722), (280, 11767), (281, 11773), (284, 11788), (287, 11818), (289, 11839), (290, 11842), (298, 11905), (302, 11932), (303, 11935), (304, 11938), (305, 11944), (311, 11968), (312, 11971), (314, 11977), (316, 11983), (318, 11998), (321, 12016), (327, 12097), (331, 12145), (332, 12151), (336, 12178), (356, 12337), (357, 12349), (365, 12385), (378, 12445), (382, 12484), (384, 12490), (385, 12493), (391, 12514), (392, 12517), (408, 12616), (415, 12655), (419, 12679), (423, 12712), (426, 12757), (432, 12811), (440, 12898), (441, 12919), (445, 12955), (449, 12985), (460, 13063), (461, 13066), (462, 13075), (465, 13099), (474, 13180), (475, 13186), (479, 13231), (481, 13234), (482, 13249), (490, 13294), (492, 13303), (494, 13312), (495, 13315), (512, 13420), (523, 13468), (525, 13474), (540, 13573), (541, 13576), (543, 13588), (555, 13705), (558, 13738), (564, 13789), (566, 13801), (569, 13819), (574, 13879), (586, 13960), (589, 13981), (591, 14014), (598, 14077), (602, 14095), (620, 14209), (623, 14239), (625, 14248), (628, 14287), (629, 14290), (631, 14320), (634, 14341), (652, 14494), (660, 14545), (666, 14608), (667, 14614), (673, 14665), (692, 14851), (699, 14938), (704, 14965), (705, 14968), (718, 15043), (722, 15067), (725, 15106), (728, 15142), (732, 15163), (741, 15250), (748, 15292), (754, 15325), (755, 15337), (760, 15415), (763, 15481),

Gene: Horseradish_17 Start: 9515, Stop: 14311, Start Num: 72

Candidate Starts for Horseradish_17:

(Start: 72 @9515 has 22 MA's), (Start: 76 @9542 has 1 MA's), (78, 9548), (98, 9671), (113, 9773), (118, 9818), (121, 9830), (125, 9848), (128, 9875), (129, 9878), (131, 9893), (140, 9944), (141, 9947), (147, 10004), (148, 10007), (149, 10010), (157, 10049), (160, 10067), (166, 10112), (174, 10148), (178, 10181), (182, 10214), (183, 10226), (190, 10280), (193, 10319), (195, 10334), (198, 10343), (201, 10370), (211, 10421), (221, 10481), (224, 10490), (230, 10544), (241, 10607), (244, 10622), (251, 10685), (264, 10775), (270, 10802), (280, 10895), (281, 10901), (284, 10916), (288, 10955), (298, 11033), (304, 11066), (314, 11105), (317, 11123), (318, 11126), (322, 11153), (325, 11210), (328, 11231), (342, 11342), (347, 11363), (349, 11399), (353, 11441), (354, 11453), (356, 11465), (364, 11510), (365, 11513), (368, 11531), (369, 11534), (370, 11537), (382, 11612), (392, 11645), (401, 11705), (412, 11771), (413, 11774), (414, 11777), (416, 11795), (430, 11894), (433, 11909), (434, 11912), (451, 12062), (453, 12083), (462, 12125), (466, 12152), (467, 12158), (483, 12290), (486, 12302), (498, 12389), (505, 12431), (512, 12467), (522, 12503), (529, 12542), (538, 12593), (544, 12632), (551, 12710), (559, 12761), (567, 12818), (585, 12956), (592, 13028), (613, 13172), (616, 13193), (640, 13370), (642, 13376), (680, 13700), (682, 13706), (689, 13766), (691, 13784), (694, 13817), (702, 13889), (708, 13928), (712, 13958), (724, 14024), (725, 14042), (727, 14072), (736, 14132), (750, 14222), (758, 14282),

Gene: Horus_18 Start: 9926, Stop: 15514, Start Num: 27

Candidate Starts for Horus_18:

(Start: 21 @9881 has 9 MA's), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964),

(188, 11060), (196, 11168), (204, 11210), (205, 11213), (206, 11219), (209, 11240), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506), (390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (419, 12692), (423, 12725), (427, 12800), (432, 12824), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (525, 13487), (540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (590, 13997), (591, 14027), (598, 14090), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14864), (699, 14951), (704, 14978), (705, 14981), (718, 15056), (722, 15080), (725, 15119), (728, 15155), (732, 15176), (741, 15263), (748, 15305), (754, 15338), (755, 15350), (763, 15494),

Gene: Jalammah_19 Start: 11050, Stop: 16590, Start Num: 8

Candidate Starts for Jalammah_19:

(Start: 8 @11050 has 36 MA's), (Start: 14 @11101 has 1 MA's), (15, 11110), (16, 11113), (18, 11155), (34, 11266), (35, 11287), (41, 11407), (48, 11449), (59, 11515), (61, 11533), (64, 11554), (65, 11557), (67, 11575), (73, 11599), (85, 11683), (95, 11725), (97, 11740), (99, 11749), (124, 11917), (127, 11944), (144, 12061), (171, 12232), (176, 12262), (196, 12466), (205, 12511), (209, 12538), (210, 12550), (225, 12640), (229, 12685), (233, 12712), (237, 12742), (249, 12829), (250, 12832), (254, 12871), (263, 12955), (271, 12991), (275, 13033), (280, 13078), (281, 13084), (283, 13096), (284, 13099), (290, 13153), (294, 13192), (297, 13213), (298, 13216), (301, 13234), (307, 13261), (312, 13282), (314, 13288), (318, 13309), (322, 13336), (347, 13546), (363, 13624), (371, 13648), (376, 13660), (377, 13663), (386, 13678), (391, 13693), (392, 13696), (400, 13747), (413, 13828), (414, 13831), (420, 13864), (423, 13894), (425, 13918), (436, 13984), (469, 14251), (475, 14299), (479, 14344), (481, 14347), (482, 14362), (490, 14407), (492, 14416), (494, 14425), (501, 14476), (514, 14548), (520, 14566), (525, 14587), (540, 14686), (541, 14689), (545, 14722), (550, 14788), (552, 14806), (555, 14821), (558, 14854), (564, 14905), (570, 14956), (596, 15199), (597, 15202), (610, 15274), (611, 15277), (619, 15343), (620, 15346), (622, 15364), (627, 15424), (634, 15481), (637, 15499), (645, 15580), (646, 15583), (647, 15598), (669, 15757), (674, 15811), (681, 15877), (682, 15883), (688, 15943), (689, 15949), (693, 15979), (702, 16072), (706, 16096), (709, 16114), (712, 16138), (713, 16144), (717, 16165), (724, 16204), (738, 16345), (740, 16357), (749, 16408), (753, 16426), (762, 16576),

Gene: Jamzy_19 Start: 9930, Stop: 14147, Start Num: 72

Candidate Starts for Jamzy_19:

(Start: 72 @9930 has 22 MA's), (Start: 76 @9957 has 1 MA's), (115, 10203), (125, 10266), (133, 10323), (138, 10350), (142, 10392), (151, 10455), (153, 10470), (156, 10488), (159, 10506), (161, 10518), (165, 10551), (172, 10593), (175, 10608), (188, 10704), (189, 10713), (192, 10776), (194, 10791), (203, 10827), (211, 10878), (217, 10911), (218, 10920), (231, 11001), (240, 11067), (242, 11076), (243, 11085), (247, 11106), (262, 11241), (264, 11253), (284, 11394), (286, 11415), (290, 11448), (291, 11466), (293, 11484), (301, 11529), (314, 11583), (318, 11604), (326, 11667), (344, 11715), (347, 11730), (349, 11766), (375, 11820), (382, 11847), (384, 11853), (391, 11877), (392, 11880), (401, 11940), (406, 11973), (414, 12012), (416, 12030), (417, 12033), (423, 12075), (424, 12087), (428, 12120), (429, 12123), (433, 12144), (437, 12168), (438, 12171), (448, 12264), (450, 12285), (451, 12297), (453, 12318), (455, 12327), (457, 12336), (459, 12342), (480, 12495), (491, 12555), (493, 12564), (494, 12570), (499, 12606), (535, 12738), (553, 12876), (557, 12900), (582,

13098), (583, 13101), (604, 13263), (607, 13287), (609, 13290), (639, 13392), (650, 13497), (683, 13569), (686, 13593), (688, 13605), (691, 13629), (693, 13641), (701, 13725), (702, 13731), (709, 13773), (712, 13794), (719, 13827), (724, 13860), (726, 13881), (727, 13908), (736, 13968), (739, 13995), (740, 14004), (742, 14016), (758, 14118),

Gene: JasperJr_17 Start: 10278, Stop: 15800, Start Num: 8

Candidate Starts for JasperJr_17:

(Start: 8 @10278 has 36 MA's), (Start: 11 @10293 has 1 MA's), (Start: 12 @10299 has 1 MA's), (Start: 14 @10329 has 1 MA's), (15, 10338), (16, 10341), (18, 10383), (34, 10494), (35, 10515), (41, 10635), (48, 10677), (59, 10743), (61, 10761), (64, 10782), (65, 10785), (67, 10803), (73, 10827), (85, 10911), (86, 10914), (95, 10953), (97, 10968), (99, 10977), (124, 11145), (127, 11172), (144, 11289), (152, 11337), (171, 11460), (176, 11490), (196, 11694), (205, 11739), (209, 11766), (210, 11778), (225, 11868), (229, 11913), (233, 11940), (237, 11970), (249, 12057), (250, 12060), (254, 12099), (263, 12183), (271, 12219), (275, 12261), (280, 12306), (281, 12312), (283, 12324), (284, 12327), (290, 12381), (294, 12420), (297, 12441), (298, 12444), (301, 12462), (302, 12471), (307, 12489), (312, 12510), (314, 12516), (318, 12537), (322, 12564), (328, 12642), (363, 12831), (371, 12855), (376, 12867), (377, 12870), (386, 12885), (391, 12900), (392, 12903), (400, 12954), (413, 13035), (414, 13038), (420, 13071), (423, 13101), (425, 13125), (446, 13284), (469, 13458), (475, 13506), (479, 13551), (481, 13554), (482, 13569), (490, 13614), (492, 13623), (494, 13632), (501, 13683), (514, 13755), (520, 13773), (525, 13794), (540, 13893), (541, 13896), (545, 13929), (550, 13995), (552, 14013), (555, 14028), (558, 14061), (564, 14112), (570, 14163), (576, 14211), (596, 14406), (597, 14409), (610, 14481), (611, 14484), (619, 14550), (620, 14553), (622, 14571), (627, 14631), (634, 14688), (637, 14706), (645, 14787), (646, 14790), (647, 14805), (674, 15018), (681, 15084), (687, 15138), (688, 15150), (689, 15156), (702, 15279), (706, 15303), (709, 15321), (712, 15345), (713, 15351), (717, 15372), (724, 15411), (738, 15552), (740, 15564), (749, 15615), (753, 15633), (762, 15783),

Gene: JuJu_17 Start: 10202, Stop: 15721, Start Num: 8

Candidate Starts for JuJu_17:

(Start: 8 @10202 has 36 MA's), (Start: 11 @10217 has 1 MA's), (Start: 12 @10223 has 1 MA's), (Start: 14 @10253 has 1 MA's), (15, 10262), (16, 10265), (18, 10307), (34, 10418), (35, 10439), (61, 10685), (64, 10706), (65, 10709), (67, 10727), (73, 10751), (85, 10835), (87, 10841), (95, 10877), (97, 10892), (99, 10901), (102, 10916), (106, 10961), (124, 11069), (127, 11096), (134, 11129), (176, 11414), (196, 11618), (205, 11663), (229, 11837), (233, 11864), (237, 11894), (249, 11981), (254, 12023), (261, 12095), (271, 12143), (275, 12185), (280, 12230), (281, 12236), (283, 12248), (284, 12251), (290, 12305), (294, 12344), (297, 12365), (298, 12368), (301, 12386), (302, 12395), (307, 12413), (312, 12434), (314, 12440), (318, 12461), (322, 12488), (328, 12566), (346, 12674), (359, 12740), (371, 12779), (391, 12824), (392, 12827), (400, 12878), (413, 12959), (414, 12962), (420, 12995), (423, 13025), (436, 13115), (445, 13196), (462, 13316), (469, 13382), (475, 13430), (479, 13475), (481, 13478), (482, 13493), (485, 13502), (490, 13538), (492, 13547), (494, 13556), (514, 13679), (525, 13718), (540, 13817), (541, 13820), (550, 13919), (552, 13937), (555, 13952), (558, 13985), (564, 14036), (570, 14087), (579, 14156), (596, 14330), (597, 14333), (608, 14399), (610, 14405), (611, 14408), (619, 14474), (620, 14477), (622, 14495), (627, 14555), (634, 14612), (637, 14630), (645, 14711), (647, 14729), (654, 14780), (669, 14888), (674, 14942), (681, 15008), (687, 15062), (688, 15074), (689, 15080), (693, 15110), (702, 15203), (706, 15227), (709, 15245), (712, 15269), (713, 15275), (717, 15296), (724, 15335), (738, 15476), (749, 15539), (753, 15557), (759, 15614), (762, 15707),

Gene: Kamaru_18 Start: 9895, Stop: 15501, Start Num: 26

Candidate Starts for Kamaru_18:

(Start: 21 @9868 has 9 MA's), (26, 9895), (Start: 27 @9913 has 1 MA's), (29, 9934), (33, 9955), (36, 10000), (Start: 37 @10015 has 1 MA's), (42, 10099), (50, 10141), (51, 10153), (61, 10216), (63, 10231), (65, 10240), (67, 10258), (68, 10264), (78, 10312), (102, 10447), (123, 10597), (127, 10627),

(160, 10846), (171, 10921), (176, 10951), (196, 11155), (204, 11197), (205, 11200), (206, 11206), (209, 11227), (220, 11308), (229, 11374), (233, 11401), (235, 11413), (237, 11431), (238, 11443), (244, 11467), (246, 11479), (249, 11518), (250, 11521), (251, 11530), (254, 11560), (258, 11605), (268, 11665), (271, 11680), (274, 11710), (275, 11722), (280, 11767), (281, 11773), (284, 11788), (287, 11818), (289, 11839), (290, 11842), (298, 11905), (302, 11932), (303, 11935), (304, 11938), (305, 11944), (311, 11968), (312, 11971), (314, 11977), (316, 11983), (318, 11998), (321, 12016), (327, 12097), (331, 12145), (332, 12151), (336, 12178), (356, 12337), (357, 12349), (365, 12385), (378, 12445), (382, 12484), (384, 12490), (385, 12493), (391, 12514), (392, 12517), (408, 12616), (415, 12655), (419, 12679), (423, 12712), (426, 12757), (432, 12811), (440, 12898), (441, 12919), (445, 12955), (449, 12985), (460, 13063), (461, 13066), (462, 13075), (465, 13099), (474, 13180), (475, 13186), (479, 13231), (481, 13234), (482, 13249), (490, 13294), (492, 13303), (494, 13312), (495, 13315), (512, 13420), (523, 13468), (525, 13474), (540, 13573), (541, 13576), (543, 13588), (555, 13705), (558, 13738), (564, 13789), (566, 13801), (569, 13819), (574, 13879), (586, 13960), (589, 13981), (591, 14014), (598, 14077), (602, 14095), (620, 14209), (623, 14239), (625, 14248), (628, 14287), (629, 14290), (631, 14320), (634, 14341), (652, 14494), (660, 14545), (666, 14608), (667, 14614), (673, 14665), (692, 14851), (699, 14938), (704, 14965), (705, 14968), (718, 15043), (722, 15067), (725, 15106), (728, 15142), (732, 15163), (741, 15250), (748, 15292), (754, 15325), (755, 15337), (760, 15415), (763, 15481),

Gene: KappaFarmDelta_17 Start: 10424, Stop: 15964, Start Num: 8

Candidate Starts for KappaFarmDelta_17:

(Start: 8 @10424 has 36 MA's), (Start: 11 @10439 has 1 MA's), (Start: 12 @10445 has 1 MA's), (Start: 14 @10475 has 1 MA's), (15, 10484), (16, 10487), (18, 10529), (34, 10640), (35, 10661), (59, 10889), (61, 10907), (64, 10928), (65, 10931), (67, 10949), (73, 10973), (85, 11057), (87, 11063), (95, 11099), (97, 11114), (99, 11123), (124, 11291), (127, 11318), (144, 11435), (171, 11606), (176, 11636), (196, 11840), (205, 11885), (209, 11912), (229, 12059), (233, 12086), (237, 12116), (249, 12203), (250, 12206), (254, 12245), (256, 12251), (271, 12365), (275, 12407), (280, 12452), (281, 12458), (283, 12470), (284, 12473), (290, 12527), (294, 12566), (297, 12587), (298, 12590), (301, 12608), (307, 12635), (312, 12656), (314, 12662), (318, 12683), (322, 12710), (327, 12782), (359, 12983), (363, 12998), (371, 13022), (377, 13037), (391, 13067), (392, 13070), (400, 13121), (414, 13205), (420, 13238), (425, 13292), (460, 13547), (469, 13625), (475, 13673), (477, 13706), (479, 13718), (481, 13721), (482, 13736), (485, 13745), (490, 13781), (492, 13790), (494, 13799), (512, 13907), (523, 13955), (524, 13958), (525, 13961), (527, 13982), (541, 14063), (542, 14066), (555, 14192), (558, 14225), (563, 14273), (564, 14276), (567, 14291), (570, 14327), (596, 14570), (597, 14573), (610, 14645), (611, 14648), (619, 14714), (620, 14717), (622, 14735), (627, 14795), (634, 14852), (637, 14870), (645, 14951), (647, 14969), (674, 15182), (681, 15248), (688, 15314), (689, 15320), (693, 15350), (702, 15443), (706, 15467), (712, 15509), (717, 15536), (724, 15575), (738, 15716), (749, 15779), (753, 15797), (759, 15854),

Gene: KayGee_15 Start: 9540, Stop: 14468, Start Num: 40

Candidate Starts for KayGee_15:

(Start: 25 @9384 has 24 MA's), (40, 9540), (54, 9669), (58, 9699), (68, 9768), (71, 9780), (80, 9825), (84, 9867), (87, 9876), (95, 9912), (99, 9936), (116, 10050), (120, 10089), (122, 10095), (123, 10101), (125, 10110), (127, 10131), (154, 10302), (163, 10365), (170, 10410), (180, 10491), (196, 10650), (200, 10683), (205, 10695), (209, 10722), (215, 10779), (221, 10809), (224, 10821), (236, 10923), (237, 10926), (249, 11013), (256, 11061), (271, 11175), (281, 11268), (284, 11283), (286, 11304), (290, 11337), (292, 11367), (295, 11379), (301, 11418), (306, 11442), (307, 11445), (313, 11469), (318, 11493), (328, 11598), (335, 11646), (339, 11676), (343, 11691), (346, 11706), (349, 11745), (353, 11787), (354, 11799), (356, 11811), (358, 11826), (360, 11841), (364, 11856), (369, 11880), (378, 11919), (379, 11934), (380, 11940), (383, 11961), (390, 11985), (392, 11991), (412, 12117), (418, 12147), (424, 12198), (429, 12234), (433, 12255), (434, 12258), (442, 12330), (448, 12375), (451, 12408), (453, 12429), (463, 12483), (473, 12558), (486, 12642), (498, 12729), (536, 12915), (553, 13047), (558, 13077), (575, 13215), (583, 13266), (588, 13296), (609, 13452), (613, 13482),

(644, 13662), (653, 13713), (661, 13740), (664, 13761), (680, 13857), (686, 13905), (689, 13923), (702, 14046), (706, 14070), (708, 14085), (712, 14115), (717, 14142), (719, 14148), (724, 14181), (731, 14250), (733, 14253), (736, 14289), (750, 14379),

Gene: Kenna_17 Start: 9881, Stop: 15508, Start Num: 21

Candidate Starts for Kenna_17:

(Start: 21 @9881 has 9 MA's), (26, 9908), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964), (188, 11060), (196, 11168), (205, 11213), (206, 11219), (209, 11240), (212, 11264), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (258, 11618), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (366, 12404), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506), (390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (415, 12668), (419, 12692), (423, 12725), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (465, 13112), (474, 13193), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (524, 13484), (525, 13487), (540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (591, 14027), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (625, 14261), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14858), (699, 14945), (704, 14972), (705, 14975), (718, 15050), (722, 15074), (725, 15113), (728, 15149), (732, 15170), (741, 15257), (748, 15299), (754, 15332), (755, 15344), (760, 15422), (763, 15488),

Gene: Lauer_15 Start: 9433, Stop: 14517, Start Num: 25

Candidate Starts for Lauer_15:

(Start: 25 @9433 has 24 MA's), (40, 9589), (54, 9718), (58, 9748), (68, 9817), (71, 9829), (84, 9916), (87, 9925), (95, 9961), (99, 9985), (106, 10045), (116, 10099), (120, 10138), (122, 10144), (125, 10159), (127, 10180), (154, 10351), (163, 10414), (170, 10459), (180, 10540), (196, 10699), (200, 10732), (205, 10744), (209, 10771), (215, 10828), (221, 10858), (224, 10870), (236, 10972), (237, 10975), (249, 11062), (256, 11110), (271, 11224), (281, 11317), (284, 11332), (286, 11353), (290, 11386), (292, 11416), (295, 11428), (301, 11467), (306, 11491), (307, 11494), (313, 11518), (318, 11542), (328, 11647), (339, 11725), (346, 11755), (347, 11758), (349, 11794), (353, 11836), (356, 11860), (358, 11875), (360, 11890), (364, 11905), (369, 11929), (378, 11968), (379, 11983), (380, 11989), (383, 12010), (390, 12034), (392, 12040), (412, 12166), (418, 12196), (423, 12235), (429, 12283), (433, 12304), (434, 12307), (442, 12379), (448, 12424), (451, 12457), (453, 12478), (463, 12532), (473, 12607), (486, 12691), (498, 12778), (536, 12964), (553, 13096), (558, 13126), (575, 13264), (583, 13315), (588, 13345), (609, 13501), (613, 13531), (644, 13711), (653, 13762), (661, 13789), (664, 13810), (680, 13906), (686, 13954), (689, 13972), (702, 14095), (706, 14119), (708, 14134), (712, 14164), (717, 14191), (719, 14197), (724, 14230), (731, 14299), (733, 14302), (736, 14338), (750, 14428),

Gene: Leroy_18 Start: 9882, Stop: 15515, Start Num: 21

Candidate Starts for Leroy_18:

(Start: 21 @9882 has 9 MA's), (Start: 27 @9927 has 1 MA's), (29, 9948), (33, 9969), (36, 10014), (Start: 37 @10029 has 1 MA's), (42, 10113), (50, 10155), (51, 10167), (61, 10230), (63, 10245), (65, 10254), (67, 10272), (68, 10278), (78, 10326), (102, 10461), (123, 10611), (127, 10641), (171, 10935), (176, 10965), (196, 11169), (204, 11211), (205, 11214), (206, 11220), (209, 11241), (212, 11265), (220, 11322), (229, 11388), (233, 11415), (235, 11427), (237, 11445), (238, 11457), (244, 11481),

(246, 11493), (249, 11532), (250, 11535), (251, 11544), (254, 11574), (256, 11580), (268, 11679), (271, 11694), (274, 11724), (275, 11736), (280, 11781), (281, 11787), (284, 11802), (287, 11832), (289, 11853), (290, 11856), (298, 11919), (302, 11946), (304, 11952), (311, 11982), (312, 11985), (314, 11991), (316, 11997), (318, 12012), (321, 12030), (327, 12111), (331, 12159), (332, 12165), (334, 12180), (336, 12192), (356, 12351), (357, 12363), (365, 12399), (366, 12405), (378, 12459), (382, 12498), (384, 12504), (385, 12507), (390, 12525), (391, 12528), (392, 12531), (397, 12555), (408, 12630), (419, 12693), (423, 12726), (426, 12771), (432, 12825), (433, 12837), (440, 12912), (441, 12933), (445, 12969), (449, 12999), (461, 13080), (462, 13089), (465, 13113), (475, 13200), (479, 13245), (481, 13248), (490, 13308), (492, 13317), (494, 13326), (512, 13434), (523, 13482), (525, 13488), (540, 13587), (541, 13590), (543, 13602), (555, 13719), (558, 13752), (564, 13803), (569, 13833), (574, 13893), (586, 13974), (589, 13995), (591, 14028), (600, 14100), (602, 14109), (620, 14223), (623, 14253), (625, 14262), (628, 14301), (629, 14304), (631, 14334), (634, 14355), (660, 14553), (666, 14616), (667, 14622), (673, 14673), (692, 14865), (699, 14952), (704, 14979), (705, 14982), (718, 15057), (722, 15081), (725, 15120), (728, 15156), (732, 15177), (741, 15264), (748, 15306), (754, 15339), (755, 15351), (763, 15495),

Gene: LitninMcQueen_18 Start: 9869, Stop: 15502, Start Num: 21

Candidate Starts for LitninMcQueen_18:

(Start: 21 @9869 has 9 MA's), (26, 9896), (Start: 27 @9914 has 1 MA's), (29, 9935), (33, 9956), (36, 10001), (Start: 37 @10016 has 1 MA's), (42, 10100), (50, 10142), (51, 10154), (61, 10217), (63, 10232), (65, 10241), (67, 10259), (68, 10265), (78, 10313), (102, 10448), (123, 10598), (127, 10628), (160, 10847), (171, 10922), (176, 10952), (196, 11156), (204, 11198), (205, 11201), (206, 11207), (209, 11228), (220, 11309), (229, 11375), (233, 11402), (235, 11414), (237, 11432), (238, 11444), (244, 11468), (246, 11480), (249, 11519), (250, 11522), (251, 11531), (254, 11561), (258, 11606), (268, 11666), (271, 11681), (274, 11711), (275, 11723), (280, 11768), (281, 11774), (284, 11789), (287, 11819), (289, 11840), (290, 11843), (298, 11906), (302, 11933), (303, 11936), (304, 11939), (305, 11945), (311, 11969), (312, 11972), (314, 11978), (316, 11984), (318, 11999), (321, 12017), (327, 12098), (331, 12146), (332, 12152), (336, 12179), (356, 12338), (357, 12350), (365, 12386), (378, 12446), (382, 12485), (384, 12491), (385, 12494), (391, 12515), (392, 12518), (408, 12617), (415, 12656), (419, 12680), (423, 12713), (426, 12758), (432, 12812), (440, 12899), (441, 12920), (445, 12956), (449, 12986), (460, 13064), (461, 13067), (462, 13076), (465, 13100), (474, 13181), (475, 13187), (479, 13232), (481, 13235), (482, 13250), (490, 13295), (492, 13304), (494, 13313), (495, 13316), (512, 13421), (523, 13469), (525, 13475), (540, 13574), (541, 13577), (543, 13589), (555, 13706), (558, 13739), (564, 13790), (569, 13820), (574, 13880), (586, 13961), (589, 13982), (591, 14015), (598, 14078), (602, 14096), (620, 14210), (623, 14240), (625, 14249), (628, 14288), (629, 14291), (631, 14321), (634, 14342), (652, 14495), (660, 14546), (666, 14609), (667, 14615), (673, 14666), (692, 14852), (699, 14939), (704, 14966), (705, 14969), (718, 15044), (722, 15068), (725, 15107), (728, 15143), (732, 15164), (741, 15251), (748, 15293), (754, 15326), (755, 15338), (760, 15416), (763, 15482),

Gene: Lutum_18 Start: 9881, Stop: 15508, Start Num: 21

Candidate Starts for Lutum_18:

(Start: 21 @9881 has 9 MA's), (26, 9908), (Start: 27 @9926 has 1 MA's), (29, 9947), (33, 9968), (36, 10013), (Start: 37 @10028 has 1 MA's), (42, 10112), (50, 10154), (51, 10166), (61, 10229), (63, 10244), (65, 10253), (67, 10271), (68, 10277), (78, 10325), (102, 10460), (123, 10610), (127, 10640), (176, 10964), (188, 11060), (196, 11168), (205, 11213), (206, 11219), (209, 11240), (212, 11264), (220, 11321), (229, 11387), (233, 11414), (235, 11426), (237, 11444), (238, 11456), (244, 11480), (246, 11492), (249, 11531), (250, 11534), (251, 11543), (254, 11573), (258, 11618), (268, 11678), (271, 11693), (274, 11723), (275, 11735), (280, 11780), (281, 11786), (284, 11801), (287, 11831), (289, 11852), (290, 11855), (298, 11918), (302, 11945), (303, 11948), (304, 11951), (305, 11957), (311, 11981), (312, 11984), (314, 11990), (316, 11996), (318, 12011), (321, 12029), (323, 12074), (331, 12158), (332, 12164), (336, 12191), (349, 12284), (350, 12293), (356, 12350), (357, 12362), (365, 12398), (366, 12404), (376, 12446), (378, 12458), (382, 12497), (384, 12503), (385, 12506),

(390, 12524), (391, 12527), (392, 12530), (397, 12554), (408, 12629), (415, 12668), (419, 12692), (423, 12725), (433, 12836), (436, 12869), (441, 12932), (445, 12968), (449, 12998), (460, 13076), (461, 13079), (462, 13088), (465, 13112), (474, 13193), (475, 13199), (479, 13244), (481, 13247), (482, 13262), (490, 13307), (492, 13316), (494, 13325), (495, 13328), (512, 13433), (523, 13481), (524, 13484), (525, 13487), (540, 13586), (541, 13589), (543, 13601), (555, 13718), (558, 13751), (564, 13802), (569, 13832), (574, 13892), (586, 13973), (589, 13994), (591, 14027), (600, 14099), (602, 14108), (620, 14222), (623, 14252), (625, 14261), (628, 14300), (629, 14303), (631, 14333), (634, 14354), (660, 14552), (666, 14615), (667, 14621), (673, 14672), (692, 14858), (699, 14945), (704, 14972), (705, 14975), (718, 15050), (722, 15074), (725, 15113), (728, 15149), (732, 15170), (741, 15257), (748, 15299), (754, 15332), (755, 15344), (760, 15422), (763, 15488),

Gene: Lysidious_18 Start: 10777, Stop: 16320, Start Num: 8

Candidate Starts for Lysidious_18:

(Start: 8 @10777 has 36 MA's), (Start: 14 @10828 has 1 MA's), (15, 10837), (16, 10840), (18, 10882), (34, 10993), (35, 11014), (41, 11134), (48, 11176), (59, 11242), (61, 11260), (64, 11281), (65, 11284), (67, 11302), (73, 11326), (85, 11410), (87, 11416), (95, 11452), (97, 11467), (99, 11476), (124, 11644), (127, 11671), (144, 11788), (171, 11959), (176, 11989), (196, 12193), (205, 12238), (209, 12265), (210, 12277), (225, 12367), (229, 12412), (233, 12439), (237, 12469), (249, 12556), (250, 12559), (254, 12598), (271, 12718), (275, 12760), (280, 12805), (281, 12811), (283, 12823), (284, 12826), (290, 12880), (294, 12919), (297, 12940), (298, 12943), (301, 12961), (302, 12970), (307, 12988), (312, 13009), (314, 13015), (318, 13036), (322, 13063), (346, 13270), (363, 13351), (371, 13375), (376, 13387), (377, 13390), (386, 13405), (391, 13420), (392, 13423), (400, 13474), (413, 13555), (414, 13558), (420, 13591), (423, 13621), (425, 13645), (436, 13711), (469, 13978), (475, 14026), (479, 14071), (481, 14074), (482, 14089), (490, 14134), (492, 14143), (494, 14152), (501, 14203), (514, 14275), (520, 14293), (525, 14314), (540, 14413), (541, 14416), (545, 14449), (550, 14515), (552, 14533), (555, 14548), (558, 14581), (564, 14632), (570, 14683), (596, 14926), (597, 14929), (610, 15001), (611, 15004), (619, 15070), (620, 15073), (622, 15091), (627, 15151), (634, 15208), (637, 15226), (645, 15307), (646, 15310), (647, 15325), (669, 15484), (674, 15538), (681, 15604), (682, 15610), (688, 15670), (689, 15676), (702, 15799), (706, 15823), (709, 15841), (712, 15865), (713, 15871), (717, 15892), (724, 15931), (738, 16072), (740, 16084), (749, 16135), (753, 16153), (759, 16210), (762, 16303),

Gene: MAnor_16 Start: 9376, Stop: 14475, Start Num: 25

Candidate Starts for MAnor_16:

(Start: 25 @9376 has 24 MA's), (40, 9532), (50, 9637), (54, 9661), (61, 9712), (68, 9760), (78, 9808), (80, 9817), (84, 9859), (86, 9865), (87, 9868), (95, 9904), (99, 9928), (103, 9955), (116, 10042), (120, 10081), (122, 10087), (125, 10102), (127, 10123), (154, 10294), (163, 10357), (170, 10402), (176, 10441), (180, 10483), (196, 10645), (199, 10654), (200, 10678), (205, 10690), (209, 10717), (210, 10729), (215, 10774), (221, 10804), (224, 10816), (236, 10918), (237, 10921), (249, 11008), (252, 11035), (258, 11095), (262, 11125), (267, 11146), (271, 11170), (281, 11263), (284, 11278), (285, 11287), (286, 11299), (290, 11332), (295, 11374), (305, 11434), (306, 11437), (307, 11440), (308, 11446), (313, 11464), (318, 11488), (328, 11593), (346, 11701), (347, 11704), (349, 11740), (356, 11806), (358, 11821), (360, 11836), (364, 11851), (368, 11872), (369, 11875), (370, 11878), (378, 11914), (379, 11929), (380, 11935), (383, 11956), (390, 11980), (392, 11986), (412, 12112), (418, 12142), (423, 12181), (429, 12229), (433, 12250), (434, 12253), (435, 12259), (442, 12325), (448, 12370), (451, 12403), (453, 12424), (463, 12478), (484, 12628), (486, 12637), (498, 12724), (534, 12901), (553, 13042), (558, 13072), (575, 13210), (588, 13291), (609, 13444), (613, 13474), (648, 13696), (651, 13705), (653, 13711), (661, 13747), (680, 13864), (686, 13912), (689, 13930), (702, 14053), (706, 14077), (708, 14092), (712, 14122), (717, 14149), (719, 14155), (724, 14188), (731, 14257), (733, 14260), (736, 14296), (746, 14368), (747, 14371), (750, 14386),

Gene: MScarn_18 Start: 9601, Stop: 14400, Start Num: 72

Candidate Starts for MScarn_18:

(Start: 72 @9601 has 22 MA's), (Start: 76 @9628 has 1 MA's), (78, 9634), (98, 9757), (113, 9859), (118, 9904), (121, 9916), (125, 9934), (128, 9961), (129, 9964), (131, 9979), (140, 10030), (141, 10033), (147, 10090), (148, 10093), (157, 10135), (160, 10153), (166, 10198), (174, 10234), (178, 10267), (182, 10300), (183, 10312), (190, 10366), (193, 10405), (195, 10420), (198, 10429), (201, 10456), (211, 10507), (221, 10567), (224, 10576), (230, 10630), (241, 10693), (244, 10708), (264, 10861), (270, 10888), (280, 10981), (281, 10987), (284, 11002), (288, 11041), (298, 11119), (304, 11152), (314, 11191), (317, 11209), (318, 11212), (322, 11239), (325, 11296), (328, 11317), (342, 11428), (347, 11449), (349, 11485), (353, 11527), (354, 11539), (356, 11551), (364, 11596), (365, 11599), (368, 11617), (369, 11620), (370, 11623), (382, 11698), (392, 11731), (401, 11791), (412, 11857), (413, 11860), (414, 11863), (416, 11881), (430, 11980), (433, 11995), (434, 11998), (451, 12148), (453, 12169), (462, 12211), (466, 12238), (467, 12244), (486, 12388), (498, 12475), (505, 12517), (512, 12553), (529, 12628), (538, 12679), (544, 12718), (547, 12742), (559, 12847), (567, 12904), (585, 13042), (592, 13117), (613, 13261), (616, 13282), (640, 13459), (642, 13465), (680, 13789), (682, 13795), (689, 13855), (694, 13906), (702, 13978), (708, 14017), (712, 14047), (724, 14113), (727, 14161), (736, 14221), (750, 14311), (758, 14371),

Gene: MaVan_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for MaVan_18:

(Start: 22 @10598 has 5 MA's), (Start: 25 @10619 has 24 MA's), (28, 10646), (40, 10775), (48, 10871), (56, 10922), (66, 10979), (70, 11012), (71, 11015), (84, 11102), (88, 11114), (97, 11162), (98, 11165), (99, 11171), (105, 11225), (106, 11231), (114, 11279), (125, 11345), (127, 11366), (184, 11759), (185, 11762), (193, 11864), (205, 11930), (206, 11936), (209, 11957), (237, 12161), (239, 12179), (244, 12197), (246, 12209), (249, 12248), (251, 12260), (256, 12296), (260, 12353), (264, 12377), (266, 12383), (281, 12503), (284, 12518), (288, 12557), (297, 12632), (303, 12665), (307, 12680), (308, 12686), (309, 12692), (318, 12728), (329, 12836), (336, 12908), (346, 12962), (348, 12968), (364, 13112), (369, 13136), (380, 13196), (381, 13208), (382, 13214), (390, 13241), (391, 13244), (392, 13247), (406, 13340), (408, 13346), (416, 13397), (425, 13466), (431, 13499), (434, 13514), (435, 13520), (441, 13577), (443, 13589), (447, 13628), (448, 13631), (450, 13652), (451, 13664), (453, 13685), (454, 13688), (462, 13727), (463, 13739), (466, 13754), (484, 13895), (498, 13991), (510, 14057), (513, 14078), (516, 14084), (553, 14321), (558, 14351), (561, 14390), (580, 14525), (584, 14555), (588, 14576), (609, 14735), (613, 14768), (651, 14981), (657, 14999), (661, 15005), (680, 15134), (689, 15200), (694, 15251), (702, 15323), (708, 15362), (712, 15392), (719, 15425), (724, 15458), (733, 15530), (740, 15602), (749, 15656), (751, 15662), (758, 15719),

Gene: Malachai_18 Start: 10785, Stop: 16274, Start Num: 8

Candidate Starts for Malachai_18:

(Start: 8 @10785 has 36 MA's), (Start: 14 @10836 has 1 MA's), (15, 10845), (16, 10848), (18, 10890), (34, 11001), (35, 11022), (41, 11142), (48, 11184), (59, 11250), (61, 11268), (63, 11283), (64, 11289), (65, 11292), (67, 11310), (73, 11334), (85, 11418), (95, 11460), (97, 11475), (99, 11484), (124, 11652), (127, 11679), (139, 11754), (144, 11796), (152, 11844), (171, 11967), (176, 11997), (196, 12201), (205, 12246), (209, 12273), (210, 12285), (225, 12375), (229, 12420), (233, 12447), (237, 12477), (249, 12564), (254, 12606), (271, 12726), (275, 12768), (280, 12813), (281, 12819), (283, 12831), (284, 12834), (290, 12888), (294, 12927), (297, 12948), (298, 12951), (301, 12969), (307, 12996), (314, 13023), (318, 13044), (322, 13071), (327, 13143), (359, 13344), (363, 13359), (371, 13383), (377, 13398), (391, 13428), (392, 13431), (400, 13482), (413, 13563), (414, 13566), (420, 13599), (423, 13629), (425, 13653), (436, 13719), (469, 13986), (475, 14034), (479, 14079), (481, 14082), (482, 14097), (490, 14142), (492, 14151), (494, 14160), (501, 14211), (514, 14283), (520, 14301), (525, 14322), (540, 14421), (541, 14424), (545, 14457), (550, 14523), (552, 14541), (555, 14556), (558, 14589), (564, 14640), (570, 14691), (596, 14934), (597, 14937), (611, 15012), (619, 15078), (620, 15081), (622, 15099), (627, 15159), (645, 15315), (646, 15318), (647, 15333), (674, 15552), (683, 15609), (685, 15624), (690, 15672), (695, 15717), (714, 15837), (716, 15846), (723, 15885), (730, 15957), (738, 16026), (740, 16038), (749, 16089), (753, 16107), (759, 16164), (762, 16257),

Gene: Malisha_19 Start: 11668, Stop: 17280, Start Num: 22

Candidate Starts for Malisha_19:

(Start: 22 @11668 has 5 MA's), (24, 11686), (26, 11695), (Start: 27 @11713 has 1 MA's), (29, 11734), (31, 11746), (36, 11800), (Start: 37 @11815 has 1 MA's), (57, 11992), (61, 12016), (65, 12040), (67, 12058), (75, 12103), (86, 12169), (87, 12172), (99, 12232), (123, 12397), (127, 12427), (148, 12583), (171, 12721), (188, 12847), (196, 12955), (200, 12988), (205, 13000), (209, 13027), (229, 13174), (233, 13201), (237, 13231), (244, 13267), (249, 13318), (250, 13321), (251, 13330), (256, 13366), (261, 13432), (271, 13480), (273, 13495), (274, 13510), (279, 13564), (280, 13567), (281, 13573), (283, 13585), (284, 13588), (289, 13639), (290, 13642), (294, 13681), (314, 13777), (318, 13798), (339, 14002), (346, 14032), (353, 14113), (356, 14137), (357, 14149), (365, 14185), (378, 14245), (382, 14284), (385, 14293), (391, 14314), (392, 14317), (408, 14416), (415, 14455), (419, 14479), (423, 14512), (426, 14557), (432, 14611), (433, 14623), (440, 14698), (441, 14719), (445, 14755), (449, 14785), (461, 14866), (462, 14875), (465, 14899), (474, 14980), (475, 14986), (479, 15031), (481, 15034), (490, 15094), (492, 15103), (494, 15112), (512, 15220), (523, 15268), (525, 15274), (540, 15373), (541, 15376), (543, 15388), (555, 15505), (558, 15538), (563, 15586), (564, 15589), (569, 15619), (574, 15679), (586, 15760), (589, 15781), (590, 15784), (598, 15877), (600, 15886), (617, 15988), (620, 16009), (623, 16039), (625, 16048), (628, 16087), (629, 16090), (630, 16093), (631, 16120), (640, 16174), (652, 16291), (663, 16375), (665, 16387), (666, 16399), (667, 16405), (670, 16432), (673, 16456), (692, 16633), (699, 16720), (703, 16738), (704, 16747), (718, 16825), (720, 16840), (722, 16849), (728, 16924), (729, 16933), (732, 16945), (741, 17032), (748, 17074), (754, 17107), (755, 17119), (760, 17194), (763, 17260),

Gene: Margaret_19 Start: 10311, Stop: 14516, Start Num: 72

Candidate Starts for Margaret_19:

(Start: 72 @10311 has 22 MA's), (Start: 76 @10338 has 1 MA's), (120, 10626), (125, 10647), (126, 10653), (130, 10686), (133, 10704), (137, 10728), (146, 10818), (149, 10827), (151, 10836), (156, 10869), (160, 10896), (162, 10905), (164, 10929), (189, 11082), (192, 11145), (194, 11160), (203, 11196), (208, 11226), (211, 11247), (218, 11289), (231, 11370), (242, 11445), (243, 11454), (247, 11475), (264, 11622), (284, 11763), (286, 11784), (290, 11817), (291, 11835), (294, 11856), (297, 11877), (301, 11898), (313, 11949), (314, 11952), (315, 11955), (318, 11973), (337, 12054), (344, 12084), (349, 12135), (375, 12189), (382, 12216), (392, 12249), (401, 12309), (413, 12378), (414, 12381), (427, 12483), (428, 12489), (433, 12513), (437, 12537), (438, 12540), (448, 12633), (451, 12666), (453, 12687), (455, 12696), (457, 12705), (459, 12711), (480, 12864), (493, 12933), (494, 12939), (499, 12975), (534, 13104), (553, 13245), (557, 13269), (561, 13314), (582, 13467), (583, 13470), (609, 13659), (613, 13689), (650, 13866), (683, 13938), (686, 13962), (688, 13974), (691, 13998), (693, 14010), (701, 14094), (702, 14100), (709, 14142), (712, 14163), (719, 14196), (724, 14229), (726, 14250), (727, 14277), (733, 14301), (736, 14337), (742, 14385), (758, 14487),

Gene: Mayweather_17 Start: 10006, Stop: 15090, Start Num: 25

Candidate Starts for Mayweather_17:

(Start: 25 @10006 has 24 MA's), (40, 10162), (54, 10291), (58, 10321), (68, 10390), (71, 10402), (74, 10417), (78, 10438), (80, 10447), (84, 10489), (87, 10498), (95, 10534), (99, 10558), (106, 10618), (116, 10672), (120, 10711), (122, 10717), (125, 10732), (127, 10753), (154, 10924), (163, 10987), (170, 11032), (180, 11113), (196, 11272), (200, 11305), (205, 11317), (209, 11344), (215, 11401), (221, 11431), (224, 11443), (236, 11545), (237, 11548), (249, 11635), (256, 11683), (271, 11797), (281, 11890), (284, 11905), (286, 11926), (290, 11959), (295, 12001), (301, 12040), (306, 12064), (307, 12067), (308, 12073), (313, 12091), (318, 12115), (328, 12220), (335, 12268), (346, 12328), (347, 12331), (349, 12367), (356, 12433), (358, 12448), (364, 12478), (368, 12499), (369, 12502), (378, 12541), (380, 12562), (383, 12583), (390, 12607), (392, 12613), (412, 12739), (418, 12769), (423, 12808), (429, 12856), (433, 12877), (434, 12880), (442, 12952), (448, 12997), (451, 13030), (453, 13051), (463, 13105), (473, 13180), (486, 13264), (498, 13351), (553, 13669), (558, 13699), (575, 13837), (583, 13888), (588, 13918), (609, 14071), (613, 14101), (648, 14311), (651, 14320),

(653, 14326), (661, 14362), (680, 14479), (682, 14485), (686, 14527), (689, 14545), (702, 14668), (706, 14692), (708, 14707), (712, 14737), (717, 14764), (719, 14770), (724, 14803), (731, 14872), (733, 14875), (736, 14911), (746, 14983), (750, 15001),

Gene: Melba_17 Start: 10274, Stop: 15796, Start Num: 8

Candidate Starts for Melba_17:

(Start: 8 @10274 has 36 MA's), (Start: 11 @10289 has 1 MA's), (Start: 12 @10295 has 1 MA's), (Start: 14 @10325 has 1 MA's), (15, 10334), (16, 10337), (18, 10379), (34, 10490), (35, 10511), (41, 10631), (48, 10673), (59, 10739), (61, 10757), (64, 10778), (65, 10781), (67, 10799), (73, 10823), (85, 10907), (86, 10910), (95, 10949), (97, 10964), (99, 10973), (124, 11141), (127, 11168), (144, 11285), (171, 11456), (176, 11486), (196, 11690), (205, 11735), (209, 11762), (210, 11774), (225, 11864), (229, 11909), (233, 11936), (237, 11966), (249, 12053), (250, 12056), (254, 12095), (263, 12179), (271, 12215), (275, 12257), (280, 12302), (281, 12308), (283, 12320), (284, 12323), (290, 12377), (294, 12416), (297, 12437), (298, 12440), (301, 12458), (302, 12467), (307, 12485), (312, 12506), (314, 12512), (318, 12533), (322, 12560), (328, 12638), (363, 12827), (371, 12851), (376, 12863), (377, 12866), (386, 12881), (391, 12896), (392, 12899), (400, 12950), (413, 13031), (414, 13034), (420, 13067), (423, 13097), (425, 13121), (469, 13454), (475, 13502), (479, 13547), (481, 13550), (482, 13565), (490, 13610), (492, 13619), (494, 13628), (501, 13679), (514, 13751), (520, 13769), (525, 13790), (540, 13889), (541, 13892), (545, 13925), (550, 13991), (552, 14009), (555, 14024), (558, 14057), (564, 14108), (570, 14159), (576, 14207), (596, 14402), (597, 14405), (610, 14477), (611, 14480), (619, 14546), (620, 14549), (622, 14567), (627, 14627), (634, 14684), (637, 14702), (645, 14783), (646, 14786), (647, 14801), (674, 15014), (681, 15080), (687, 15134), (688, 15146), (689, 15152), (702, 15275), (706, 15299), (709, 15317), (712, 15341), (713, 15347), (717, 15368), (724, 15407), (738, 15548), (740, 15560), (749, 15611), (753, 15629), (762, 15779),

Gene: Mellie_16 Start: 10014, Stop: 15557, Start Num: 8

Candidate Starts for Mellie_16:

(Start: 8 @10014 has 36 MA's), (Start: 11 @10029 has 1 MA's), (Start: 12 @10035 has 1 MA's), (Start: 14 @10065 has 1 MA's), (15, 10074), (16, 10077), (18, 10119), (34, 10230), (35, 10251), (59, 10479), (61, 10497), (63, 10512), (64, 10518), (65, 10521), (67, 10539), (73, 10563), (85, 10647), (87, 10653), (95, 10689), (97, 10704), (99, 10713), (124, 10881), (127, 10908), (144, 11025), (171, 11196), (176, 11226), (196, 11430), (205, 11475), (209, 11502), (210, 11514), (225, 11604), (233, 11676), (237, 11706), (249, 11793), (250, 11796), (254, 11835), (271, 11955), (275, 11997), (280, 12042), (281, 12048), (283, 12060), (284, 12063), (290, 12117), (294, 12156), (297, 12177), (298, 12180), (301, 12198), (312, 12246), (314, 12252), (318, 12273), (322, 12300), (327, 12372), (346, 12507), (363, 12588), (371, 12612), (377, 12627), (391, 12657), (392, 12660), (400, 12711), (413, 12792), (414, 12795), (420, 12828), (423, 12858), (425, 12882), (436, 12948), (469, 13215), (472, 13233), (475, 13263), (479, 13308), (481, 13311), (482, 13326), (485, 13335), (490, 13371), (492, 13380), (494, 13389), (501, 13440), (514, 13512), (520, 13530), (525, 13551), (540, 13650), (541, 13653), (545, 13686), (550, 13752), (552, 13770), (555, 13785), (558, 13818), (564, 13869), (570, 13920), (596, 14163), (597, 14166), (610, 14238), (611, 14241), (619, 14307), (620, 14310), (622, 14328), (627, 14388), (634, 14445), (637, 14463), (645, 14544), (646, 14547), (647, 14562), (674, 14775), (681, 14841), (682, 14847), (688, 14907), (689, 14913), (702, 15036), (706, 15060), (709, 15078), (712, 15102), (713, 15108), (717, 15129), (724, 15168), (738, 15309), (740, 15321), (749, 15372), (753, 15390), (762, 15540),

Gene: MintFen_17 Start: 10274, Stop: 15796, Start Num: 8

Candidate Starts for MintFen_17:

(Start: 8 @10274 has 36 MA's), (Start: 11 @10289 has 1 MA's), (Start: 12 @10295 has 1 MA's), (Start: 14 @10325 has 1 MA's), (15, 10334), (16, 10337), (18, 10379), (34, 10490), (35, 10511), (41, 10631), (48, 10673), (59, 10739), (61, 10757), (64, 10778), (65, 10781), (67, 10799), (73, 10823), (85, 10907), (86, 10910), (95, 10949), (97, 10964), (99, 10973), (124, 11141), (127, 11168), (144, 11285), (171, 11456), (176, 11486), (196, 11690), (205, 11735), (209, 11762), (210, 11774), (225, 11864), (229,

11909), (233, 11936), (237, 11966), (249, 12053), (250, 12056), (254, 12095), (263, 12179), (271, 12215), (275, 12257), (280, 12302), (281, 12308), (283, 12320), (284, 12323), (290, 12377), (294, 12416), (297, 12437), (298, 12440), (301, 12458), (302, 12467), (307, 12485), (312, 12506), (314, 12512), (318, 12533), (322, 12560), (328, 12638), (363, 12827), (371, 12851), (376, 12863), (377, 12866), (386, 12881), (391, 12896), (392, 12899), (400, 12950), (413, 13031), (414, 13034), (420, 13067), (423, 13097), (425, 13121), (469, 13454), (475, 13502), (479, 13547), (481, 13550), (482, 13565), (490, 13610), (492, 13619), (494, 13628), (501, 13679), (514, 13751), (520, 13769), (525, 13790), (540, 13889), (541, 13892), (545, 13925), (550, 13991), (552, 14009), (555, 14024), (558, 14057), (564, 14108), (570, 14159), (576, 14207), (596, 14402), (597, 14405), (610, 14477), (611, 14480), (619, 14546), (620, 14549), (622, 14567), (627, 14627), (634, 14684), (637, 14702), (645, 14783), (646, 14786), (647, 14801), (674, 15014), (681, 15080), (687, 15134), (688, 15146), (689, 15152), (702, 15275), (706, 15299), (709, 15317), (712, 15341), (713, 15347), (717, 15368), (724, 15407), (738, 15548), (740, 15560), (749, 15611), (753, 15629), (762, 15779),

Gene: MissRona_19 Start: 10619, Stop: 16108, Start Num: 8

Candidate Starts for MissRona_19:

(Start: 8 @10619 has 36 MA's), (Start: 11 @10634 has 1 MA's), (Start: 12 @10640 has 1 MA's), (Start: 14 @10670 has 1 MA's), (15, 10679), (16, 10682), (18, 10724), (34, 10835), (35, 10856), (41, 10976), (48, 11018), (59, 11084), (61, 11102), (64, 11123), (65, 11126), (67, 11144), (73, 11168), (85, 11252), (95, 11294), (97, 11309), (99, 11318), (124, 11486), (127, 11513), (144, 11630), (171, 11801), (176, 11831), (196, 12035), (205, 12080), (209, 12107), (210, 12119), (212, 12131), (225, 12209), (229, 12254), (233, 12281), (237, 12311), (249, 12398), (250, 12401), (254, 12440), (260, 12503), (261, 12512), (271, 12560), (275, 12602), (280, 12647), (281, 12653), (284, 12668), (290, 12722), (294, 12761), (297, 12782), (298, 12785), (301, 12803), (307, 12830), (312, 12851), (314, 12857), (318, 12878), (321, 12896), (322, 12905), (359, 13178), (377, 13232), (391, 13262), (392, 13265), (400, 13316), (413, 13397), (414, 13400), (420, 13433), (423, 13463), (425, 13487), (436, 13553), (469, 13820), (475, 13868), (477, 13901), (479, 13913), (481, 13916), (490, 13976), (492, 13985), (494, 13994), (501, 14045), (514, 14117), (520, 14135), (525, 14156), (540, 14255), (541, 14258), (545, 14291), (550, 14357), (552, 14375), (555, 14390), (558, 14423), (564, 14474), (570, 14525), (579, 14594), (596, 14768), (597, 14771), (610, 14843), (611, 14846), (619, 14912), (620, 14915), (622, 14933), (627, 14993), (634, 15050), (637, 15068), (645, 15149), (646, 15152), (647, 15167), (669, 15338), (674, 15392), (685, 15464), (686, 15473), (690, 15509), (698, 15569), (699, 15587), (703, 15605), (711, 15650), (716, 15683), (730, 15794), (738, 15863), (749, 15926), (753, 15944), (762, 16094),

Gene: MunkgeeRoachy_17 Start: 9677, Stop: 14815, Start Num: 25

Candidate Starts for MunkgeeRoachy_17:

(Start: 22 @9653 has 5 MA's), (Start: 25 @9677 has 24 MA's), (28, 9704), (40, 9833), (43, 9908), (68, 10061), (69, 10064), (84, 10160), (87, 10169), (93, 10199), (95, 10205), (97, 10220), (98, 10223), (102, 10244), (111, 10316), (114, 10337), (125, 10403), (127, 10424), (144, 10541), (170, 10703), (176, 10742), (184, 10817), (200, 10976), (205, 10988), (209, 11015), (214, 11060), (215, 11072), (232, 11180), (235, 11201), (238, 11231), (244, 11255), (246, 11267), (249, 11306), (253, 11339), (266, 11441), (267, 11444), (270, 11462), (271, 11468), (281, 11561), (284, 11576), (288, 11615), (294, 11669), (301, 11711), (310, 11753), (317, 11783), (318, 11786), (329, 11894), (330, 11897), (333, 11948), (347, 12023), (354, 12113), (356, 12125), (364, 12170), (368, 12191), (369, 12194), (370, 12197), (382, 12272), (392, 12305), (396, 12326), (400, 12356), (408, 12404), (410, 12410), (414, 12437), (434, 12572), (448, 12689), (451, 12722), (453, 12743), (454, 12746), (466, 12812), (467, 12818), (468, 12833), (484, 12953), (486, 12962), (498, 13046), (553, 13367), (581, 13586), (588, 13622), (616, 13835), (651, 14027), (661, 14075), (664, 14096), (680, 14204), (689, 14270), (691, 14288), (702, 14393), (707, 14423), (708, 14432), (712, 14462), (724, 14528), (727, 14576), (736, 14636), (749, 14723), (758, 14786),

Gene: Murp_17 Start: 10264, Stop: 15864, Start Num: 8

Candidate Starts for Murp_17:

(Start: 8 @10264 has 36 MA's), (Start: 11 @10279 has 1 MA's), (Start: 12 @10285 has 1 MA's), (Start: 14 @10315 has 1 MA's), (15, 10324), (16, 10327), (18, 10369), (34, 10480), (35, 10501), (41, 10621), (49, 10669), (59, 10729), (61, 10747), (64, 10768), (65, 10771), (67, 10789), (85, 10897), (87, 10903), (95, 10939), (97, 10954), (99, 10963), (124, 11131), (127, 11158), (144, 11275), (171, 11446), (176, 11476), (188, 11572), (196, 11680), (205, 11725), (209, 11752), (210, 11764), (225, 11854), (229, 11899), (233, 11926), (237, 11956), (249, 12043), (254, 12085), (256, 12091), (271, 12205), (275, 12247), (280, 12292), (281, 12298), (284, 12313), (290, 12367), (294, 12406), (297, 12427), (298, 12430), (301, 12448), (302, 12457), (307, 12475), (312, 12496), (314, 12502), (318, 12523), (322, 12550), (324, 12598), (328, 12628), (359, 12802), (371, 12841), (377, 12856), (391, 12886), (392, 12889), (400, 12940), (413, 13021), (414, 13024), (420, 13057), (423, 13087), (425, 13111), (435, 13165), (436, 13177), (460, 13366), (469, 13444), (474, 13486), (479, 13537), (481, 13540), (482, 13555), (486, 13567), (490, 13600), (492, 13609), (509, 13723), (515, 13777), (518, 13795), (530, 13879), (532, 13885), (537, 13921), (572, 14245), (577, 14293), (579, 14305), (587, 14368), (593, 14437), (594, 14467), (595, 14470), (596, 14479), (597, 14482), (603, 14515), (610, 14554), (611, 14557), (619, 14623), (620, 14626), (622, 14644), (627, 14704), (634, 14761), (637, 14779), (645, 14860), (647, 14878), (674, 15079), (681, 15145), (688, 15211), (689, 15217), (702, 15343), (706, 15367), (709, 15385), (712, 15409), (713, 15415), (717, 15436), (724, 15475), (738, 15616), (749, 15679), (753, 15697), (759, 15757), (762, 15850),

Gene: Nibbles_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for Nibbles_18:

(Start: 22 @10598 has 5 MA's), (Start: 25 @10619 has 24 MA's), (28, 10646), (40, 10775), (48, 10871), (56, 10922), (66, 10979), (70, 11012), (71, 11015), (84, 11102), (88, 11114), (97, 11162), (98, 11165), (99, 11171), (105, 11225), (106, 11231), (114, 11279), (125, 11345), (127, 11366), (184, 11759), (185, 11762), (193, 11864), (205, 11930), (206, 11936), (209, 11957), (237, 12161), (239, 12179), (242, 12185), (244, 12197), (246, 12209), (249, 12248), (251, 12260), (256, 12296), (260, 12353), (264, 12377), (281, 12503), (284, 12518), (288, 12557), (297, 12632), (303, 12665), (307, 12680), (308, 12686), (309, 12692), (318, 12728), (329, 12836), (336, 12908), (346, 12962), (364, 13112), (369, 13136), (380, 13196), (381, 13208), (382, 13214), (390, 13241), (391, 13244), (392, 13247), (406, 13340), (408, 13346), (416, 13397), (425, 13466), (431, 13499), (434, 13514), (435, 13520), (441, 13577), (443, 13589), (447, 13628), (448, 13631), (450, 13652), (451, 13664), (453, 13685), (454, 13688), (462, 13727), (463, 13739), (466, 13754), (484, 13895), (498, 13991), (510, 14057), (513, 14078), (516, 14084), (553, 14321), (558, 14351), (561, 14390), (580, 14525), (584, 14555), (588, 14576), (609, 14735), (613, 14768), (651, 14981), (657, 14999), (661, 15005), (680, 15134), (689, 15200), (694, 15251), (702, 15323), (708, 15362), (712, 15392), (719, 15425), (724, 15458), (733, 15530), (740, 15602), (749, 15656), (751, 15662), (758, 15719),

Gene: Nina_17 Start: 10662, Stop: 15809, Start Num: 25

Candidate Starts for Nina_17:

(Start: 22 @10638 has 5 MA's), (Start: 25 @10662 has 24 MA's), (28, 10689), (40, 10818), (45, 10911), (46, 10914), (60, 11004), (64, 11028), (73, 11073), (74, 11082), (84, 11154), (86, 11160), (87, 11163), (92, 11190), (94, 11196), (97, 11214), (98, 11217), (102, 11238), (111, 11310), (114, 11331), (125, 11397), (127, 11418), (144, 11535), (170, 11697), (176, 11736), (184, 11811), (200, 11970), (205, 11982), (209, 12009), (214, 12054), (215, 12066), (229, 12156), (232, 12174), (235, 12195), (238, 12225), (244, 12249), (246, 12261), (249, 12300), (253, 12333), (266, 12435), (267, 12438), (271, 12462), (281, 12555), (284, 12570), (288, 12609), (294, 12663), (301, 12705), (303, 12717), (310, 12747), (317, 12777), (318, 12780), (329, 12888), (330, 12891), (333, 12942), (334, 12948), (347, 13017), (354, 13107), (356, 13119), (364, 13164), (368, 13185), (369, 13188), (370, 13191), (382, 13266), (392, 13299), (396, 13320), (400, 13350), (408, 13398), (410, 13404), (414, 13431), (434, 13566), (448, 13683), (451, 13716), (453, 13737), (466, 13806), (467, 13812), (468, 13827), (484, 13947), (486, 13956), (498, 14040), (553, 14361), (556, 14382), (581, 14580), (588, 14616), (616, 14829), (651, 15021), (661, 15069), (664, 15090), (680, 15198), (689, 15264), (691, 15282),

(702, 15387), (707, 15417), (708, 15426), (712, 15456), (724, 15522), (727, 15570), (736, 15630), (749, 15717), (758, 15780),

Gene: Nodigi_18 Start: 10594, Stop: 14802, Start Num: 72

Candidate Starts for Nodigi_18:

(Start: 72 @10594 has 22 MA's), (Start: 76 @10621 has 1 MA's), (125, 10930), (133, 10987), (137, 11011), (142, 11056), (146, 11101), (151, 11119), (153, 11134), (156, 11152), (158, 11161), (165, 11215), (175, 11272), (186, 11353), (190, 11401), (192, 11440), (194, 11455), (199, 11464), (203, 11491), (208, 11521), (211, 11542), (231, 11665), (240, 11731), (248, 11794), (259, 11881), (271, 11950), (284, 12058), (286, 12079), (290, 12112), (291, 12130), (293, 12148), (297, 12172), (302, 12202), (314, 12247), (315, 12250), (318, 12268), (344, 12379), (346, 12391), (347, 12394), (349, 12430), (364, 12472), (375, 12484), (382, 12511), (392, 12544), (404, 12619), (413, 12673), (414, 12676), (416, 12694), (423, 12739), (428, 12784), (437, 12832), (438, 12835), (451, 12961), (455, 12991), (457, 13000), (459, 13006), (480, 13159), (489, 13204), (493, 13228), (494, 13234), (499, 13270), (511, 13327), (526, 13378), (535, 13423), (553, 13561), (558, 13591), (582, 13783), (609, 13960), (650, 14152), (683, 14224), (688, 14260), (691, 14284), (693, 14296), (696, 14338), (702, 14386), (712, 14449), (717, 14476), (719, 14482), (724, 14515), (726, 14536), (727, 14563), (733, 14587), (736, 14623), (739, 14650), (740, 14659), (742, 14671), (758, 14773),

Gene: Obliviate_16 Start: 10043, Stop: 15586, Start Num: 8

Candidate Starts for Obliviate_16:

(Start: 8 @10043 has 36 MA's), (Start: 11 @10058 has 1 MA's), (Start: 12 @10064 has 1 MA's), (Start: 14 @10094 has 1 MA's), (15, 10103), (16, 10106), (18, 10148), (34, 10259), (35, 10280), (59, 10508), (61, 10526), (63, 10541), (64, 10547), (65, 10550), (67, 10568), (73, 10592), (85, 10676), (87, 10682), (95, 10718), (97, 10733), (99, 10742), (124, 10910), (127, 10937), (144, 11054), (154, 11108), (171, 11225), (176, 11255), (196, 11459), (205, 11504), (209, 11531), (210, 11543), (225, 11633), (229, 11678), (233, 11705), (237, 11735), (249, 11822), (250, 11825), (254, 11864), (271, 11984), (275, 12026), (280, 12071), (281, 12077), (283, 12089), (284, 12092), (290, 12146), (294, 12185), (297, 12206), (298, 12209), (301, 12227), (307, 12254), (312, 12275), (314, 12281), (318, 12302), (322, 12329), (327, 12401), (346, 12536), (363, 12617), (371, 12641), (377, 12656), (391, 12686), (392, 12689), (400, 12740), (413, 12821), (414, 12824), (420, 12857), (423, 12887), (425, 12911), (436, 12977), (469, 13244), (472, 13262), (475, 13292), (479, 13337), (481, 13340), (482, 13355), (485, 13364), (490, 13400), (492, 13409), (494, 13418), (501, 13469), (514, 13541), (520, 13559), (525, 13580), (540, 13679), (541, 13682), (545, 13715), (550, 13781), (552, 13799), (555, 13814), (558, 13847), (564, 13898), (570, 13949), (596, 14192), (597, 14195), (610, 14267), (611, 14270), (619, 14336), (620, 14339), (622, 14357), (627, 14417), (634, 14474), (637, 14492), (645, 14573), (646, 14576), (647, 14591), (669, 14750), (674, 14804), (681, 14870), (682, 14876), (688, 14936), (689, 14942), (694, 14993), (702, 15065), (706, 15089), (709, 15107), (712, 15131), (713, 15137), (717, 15158), (724, 15197), (738, 15338), (740, 15350), (749, 15401), (753, 15419), (762, 15569),

Gene: Orla_18 Start: 10598, Stop: 14806, Start Num: 72

Candidate Starts for Orla_18:

(Start: 72 @10598 has 22 MA's), (Start: 76 @10625 has 1 MA's), (125, 10934), (133, 10991), (137, 11015), (142, 11060), (146, 11105), (151, 11123), (153, 11138), (156, 11156), (158, 11165), (165, 11219), (175, 11276), (186, 11357), (190, 11405), (192, 11444), (194, 11459), (199, 11468), (203, 11495), (208, 11525), (211, 11546), (231, 11669), (240, 11735), (248, 11798), (259, 11885), (271, 11954), (284, 12062), (286, 12083), (290, 12116), (291, 12134), (293, 12152), (297, 12176), (302, 12206), (314, 12251), (315, 12254), (318, 12272), (344, 12383), (346, 12395), (349, 12434), (364, 12476), (375, 12488), (377, 12500), (382, 12515), (392, 12548), (404, 12623), (413, 12677), (414, 12680), (416, 12698), (423, 12743), (427, 12782), (428, 12788), (433, 12812), (436, 12833), (437, 12836), (438, 12839), (451, 12965), (453, 12986), (455, 12995), (457, 13004), (459, 13010), (480, 13163), (489, 13208), (493, 13232), (494, 13238), (499, 13274), (505, 13307), (511, 13331), (526, 13382), (535, 13427), (553, 13565), (558, 13595), (582, 13787), (609, 13964), (650, 14156), (683,

14228), (688, 14264), (691, 14288), (693, 14300), (696, 14342), (702, 14390), (712, 14453), (717, 14480), (719, 14486), (724, 14519), (726, 14540), (727, 14567), (733, 14591), (736, 14627), (739, 14654), (740, 14663), (742, 14675), (758, 14777),

Gene: PCoral7_17 Start: 10271, Stop: 15886, Start Num: 8

Candidate Starts for PCoral7_17:

(Start: 7 @10235 has 1 MA's), (Start: 8 @10271 has 36 MA's), (Start: 12 @10292 has 1 MA's), (15, 10331), (18, 10376), (30, 10466), (32, 10475), (34, 10487), (35, 10508), (38, 10565), (42, 10637), (45, 10658), (53, 10700), (54, 10703), (57, 10730), (60, 10751), (61, 10754), (64, 10775), (67, 10796), (77, 10847), (78, 10850), (87, 10910), (117, 11093), (127, 11165), (156, 11351), (171, 11453), (173, 11468), (176, 11483), (181, 11540), (205, 11732), (223, 11852), (233, 11933), (237, 11963), (244, 11999), (249, 12050), (266, 12185), (267, 12188), (271, 12212), (277, 12263), (280, 12299), (281, 12305), (284, 12320), (290, 12374), (294, 12413), (298, 12437), (301, 12455), (312, 12503), (314, 12509), (317, 12527), (318, 12530), (320, 12545), (322, 12557), (324, 12605), (346, 12743), (353, 12824), (356, 12848), (357, 12860), (358, 12863), (365, 12896), (383, 12998), (390, 13025), (391, 13028), (392, 13031), (393, 13037), (400, 13082), (402, 13094), (404, 13106), (408, 13130), (411, 13145), (413, 13160), (414, 13163), (418, 13187), (421, 13214), (433, 13295), (444, 13379), (456, 13484), (462, 13517), (469, 13583), (470, 13592), (475, 13631), (477, 13664), (479, 13676), (481, 13679), (482, 13694), (485, 13703), (490, 13739), (492, 13748), (494, 13757), (523, 13913), (524, 13916), (525, 13919), (527, 13940), (541, 14021), (546, 14063), (555, 14150), (558, 14183), (560, 14192), (564, 14234), (579, 14348), (595, 14513), (610, 14597), (611, 14600), (614, 14630), (615, 14633), (619, 14666), (620, 14669), (627, 14747), (634, 14804), (647, 14921), (654, 14972), (672, 15074), (674, 15107), (681, 15173), (688, 15239), (689, 15245), (691, 15263), (694, 15296), (702, 15368), (709, 15410), (710, 15416), (712, 15434), (713, 15440), (717, 15461), (724, 15500), (738, 15641), (749, 15704), (759, 15779), (762, 15872),

Gene: Periwinkle_20 Start: 10340, Stop: 15973, Start Num: 20

Candidate Starts for Periwinkle_20:

(17, 10313), (Start: 20 @10340 has 1 MA's), (Start: 27 @10385 has 1 MA's), (29, 10406), (33, 10427), (36, 10472), (Start: 37 @10487 has 1 MA's), (42, 10571), (50, 10613), (51, 10625), (61, 10688), (63, 10703), (65, 10712), (67, 10730), (68, 10736), (78, 10784), (85, 10838), (102, 10919), (122, 11063), (123, 11069), (127, 11099), (160, 11318), (171, 11393), (176, 11423), (193, 11606), (196, 11627), (205, 11672), (206, 11678), (209, 11699), (220, 11780), (229, 11846), (233, 11873), (235, 11885), (237, 11903), (238, 11915), (244, 11939), (246, 11951), (249, 11990), (250, 11993), (251, 12002), (254, 12032), (258, 12077), (268, 12137), (271, 12152), (274, 12182), (275, 12194), (280, 12239), (281, 12245), (283, 12257), (284, 12260), (286, 12281), (289, 12311), (290, 12314), (298, 12377), (302, 12404), (303, 12407), (304, 12410), (305, 12416), (311, 12440), (312, 12443), (314, 12449), (316, 12455), (318, 12470), (321, 12488), (327, 12569), (331, 12617), (332, 12623), (336, 12650), (356, 12809), (357, 12821), (365, 12857), (378, 12917), (382, 12956), (384, 12962), (385, 12965), (391, 12986), (392, 12989), (408, 13088), (415, 13127), (419, 13151), (423, 13184), (426, 13229), (432, 13283), (440, 13370), (441, 13391), (445, 13427), (449, 13457), (461, 13538), (462, 13547), (465, 13571), (474, 13652), (475, 13658), (479, 13703), (481, 13706), (490, 13766), (492, 13775), (494, 13784), (512, 13892), (523, 13940), (525, 13946), (540, 14045), (541, 14048), (543, 14060), (555, 14177), (558, 14210), (564, 14261), (569, 14291), (574, 14351), (586, 14432), (589, 14453), (591, 14486), (598, 14549), (600, 14558), (602, 14567), (620, 14681), (623, 14711), (625, 14720), (628, 14759), (629, 14762), (631, 14792), (634, 14813), (660, 15017), (666, 15080), (667, 15086), (673, 15137), (692, 15323), (699, 15410), (704, 15437), (705, 15440), (718, 15515), (722, 15539), (725, 15578), (728, 15614), (732, 15635), (741, 15722), (748, 15764), (754, 15797), (755, 15809), (760, 15887), (763, 15953),

Gene: Petra_19 Start: 10705, Stop: 16197, Start Num: 14

Candidate Starts for Petra_19:

(Start: 8 @10654 has 36 MA's), (Start: 11 @10669 has 1 MA's), (Start: 12 @10675 has 1 MA's), (Start: 14 @10705 has 1 MA's), (15, 10714), (16, 10717), (18, 10759), (34, 10870), (35, 10891), (59, 11119), (61, 11137), (64, 11158), (65, 11161), (67, 11179), (73, 11203), (85, 11287), (95, 11329), (97, 11344), (99, 11353), (124, 11521), (127, 11548), (144, 11665), (171, 11836), (176, 11866), (196, 12070), (205, 12115), (229, 12289), (233, 12316), (237, 12346), (249, 12433), (254, 12475), (256, 12481), (271, 12595), (273, 12610), (275, 12637), (280, 12682), (281, 12688), (284, 12703), (290, 12757), (294, 12796), (297, 12817), (298, 12820), (301, 12838), (307, 12865), (312, 12886), (314, 12892), (318, 12913), (322, 12940), (359, 13213), (371, 13252), (377, 13267), (391, 13297), (392, 13300), (400, 13351), (413, 13432), (414, 13435), (420, 13468), (423, 13498), (436, 13588), (469, 13855), (475, 13903), (479, 13948), (481, 13951), (482, 13966), (485, 13975), (490, 14011), (492, 14020), (494, 14029), (501, 14080), (514, 14152), (520, 14170), (525, 14191), (540, 14290), (541, 14293), (545, 14326), (550, 14392), (552, 14410), (555, 14425), (558, 14458), (564, 14509), (570, 14560), (596, 14803), (597, 14806), (610, 14878), (611, 14881), (619, 14947), (620, 14950), (622, 14968), (627, 15028), (634, 15085), (637, 15103), (645, 15184), (646, 15187), (647, 15202), (669, 15361), (674, 15415), (681, 15481), (688, 15547), (689, 15553), (702, 15676), (706, 15700), (709, 15718), (712, 15742), (713, 15748), (717, 15769), (724, 15808), (738, 15949), (740, 15961), (749, 16012), (753, 16030), (759, 16087), (762, 16180),

Gene: Phabuloso_18 Start: 9869, Stop: 15502, Start Num: 21

Candidate Starts for Phabuloso_18:

(Start: 21 @9869 has 9 MA's), (26, 9896), (Start: 27 @9914 has 1 MA's), (29, 9935), (33, 9956), (36, 10001), (Start: 37 @10016 has 1 MA's), (42, 10100), (50, 10142), (51, 10154), (61, 10217), (63, 10232), (65, 10241), (67, 10259), (68, 10265), (78, 10313), (102, 10448), (123, 10598), (127, 10628), (160, 10847), (171, 10922), (176, 10952), (196, 11156), (204, 11198), (205, 11201), (206, 11207), (209, 11228), (220, 11309), (229, 11375), (233, 11402), (235, 11414), (237, 11432), (238, 11444), (244, 11468), (246, 11480), (249, 11519), (250, 11522), (251, 11531), (254, 11561), (258, 11606), (268, 11666), (271, 11681), (274, 11711), (275, 11723), (280, 11768), (281, 11774), (284, 11789), (287, 11819), (289, 11840), (290, 11843), (298, 11906), (302, 11933), (303, 11936), (304, 11939), (305, 11945), (311, 11969), (312, 11972), (314, 11978), (316, 11984), (318, 11999), (321, 12017), (327, 12098), (331, 12146), (332, 12152), (336, 12179), (356, 12338), (357, 12350), (365, 12386), (378, 12446), (382, 12485), (384, 12491), (385, 12494), (391, 12515), (392, 12518), (408, 12617), (415, 12656), (419, 12680), (423, 12713), (426, 12758), (432, 12812), (440, 12899), (441, 12920), (445, 12956), (449, 12986), (460, 13064), (461, 13067), (462, 13076), (465, 13100), (474, 13181), (475, 13187), (479, 13232), (481, 13235), (482, 13250), (490, 13295), (492, 13304), (494, 13313), (495, 13316), (512, 13421), (523, 13469), (525, 13475), (540, 13574), (541, 13577), (543, 13589), (555, 13706), (558, 13739), (564, 13790), (569, 13820), (574, 13880), (586, 13961), (589, 13982), (591, 14015), (598, 14078), (602, 14096), (620, 14210), (623, 14240), (625, 14249), (628, 14288), (629, 14291), (631, 14321), (634, 14342), (652, 14495), (660, 14546), (666, 14609), (667, 14615), (673, 14666), (692, 14852), (699, 14939), (704, 14966), (705, 14969), (718, 15044), (722, 15068), (725, 15107), (728, 15143), (732, 15164), (741, 15251), (748, 15293), (754, 15326), (755, 15338), (760, 15416), (763, 15482),

Gene: Phistory_19 Start: 10653, Stop: 16280, Start Num: 19

Candidate Starts for Phistory_19:

(Start: 19 @10653 has 1 MA's), (23, 10659), (Start: 27 @10698 has 1 MA's), (36, 10785), (42, 10884), (50, 10926), (51, 10938), (61, 11001), (63, 11016), (65, 11025), (67, 11043), (68, 11049), (78, 11097), (90, 11172), (102, 11232), (123, 11382), (127, 11412), (171, 11706), (176, 11736), (193, 11919), (196, 11940), (204, 11982), (205, 11985), (206, 11991), (209, 12012), (210, 12024), (219, 12084), (223, 12105), (229, 12159), (233, 12186), (235, 12198), (237, 12216), (238, 12228), (244, 12252), (246, 12264), (249, 12303), (250, 12306), (251, 12315), (255, 12348), (261, 12417), (266, 12438), (271, 12465), (272, 12471), (275, 12507), (276, 12510), (280, 12552), (281, 12558), (283, 12570), (284, 12573), (289, 12624), (290, 12627), (298, 12690), (299, 12699), (302, 12717), (303, 12720), (305, 12729), (314, 12762), (318, 12783), (319, 12789), (320, 12798), (323, 12846), (328, 12888), (331,

12930), (336, 12963), (345, 13014), (346, 13017), (349, 13056), (350, 13065), (356, 13122), (357, 13134), (365, 13170), (378, 13230), (382, 13269), (384, 13275), (391, 13299), (392, 13302), (395, 13320), (408, 13401), (419, 13464), (423, 13497), (427, 13572), (432, 13596), (433, 13608), (436, 13641), (441, 13704), (445, 13740), (449, 13770), (460, 13848), (461, 13851), (462, 13860), (465, 13884), (475, 13971), (479, 14016), (481, 14019), (482, 14034), (490, 14079), (492, 14088), (494, 14097), (495, 14100), (512, 14205), (523, 14253), (525, 14259), (540, 14358), (541, 14361), (543, 14373), (555, 14490), (558, 14523), (564, 14574), (569, 14604), (574, 14664), (586, 14745), (589, 14766), (590, 14769), (598, 14862), (602, 14880), (620, 14994), (623, 15024), (625, 15033), (628, 15072), (629, 15075), (631, 15105), (634, 15126), (660, 15324), (666, 15387), (667, 15393), (670, 15420), (673, 15444), (692, 15630), (699, 15717), (704, 15744), (705, 15747), (718, 15822), (722, 15846), (725, 15885), (728, 15921), (732, 15942), (741, 16029), (748, 16071), (754, 16104), (755, 16116), (760, 16194), (763, 16260),

Gene: PhrostedPhlake_18 Start: 10632, Stop: 16172, Start Num: 8

Candidate Starts for PhrostedPhlake_18:

(Start: 8 @10632 has 36 MA's), (Start: 11 @10647 has 1 MA's), (Start: 12 @10653 has 1 MA's), (Start: 14 @10683 has 1 MA's), (15, 10692), (18, 10737), (34, 10848), (35, 10869), (59, 11097), (61, 11115), (64, 11136), (65, 11139), (67, 11157), (73, 11181), (85, 11265), (87, 11271), (95, 11307), (97, 11322), (99, 11331), (106, 11391), (124, 11499), (127, 11526), (144, 11643), (154, 11697), (160, 11739), (171, 11814), (176, 11844), (196, 12048), (205, 12093), (229, 12267), (233, 12294), (237, 12324), (249, 12411), (254, 12453), (260, 12516), (271, 12573), (275, 12615), (280, 12660), (281, 12666), (284, 12681), (290, 12735), (294, 12774), (297, 12795), (298, 12798), (301, 12816), (307, 12843), (312, 12864), (314, 12870), (318, 12891), (322, 12918), (371, 13230), (377, 13245), (391, 13275), (392, 13278), (400, 13329), (413, 13410), (414, 13413), (420, 13446), (423, 13476), (436, 13566), (469, 13833), (475, 13881), (477, 13914), (479, 13926), (481, 13929), (482, 13944), (485, 13953), (490, 13989), (492, 13998), (494, 14007), (512, 14115), (523, 14163), (524, 14166), (525, 14169), (541, 14271), (542, 14274), (555, 14400), (558, 14433), (563, 14481), (564, 14484), (570, 14535), (579, 14604), (596, 14778), (597, 14781), (610, 14853), (611, 14856), (619, 14922), (620, 14925), (622, 14943), (627, 15003), (634, 15060), (637, 15078), (645, 15159), (646, 15162), (647, 15177), (669, 15336), (674, 15390), (681, 15456), (688, 15522), (689, 15528), (693, 15558), (702, 15651), (706, 15675), (709, 15693), (712, 15717), (713, 15723), (717, 15744), (724, 15783), (738, 15924), (749, 15987), (753, 16005), (762, 16155),

Gene: Pipp_17 Start: 10133, Stop: 15790, Start Num: 5

Candidate Starts for Pipp_17:

(4, 10094), (Start: 5 @10133 has 1 MA's), (Start: 8 @10247 has 36 MA's), (Start: 11 @10262 has 1 MA's), (Start: 12 @10268 has 1 MA's), (Start: 14 @10298 has 1 MA's), (15, 10307), (16, 10310), (18, 10352), (34, 10463), (35, 10484), (61, 10730), (64, 10751), (65, 10754), (67, 10772), (73, 10796), (85, 10880), (87, 10886), (95, 10922), (97, 10937), (99, 10946), (102, 10961), (106, 11006), (124, 11114), (127, 11141), (134, 11174), (144, 11258), (176, 11459), (196, 11663), (206, 11714), (209, 11735), (210, 11747), (225, 11837), (229, 11882), (233, 11909), (237, 11939), (249, 12026), (250, 12029), (254, 12068), (261, 12140), (271, 12188), (275, 12230), (280, 12275), (281, 12281), (283, 12293), (284, 12296), (290, 12350), (294, 12389), (297, 12410), (298, 12413), (301, 12431), (307, 12458), (312, 12479), (314, 12485), (318, 12506), (346, 12740), (359, 12806), (371, 12845), (377, 12860), (391, 12890), (392, 12893), (400, 12944), (413, 13025), (414, 13028), (420, 13061), (423, 13091), (436, 13181), (462, 13382), (469, 13448), (475, 13496), (479, 13541), (481, 13544), (482, 13559), (485, 13568), (490, 13604), (492, 13613), (494, 13622), (514, 13745), (525, 13784), (540, 13883), (541, 13886), (550, 13985), (552, 14003), (555, 14018), (558, 14051), (564, 14102), (570, 14153), (579, 14222), (596, 14396), (597, 14399), (608, 14465), (610, 14471), (611, 14474), (619, 14540), (620, 14543), (622, 14561), (627, 14621), (634, 14678), (637, 14696), (645, 14777), (647, 14795), (654, 14846), (669, 14954), (674, 15008), (681, 15074), (687, 15128), (688, 15140), (689, 15146), (693, 15176), (702, 15269), (706, 15293), (709, 15311), (712, 15335), (713, 15341), (717, 15362), (724, 15401), (738, 15542), (749, 15605), (753, 15623), (759, 15680), (762, 15773),

Gene: Pons_16 Start: 9384, Stop: 14465, Start Num: 25

Candidate Starts for Pons_16:

(Start: 25 @9384 has 24 MA's), (40, 9540), (54, 9669), (58, 9699), (68, 9768), (71, 9780), (74, 9795), (78, 9816), (80, 9825), (84, 9867), (87, 9876), (95, 9912), (99, 9936), (106, 9996), (116, 10050), (120, 10089), (122, 10095), (125, 10110), (127, 10131), (136, 10185), (154, 10302), (163, 10365), (170, 10410), (176, 10449), (180, 10491), (196, 10650), (200, 10683), (205, 10695), (209, 10722), (215, 10779), (221, 10809), (224, 10821), (236, 10923), (237, 10926), (249, 11013), (256, 11061), (271, 11175), (277, 11226), (281, 11268), (284, 11283), (285, 11292), (286, 11304), (290, 11337), (295, 11379), (305, 11439), (306, 11442), (307, 11445), (308, 11451), (313, 11469), (318, 11493), (328, 11598), (335, 11646), (346, 11706), (347, 11709), (349, 11745), (358, 11826), (364, 11856), (368, 11877), (369, 11880), (370, 11883), (383, 11961), (390, 11985), (392, 11991), (412, 12117), (418, 12147), (423, 12186), (429, 12234), (433, 12255), (434, 12258), (435, 12264), (442, 12330), (448, 12375), (451, 12408), (453, 12429), (463, 12483), (484, 12633), (486, 12642), (498, 12729), (553, 13047), (558, 13077), (575, 13215), (588, 13296), (609, 13446), (613, 13476), (648, 13686), (651, 13695), (653, 13701), (661, 13737), (680, 13854), (682, 13860), (686, 13902), (689, 13920), (702, 14043), (706, 14067), (708, 14082), (712, 14112), (717, 14139), (719, 14145), (724, 14178), (731, 14247), (733, 14250), (736, 14286), (746, 14358), (750, 14376),

Gene: PotPie_17 Start: 10237, Stop: 15330, Start Num: 25

Candidate Starts for PotPie_17:

(Start: 25 @10237 has 24 MA's), (40, 10393), (54, 10522), (58, 10552), (68, 10621), (71, 10633), (78, 10669), (80, 10678), (84, 10720), (87, 10729), (95, 10765), (99, 10789), (116, 10903), (120, 10942), (125, 10963), (127, 10984), (154, 11155), (163, 11218), (170, 11263), (180, 11344), (196, 11503), (200, 11536), (205, 11548), (209, 11575), (215, 11632), (221, 11662), (224, 11674), (236, 11776), (237, 11779), (249, 11866), (256, 11914), (271, 12028), (281, 12121), (284, 12136), (286, 12157), (290, 12190), (292, 12220), (295, 12232), (301, 12271), (306, 12295), (307, 12298), (313, 12322), (318, 12346), (328, 12451), (339, 12529), (346, 12559), (347, 12562), (349, 12598), (353, 12640), (356, 12664), (358, 12679), (360, 12694), (364, 12709), (369, 12733), (378, 12772), (379, 12787), (380, 12793), (390, 12838), (392, 12844), (412, 12970), (418, 13000), (424, 13051), (429, 13087), (433, 13108), (434, 13111), (442, 13183), (448, 13228), (451, 13261), (453, 13282), (463, 13336), (473, 13411), (486, 13495), (498, 13582), (553, 13900), (558, 13930), (575, 14068), (583, 14119), (588, 14149), (609, 14314), (613, 14344), (644, 14524), (653, 14575), (661, 14602), (664, 14623), (680, 14719), (686, 14767), (689, 14785), (702, 14908), (706, 14932), (708, 14947), (712, 14977), (717, 15004), (719, 15010), (724, 15043), (731, 15112), (733, 15115), (736, 15151), (750, 15241),

Gene: PrincePatrick_17 Start: 10339, Stop: 15960, Start Num: 8

Candidate Starts for PrincePatrick_17:

(Start: 7 @10303 has 1 MA's), (Start: 8 @10339 has 36 MA's), (Start: 12 @10360 has 1 MA's), (15, 10399), (18, 10444), (30, 10534), (32, 10543), (34, 10555), (35, 10576), (38, 10633), (42, 10705), (45, 10726), (53, 10768), (54, 10771), (57, 10798), (60, 10819), (61, 10822), (64, 10843), (67, 10864), (77, 10915), (78, 10918), (87, 10978), (117, 11161), (127, 11233), (156, 11419), (171, 11521), (173, 11536), (176, 11551), (181, 11608), (205, 11800), (223, 11920), (233, 12001), (237, 12031), (244, 12067), (249, 12118), (254, 12160), (261, 12232), (269, 12268), (271, 12280), (277, 12331), (281, 12373), (284, 12388), (290, 12442), (294, 12481), (298, 12505), (301, 12523), (312, 12571), (314, 12577), (317, 12595), (318, 12598), (320, 12613), (322, 12625), (324, 12673), (328, 12703), (338, 12778), (353, 12892), (356, 12916), (357, 12928), (358, 12931), (365, 12964), (383, 13066), (392, 13099), (400, 13150), (402, 13162), (404, 13174), (408, 13198), (414, 13234), (418, 13258), (421, 13285), (433, 13366), (444, 13450), (456, 13555), (462, 13588), (469, 13654), (470, 13663), (475, 13702), (477, 13735), (479, 13747), (481, 13750), (482, 13765), (485, 13774), (490, 13810), (492, 13819), (494, 13828), (500, 13870), (523, 13984), (524, 13987), (525, 13990), (527, 14011), (541, 14092), (546, 14134), (555, 14221), (558, 14254), (560, 14263), (564, 14305), (579, 14419), (610, 14668), (611, 14671), (614, 14701), (615, 14704), (618, 14728), (619, 14737), (620, 14740), (627,

14818), (634, 14875), (647, 14992), (654, 15043), (674, 15181), (681, 15247), (688, 15313), (689, 15319), (691, 15337), (700, 15430), (702, 15442), (710, 15490), (712, 15508), (713, 15514), (717, 15535), (724, 15574), (738, 15715), (749, 15778), (759, 15853), (762, 15946),

Gene: PsychoKiller_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for PsychoKiller_16:

(Start: 22 @9605 has 5 MA's), (Start: 25 @9629 has 24 MA's), (28, 9656), (40, 9785), (43, 9860), (68, 10013), (69, 10016), (84, 10112), (87, 10121), (93, 10151), (95, 10157), (97, 10172), (98, 10175), (102, 10196), (111, 10268), (114, 10289), (125, 10355), (127, 10376), (144, 10493), (170, 10655), (176, 10694), (184, 10769), (200, 10928), (205, 10940), (209, 10967), (214, 11012), (215, 11024), (229, 11114), (232, 11132), (235, 11153), (238, 11183), (244, 11207), (246, 11219), (249, 11258), (253, 11291), (266, 11393), (267, 11396), (271, 11420), (281, 11513), (284, 11528), (288, 11567), (309, 11702), (310, 11705), (318, 11738), (329, 11846), (330, 11849), (333, 11900), (347, 11975), (356, 12077), (364, 12122), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (396, 12278), (400, 12308), (408, 12356), (410, 12362), (414, 12389), (434, 12524), (448, 12641), (451, 12674), (453, 12695), (466, 12764), (467, 12770), (468, 12785), (484, 12905), (486, 12914), (498, 12998), (553, 13319), (581, 13538), (588, 13574), (616, 13787), (651, 13979), (661, 14027), (664, 14048), (680, 14156), (689, 14222), (691, 14240), (702, 14345), (707, 14375), (708, 14384), (712, 14414), (724, 14480), (727, 14528), (736, 14588), (749, 14675), (758, 14738),

Gene: Quasar_16 Start: 10238, Stop: 15376, Start Num: 25

Candidate Starts for Quasar_16:

(Start: 22 @10214 has 5 MA's), (Start: 25 @10238 has 24 MA's), (28, 10265), (40, 10394), (43, 10469), (68, 10622), (69, 10625), (84, 10721), (87, 10730), (93, 10760), (95, 10766), (97, 10781), (98, 10784), (102, 10805), (111, 10877), (114, 10898), (125, 10964), (127, 10985), (144, 11102), (170, 11264), (176, 11303), (184, 11378), (200, 11537), (205, 11549), (209, 11576), (214, 11621), (215, 11633), (229, 11723), (232, 11741), (235, 11762), (238, 11792), (244, 11816), (246, 11828), (249, 11867), (253, 11900), (266, 12002), (267, 12005), (271, 12029), (272, 12035), (281, 12122), (284, 12137), (288, 12176), (310, 12314), (317, 12344), (318, 12347), (329, 12455), (330, 12458), (333, 12509), (347, 12584), (356, 12686), (364, 12731), (368, 12752), (369, 12755), (370, 12758), (382, 12833), (392, 12866), (396, 12887), (400, 12917), (408, 12965), (410, 12971), (414, 12998), (434, 13133), (448, 13250), (451, 13283), (453, 13304), (454, 13307), (466, 13373), (467, 13379), (468, 13394), (484, 13514), (486, 13523), (498, 13607), (553, 13928), (581, 14147), (588, 14183), (616, 14396), (651, 14588), (661, 14636), (664, 14657), (680, 14765), (689, 14831), (691, 14849), (702, 14954), (707, 14984), (708, 14993), (712, 15023), (724, 15089), (727, 15137), (736, 15197), (749, 15284), (758, 15347),

Gene: REQ2_18 Start: 12445, Stop: 18258, Start Num: 1

Candidate Starts for REQ2_18:

(Start: 1 @12445 has 1 MA's), (3, 12493), (9, 12664), (Start: 25 @12805 has 24 MA's), (39, 12958), (40, 12970), (43, 13045), (44, 13051), (47, 13060), (55, 13114), (60, 13147), (68, 13198), (69, 13201), (79, 13252), (87, 13306), (88, 13309), (99, 13366), (100, 13369), (104, 13402), (105, 13420), (107, 13447), (108, 13450), (114, 13480), (119, 13531), (122, 13540), (132, 13630), (191, 14125), (207, 14227), (216, 14308), (222, 14338), (231, 14407), (236, 14452), (247, 14515), (261, 14668), (277, 14767), (280, 14803), (281, 14809), (282, 14818), (284, 14824), (293, 14914), (299, 14950), (306, 14983), (313, 15010), (318, 15034), (320, 15049), (322, 15061), (329, 15142), (345, 15244), (373, 15430), (376, 15445), (388, 15517), (392, 15529), (394, 15544), (401, 15589), (406, 15622), (409, 15631), (415, 15667), (435, 15802), (439, 15826), (440, 15838), (441, 15859), (442, 15871), (452, 15961), (469, 16075), (472, 16093), (478, 16150), (497, 16264), (502, 16297), (521, 16405), (527, 16441), (531, 16480), (533, 16498), (538, 16519), (539, 16522), (549, 16615), (568, 16750), (571, 16771), (578, 16828), (621, 17152), (626, 17185), (633, 17263), (641, 17308), (643, 17347), (646, 17377), (647, 17392), (649, 17410), (655, 17443), (677, 17611), (734, 18052), (735, 18064), (737, 18094), (738, 18097), (745, 18142), (754, 18190),

Gene: RedBaron_17 Start: 9673, Stop: 14811, Start Num: 25

Candidate Starts for RedBaron_17:

(Start: 22 @9649 has 5 MA's), (Start: 25 @9673 has 24 MA's), (28, 9700), (40, 9829), (43, 9904), (68, 10057), (69, 10060), (84, 10156), (87, 10165), (93, 10195), (95, 10201), (97, 10216), (98, 10219), (102, 10240), (111, 10312), (114, 10333), (125, 10399), (127, 10420), (144, 10537), (170, 10699), (176, 10738), (184, 10813), (209, 11011), (226, 11119), (235, 11197), (237, 11215), (239, 11233), (249, 11302), (250, 11305), (251, 11314), (255, 11347), (270, 11458), (271, 11464), (281, 11557), (284, 11572), (301, 11707), (308, 11740), (318, 11782), (329, 11890), (333, 11944), (346, 12016), (347, 12019), (356, 12121), (364, 12166), (366, 12175), (368, 12187), (369, 12190), (370, 12193), (382, 12268), (383, 12271), (384, 12274), (387, 12286), (390, 12295), (392, 12301), (398, 12343), (400, 12352), (408, 12400), (414, 12433), (434, 12568), (448, 12685), (451, 12718), (453, 12739), (466, 12808), (467, 12814), (484, 12949), (486, 12958), (498, 13042), (553, 13363), (581, 13582), (588, 13618), (651, 14023), (661, 14071), (664, 14092), (680, 14200), (689, 14266), (691, 14284), (702, 14389), (707, 14419), (708, 14428), (712, 14458), (724, 14524), (727, 14572), (736, 14632), (749, 14719), (758, 14782),

Gene: Samba_17 Start: 10382, Stop: 15874, Start Num: 8

Candidate Starts for Samba_17:

(Start: 8 @10382 has 36 MA's), (Start: 11 @10397 has 1 MA's), (Start: 12 @10403 has 1 MA's), (Start: 14 @10433 has 1 MA's), (15, 10442), (16, 10445), (18, 10487), (34, 10598), (35, 10619), (41, 10739), (48, 10781), (59, 10847), (61, 10865), (63, 10880), (64, 10886), (65, 10889), (67, 10907), (73, 10931), (85, 11015), (95, 11057), (97, 11072), (99, 11081), (124, 11249), (127, 11276), (144, 11393), (171, 11564), (176, 11594), (196, 11798), (205, 11843), (209, 11870), (210, 11882), (225, 11972), (229, 12017), (233, 12044), (237, 12074), (249, 12161), (254, 12203), (260, 12266), (261, 12275), (271, 12323), (275, 12365), (280, 12410), (281, 12416), (283, 12428), (284, 12431), (290, 12485), (294, 12524), (297, 12545), (298, 12548), (301, 12566), (302, 12575), (312, 12614), (314, 12620), (317, 12638), (318, 12641), (322, 12668), (359, 12941), (367, 12968), (371, 12980), (376, 12992), (377, 12995), (391, 13025), (392, 13028), (400, 13079), (413, 13160), (414, 13163), (420, 13196), (423, 13226), (425, 13250), (436, 13316), (469, 13583), (475, 13631), (479, 13676), (481, 13679), (482, 13694), (490, 13739), (492, 13748), (494, 13757), (501, 13808), (514, 13880), (520, 13898), (525, 13919), (540, 14018), (541, 14021), (545, 14054), (550, 14120), (552, 14138), (555, 14153), (558, 14186), (564, 14237), (570, 14288), (596, 14531), (597, 14534), (610, 14606), (611, 14609), (619, 14675), (620, 14678), (622, 14696), (627, 14756), (645, 14912), (646, 14915), (647, 14930), (669, 15101), (674, 15155), (683, 15212), (685, 15227), (690, 15275), (695, 15320), (714, 15440), (716, 15449), (723, 15488), (730, 15560), (738, 15629), (749, 15692), (753, 15710), (762, 15860),

Gene: SheckWes_15 Start: 9372, Stop: 14465, Start Num: 25

Candidate Starts for SheckWes_15:

(Start: 25 @9372 has 24 MA's), (40, 9528), (50, 9633), (54, 9657), (61, 9708), (63, 9723), (68, 9756), (78, 9804), (80, 9813), (84, 9855), (86, 9861), (87, 9864), (95, 9900), (99, 9924), (103, 9951), (116, 10038), (120, 10077), (122, 10083), (125, 10098), (127, 10119), (136, 10173), (154, 10290), (163, 10353), (170, 10398), (176, 10437), (180, 10479), (196, 10641), (199, 10650), (200, 10674), (205, 10686), (209, 10713), (210, 10725), (215, 10770), (221, 10800), (224, 10812), (236, 10914), (237, 10917), (249, 11004), (252, 11031), (258, 11091), (262, 11121), (267, 11142), (271, 11166), (277, 11217), (281, 11259), (284, 11274), (285, 11283), (286, 11295), (290, 11328), (295, 11370), (305, 11430), (306, 11433), (307, 11436), (308, 11442), (313, 11460), (318, 11484), (325, 11568), (328, 11589), (335, 11637), (346, 11697), (347, 11700), (349, 11736), (356, 11802), (358, 11817), (364, 11847), (368, 11868), (369, 11871), (370, 11874), (383, 11952), (390, 11976), (392, 11982), (412, 12108), (418, 12138), (423, 12177), (429, 12225), (433, 12246), (434, 12249), (435, 12255), (442, 12321), (448, 12366), (451, 12399), (453, 12420), (463, 12474), (484, 12624), (486, 12633), (498, 12720), (534, 12897), (553, 13038), (558, 13068), (575, 13206), (588, 13287), (609, 13440), (613, 13470), (648, 13686), (651, 13695), (653, 13701), (661, 13737), (680, 13854), (682, 13860), (686,

13902), (689, 13920), (702, 14043), (706, 14067), (708, 14082), (712, 14112), (717, 14139), (719, 14145), (724, 14178), (731, 14247), (733, 14250), (736, 14286), (746, 14358), (747, 14361), (750, 14376),

Gene: SketchMex_15 Start: 9616, Stop: 14415, Start Num: 72

Candidate Starts for SketchMex_15:

(Start: 72 @9616 has 22 MA's), (Start: 76 @9643 has 1 MA's), (98, 9772), (113, 9874), (118, 9919), (121, 9931), (125, 9949), (128, 9976), (129, 9979), (131, 9994), (140, 10045), (141, 10048), (147, 10105), (148, 10108), (157, 10150), (160, 10168), (166, 10213), (174, 10249), (178, 10282), (182, 10315), (183, 10327), (190, 10381), (193, 10420), (195, 10435), (198, 10444), (201, 10471), (211, 10522), (218, 10564), (221, 10582), (224, 10591), (230, 10645), (241, 10708), (244, 10723), (251, 10786), (264, 10876), (270, 10903), (280, 10996), (281, 11002), (284, 11017), (288, 11056), (298, 11134), (304, 11167), (314, 11206), (317, 11224), (318, 11227), (322, 11254), (325, 11311), (328, 11332), (334, 11395), (339, 11431), (342, 11443), (347, 11464), (349, 11500), (353, 11542), (354, 11554), (356, 11566), (364, 11611), (365, 11614), (368, 11632), (369, 11635), (370, 11638), (382, 11713), (384, 11719), (392, 11746), (401, 11806), (404, 11821), (412, 11872), (413, 11875), (414, 11878), (416, 11896), (430, 11995), (433, 12010), (434, 12013), (451, 12163), (453, 12184), (462, 12226), (466, 12253), (467, 12259), (483, 12391), (486, 12403), (498, 12490), (505, 12532), (512, 12568), (529, 12643), (538, 12694), (544, 12733), (551, 12811), (559, 12862), (567, 12919), (585, 13057), (592, 13132), (613, 13276), (616, 13297), (640, 13474), (642, 13480), (680, 13804), (682, 13810), (689, 13870), (691, 13888), (694, 13921), (702, 13993), (708, 14032), (712, 14062), (724, 14128), (727, 14176), (736, 14236), (750, 14326), (758, 14386),

Gene: Sopespian_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Sopespian_16:

(Start: 22 @9606 has 5 MA's), (Start: 25 @9630 has 24 MA's), (28, 9657), (40, 9786), (43, 9861), (68, 10014), (69, 10017), (84, 10113), (87, 10122), (93, 10152), (95, 10158), (97, 10173), (98, 10176), (102, 10197), (111, 10269), (114, 10290), (125, 10356), (127, 10377), (144, 10494), (170, 10656), (176, 10695), (184, 10770), (200, 10929), (205, 10941), (209, 10968), (214, 11013), (215, 11025), (229, 11115), (232, 11133), (235, 11154), (238, 11184), (244, 11208), (246, 11220), (249, 11259), (253, 11292), (266, 11394), (267, 11397), (271, 11421), (281, 11514), (284, 11529), (288, 11568), (309, 11703), (310, 11706), (318, 11739), (329, 11847), (330, 11850), (333, 11901), (347, 11976), (354, 12066), (356, 12078), (364, 12123), (368, 12144), (369, 12147), (370, 12150), (382, 12225), (392, 12258), (396, 12279), (400, 12309), (408, 12357), (410, 12363), (414, 12390), (434, 12525), (448, 12642), (451, 12675), (453, 12696), (466, 12765), (467, 12771), (468, 12786), (484, 12906), (486, 12915), (498, 12999), (553, 13320), (581, 13539), (588, 13575), (616, 13788), (651, 13980), (661, 14028), (664, 14049), (680, 14157), (689, 14223), (691, 14241), (702, 14346), (707, 14376), (708, 14385), (712, 14415), (724, 14481), (727, 14529), (736, 14589), (749, 14676), (758, 14739),

Gene: Spooky_18 Start: 9874, Stop: 15489, Start Num: 22

Candidate Starts for Spooky_18:

(Start: 22 @9874 has 5 MA's), (Start: 27 @9919 has 1 MA's), (29, 9940), (33, 9961), (36, 10006), (65, 10246), (81, 10339), (82, 10351), (86, 10375), (87, 10378), (99, 10438), (101, 10447), (102, 10453), (111, 10525), (123, 10603), (125, 10612), (127, 10633), (188, 11053), (196, 11161), (200, 11194), (205, 11206), (209, 11233), (229, 11380), (233, 11407), (237, 11437), (244, 11473), (249, 11524), (250, 11527), (251, 11536), (256, 11572), (261, 11638), (271, 11686), (279, 11770), (280, 11773), (281, 11779), (283, 11791), (284, 11794), (289, 11845), (290, 11848), (294, 11887), (314, 11983), (318, 12004), (339, 12208), (346, 12238), (353, 12319), (356, 12343), (357, 12355), (365, 12391), (378, 12451), (382, 12490), (384, 12496), (385, 12499), (391, 12520), (392, 12523), (408, 12622), (415, 12661), (419, 12685), (423, 12718), (426, 12763), (432, 12817), (433, 12829), (440, 12904), (441, 12925), (445, 12961), (449, 12991), (461, 13072), (462, 13081), (465, 13105), (474, 13186), (475, 13192), (479, 13237), (481, 13240), (482, 13255), (490, 13300), (492, 13309), (494, 13318), (512, 13426), (520, 13459), (523, 13474), (525, 13480), (540, 13579), (541, 13582), (542, 13585),

(543, 13594), (555, 13711), (558, 13744), (563, 13792), (564, 13795), (569, 13825), (574, 13885), (586, 13966), (589, 13987), (590, 13990), (598, 14083), (600, 14092), (617, 14194), (620, 14215), (623, 14245), (625, 14254), (628, 14293), (629, 14296), (630, 14299), (631, 14326), (640, 14380), (652, 14497), (663, 14581), (665, 14593), (666, 14605), (667, 14611), (670, 14638), (673, 14662), (692, 14839), (699, 14926), (703, 14944), (704, 14953), (718, 15031), (721, 15049), (729, 15139), (732, 15151), (741, 15238), (748, 15280), (754, 15313), (755, 15325), (763, 15469),

Gene: Squiddly_20 Start: 11289, Stop: 16901, Start Num: 22

Candidate Starts for Squiddly_20:

(Start: 22 @11289 has 5 MA's), (24, 11307), (26, 11316), (Start: 27 @11334 has 1 MA's), (29, 11355), (31, 11367), (36, 11421), (Start: 37 @11436 has 1 MA's), (56, 11604), (57, 11613), (61, 11637), (65, 11661), (67, 11679), (75, 11724), (86, 11790), (87, 11793), (99, 11853), (123, 12018), (127, 12048), (148, 12204), (171, 12342), (173, 12357), (188, 12468), (196, 12576), (204, 12618), (205, 12621), (206, 12627), (209, 12648), (210, 12660), (229, 12795), (233, 12822), (237, 12852), (239, 12870), (249, 12939), (251, 12951), (261, 13053), (271, 13101), (275, 13143), (280, 13188), (281, 13194), (283, 13206), (284, 13209), (286, 13230), (289, 13260), (290, 13263), (293, 13299), (294, 13302), (308, 13377), (314, 13398), (318, 13419), (325, 13503), (335, 13593), (353, 13734), (357, 13770), (364, 13803), (365, 13806), (368, 13824), (378, 13866), (382, 13905), (384, 13911), (385, 13914), (391, 13935), (392, 13938), (408, 14037), (415, 14076), (423, 14133), (427, 14208), (433, 14244), (441, 14340), (445, 14376), (449, 14406), (460, 14484), (461, 14487), (462, 14496), (465, 14520), (468, 14544), (471, 14577), (474, 14601), (475, 14607), (477, 14640), (479, 14652), (481, 14655), (482, 14670), (487, 14688), (490, 14715), (492, 14724), (494, 14733), (495, 14736), (512, 14841), (523, 14889), (525, 14895), (541, 14997), (543, 15009), (555, 15126), (558, 15159), (564, 15210), (566, 15222), (569, 15240), (574, 15300), (586, 15381), (589, 15402), (598, 15498), (602, 15516), (606, 15540), (617, 15609), (620, 15630), (623, 15660), (625, 15669), (628, 15708), (629, 15711), (630, 15714), (631, 15741), (640, 15795), (652, 15912), (663, 15996), (665, 16008), (666, 16020), (667, 16026), (670, 16053), (673, 16077), (692, 16254), (699, 16341), (703, 16359), (704, 16368), (718, 16446), (720, 16461), (722, 16470), (728, 16545), (729, 16554), (732, 16566), (741, 16653), (748, 16695), (754, 16728), (755, 16740), (760, 16815), (763, 16881),

Gene: SteamedHams_18 Start: 9646, Stop: 14433, Start Num: 72

Candidate Starts for SteamedHams_18:

(Start: 72 @9646 has 22 MA's), (Start: 76 @9673 has 1 MA's), (89, 9751), (98, 9802), (110, 9889), (113, 9904), (121, 9961), (125, 9979), (128, 10006), (129, 10009), (141, 10078), (147, 10135), (157, 10180), (160, 10198), (166, 10243), (174, 10279), (178, 10312), (185, 10360), (186, 10363), (190, 10411), (193, 10450), (195, 10465), (220, 10606), (228, 10657), (230, 10675), (238, 10729), (264, 10906), (270, 10933), (280, 11026), (281, 11032), (284, 11047), (288, 11086), (289, 11098), (298, 11164), (314, 11236), (317, 11254), (318, 11257), (322, 11284), (349, 11530), (356, 11596), (364, 11641), (368, 11662), (369, 11665), (370, 11668), (378, 11704), (382, 11743), (384, 11749), (392, 11776), (413, 11905), (414, 11908), (416, 11926), (435, 12049), (437, 12064), (451, 12193), (453, 12214), (462, 12256), (466, 12283), (467, 12289), (483, 12421), (486, 12433), (498, 12520), (505, 12562), (512, 12598), (538, 12724), (544, 12763), (559, 12892), (567, 12949), (573, 12991), (585, 13084), (592, 13159), (601, 13222), (613, 13303), (616, 13324), (640, 13501), (642, 13507), (668, 13726), (679, 13804), (680, 13822), (682, 13828), (689, 13888), (691, 13906), (694, 13939), (702, 14011), (708, 14050), (712, 14080), (724, 14146), (727, 14194), (736, 14254), (750, 14344), (758, 14404),

Gene: SummitAcademy_15 Start: 9452, Stop: 14545, Start Num: 25

Candidate Starts for SummitAcademy_15:

(Start: 25 @9452 has 24 MA's), (40, 9608), (54, 9737), (58, 9767), (68, 9836), (71, 9848), (78, 9884), (84, 9935), (87, 9944), (95, 9980), (99, 10004), (106, 10064), (116, 10118), (120, 10157), (122, 10163), (125, 10178), (127, 10199), (154, 10370), (163, 10433), (170, 10478), (180, 10559), (196, 10718), (200, 10751), (205, 10763), (209, 10790), (215, 10847), (221, 10877), (224, 10889), (236,

10991), (237, 10994), (249, 11081), (256, 11129), (271, 11243), (281, 11336), (284, 11351), (286, 11372), (290, 11405), (292, 11435), (295, 11447), (301, 11486), (306, 11510), (307, 11513), (313, 11537), (318, 11561), (328, 11666), (339, 11744), (346, 11774), (347, 11777), (349, 11813), (353, 11855), (356, 11879), (358, 11894), (360, 11909), (364, 11924), (369, 11948), (378, 11987), (379, 12002), (380, 12008), (383, 12029), (390, 12053), (392, 12059), (412, 12185), (418, 12215), (424, 12266), (429, 12302), (433, 12323), (434, 12326), (442, 12398), (448, 12443), (451, 12476), (453, 12497), (463, 12551), (473, 12626), (486, 12710), (498, 12797), (553, 13115), (558, 13145), (575, 13283), (583, 13334), (588, 13364), (609, 13529), (613, 13559), (644, 13739), (653, 13790), (661, 13817), (664, 13838), (680, 13934), (686, 13982), (689, 14000), (702, 14123), (706, 14147), (708, 14162), (712, 14192), (717, 14219), (719, 14225), (724, 14258), (731, 14327), (733, 14330), (736, 14366), (750, 14456),

Gene: Survivors_18 Start: 10474, Stop: 15597, Start Num: 25

Candidate Starts for Survivors_18:

(Start: 22 @10453 has 5 MA's), (Start: 25 @10474 has 24 MA's), (28, 10501), (40, 10630), (48, 10726), (56, 10777), (66, 10834), (70, 10867), (71, 10870), (84, 10957), (88, 10969), (97, 11017), (98, 11020), (99, 11026), (105, 11080), (106, 11086), (114, 11134), (125, 11200), (127, 11221), (184, 11614), (185, 11617), (193, 11719), (205, 11785), (206, 11791), (209, 11812), (237, 12016), (239, 12034), (242, 12040), (244, 12052), (246, 12064), (249, 12103), (251, 12115), (256, 12151), (260, 12208), (264, 12232), (266, 12238), (281, 12358), (284, 12373), (288, 12412), (297, 12487), (303, 12520), (307, 12535), (308, 12541), (309, 12547), (318, 12583), (329, 12691), (336, 12763), (346, 12817), (364, 12967), (369, 12991), (380, 13051), (381, 13063), (382, 13069), (390, 13096), (391, 13099), (392, 13102), (406, 13195), (408, 13201), (416, 13252), (425, 13321), (431, 13354), (434, 13369), (435, 13375), (441, 13432), (443, 13444), (447, 13483), (448, 13486), (450, 13507), (451, 13519), (453, 13540), (454, 13543), (462, 13582), (463, 13594), (466, 13609), (484, 13750), (498, 13846), (510, 13912), (513, 13933), (516, 13939), (553, 14176), (558, 14206), (561, 14245), (580, 14380), (584, 14410), (588, 14431), (606, 14569), (613, 14617), (657, 14848), (661, 14854), (680, 14983), (689, 15049), (694, 15100), (702, 15172), (708, 15211), (712, 15241), (719, 15274), (724, 15307), (733, 15379), (740, 15451), (749, 15505), (751, 15511), (758, 15568),

Gene: SweatNTears_18 Start: 10127, Stop: 14926, Start Num: 72

Candidate Starts for SweatNTears_18:

(Start: 72 @10127 has 22 MA's), (Start: 76 @10154 has 1 MA's), (78, 10160), (98, 10283), (113, 10385), (118, 10430), (121, 10442), (125, 10460), (128, 10487), (129, 10490), (131, 10505), (140, 10556), (141, 10559), (147, 10616), (148, 10619), (157, 10661), (160, 10679), (166, 10724), (174, 10760), (178, 10793), (182, 10826), (183, 10838), (190, 10892), (193, 10931), (195, 10946), (198, 10955), (201, 10982), (211, 11033), (221, 11093), (224, 11102), (230, 11156), (241, 11219), (244, 11234), (251, 11297), (264, 11387), (270, 11414), (278, 11495), (280, 11507), (281, 11513), (284, 11528), (287, 11558), (288, 11567), (298, 11645), (304, 11678), (314, 11717), (317, 11735), (318, 11738), (322, 11765), (325, 11822), (328, 11843), (342, 11954), (347, 11975), (349, 12011), (353, 12053), (354, 12065), (356, 12077), (364, 12122), (365, 12125), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (401, 12317), (412, 12383), (413, 12386), (414, 12389), (416, 12407), (430, 12506), (433, 12521), (434, 12524), (451, 12674), (453, 12695), (462, 12737), (466, 12764), (467, 12770), (483, 12902), (486, 12914), (498, 13001), (505, 13043), (512, 13079), (529, 13154), (538, 13205), (544, 13244), (547, 13268), (559, 13373), (567, 13430), (585, 13568), (592, 13643), (613, 13787), (616, 13808), (640, 13985), (642, 13991), (680, 14315), (682, 14321), (689, 14381), (691, 14399), (694, 14432), (702, 14504), (708, 14543), (712, 14573), (724, 14639), (727, 14687), (736, 14747), (750, 14837), (758, 14897),

Gene: Toast_17 Start: 10235, Stop: 15886, Start Num: 7

Candidate Starts for Toast_17:

(Start: 7 @10235 has 1 MA's), (Start: 8 @10271 has 36 MA's), (Start: 12 @10292 has 1 MA's), (15, 10331), (18, 10376), (30, 10466), (32, 10475), (34, 10487), (35, 10508), (38, 10565), (42, 10637), (45,

10658), (53, 10700), (54, 10703), (57, 10730), (60, 10751), (61, 10754), (64, 10775), (67, 10796), (77, 10847), (78, 10850), (87, 10910), (117, 11093), (127, 11165), (156, 11351), (171, 11453), (173, 11468), (176, 11483), (181, 11540), (205, 11732), (223, 11852), (233, 11933), (237, 11963), (244, 11999), (249, 12050), (266, 12185), (267, 12188), (271, 12212), (277, 12263), (280, 12299), (281, 12305), (284, 12320), (290, 12374), (294, 12413), (298, 12437), (301, 12455), (312, 12503), (314, 12509), (317, 12527), (318, 12530), (320, 12545), (322, 12557), (324, 12605), (346, 12743), (353, 12824), (356, 12848), (357, 12860), (358, 12863), (365, 12896), (383, 12998), (390, 13025), (391, 13028), (392, 13031), (393, 13037), (400, 13082), (402, 13094), (404, 13106), (408, 13130), (411, 13145), (413, 13160), (414, 13163), (418, 13187), (421, 13214), (433, 13295), (444, 13379), (456, 13484), (462, 13517), (469, 13583), (470, 13592), (475, 13631), (477, 13664), (479, 13676), (481, 13679), (482, 13694), (485, 13703), (490, 13739), (492, 13748), (494, 13757), (523, 13913), (524, 13916), (525, 13919), (527, 13940), (541, 14021), (546, 14063), (555, 14150), (558, 14183), (560, 14192), (564, 14234), (579, 14348), (595, 14513), (610, 14597), (611, 14600), (614, 14630), (615, 14633), (619, 14666), (620, 14669), (627, 14747), (634, 14804), (647, 14921), (654, 14972), (672, 15074), (674, 15107), (681, 15173), (688, 15239), (689, 15245), (691, 15263), (694, 15296), (702, 15368), (709, 15410), (710, 15416), (712, 15434), (713, 15440), (717, 15461), (724, 15500), (738, 15641), (749, 15704), (759, 15779), (762, 15872),

Gene: Tolls_18 Start: 9649, Stop: 14436, Start Num: 72

Candidate Starts for Tolls_18:

(Start: 72 @9649 has 22 MA's), (Start: 76 @9676 has 1 MA's), (89, 9754), (98, 9805), (110, 9892), (113, 9907), (121, 9964), (125, 9982), (128, 10009), (129, 10012), (141, 10081), (147, 10138), (157, 10183), (160, 10201), (166, 10246), (169, 10261), (174, 10282), (178, 10315), (185, 10363), (186, 10366), (190, 10414), (193, 10453), (195, 10468), (228, 10660), (230, 10678), (245, 10762), (264, 10909), (270, 10936), (280, 11029), (281, 11035), (284, 11050), (288, 11089), (289, 11101), (298, 11167), (314, 11239), (317, 11257), (318, 11260), (322, 11287), (349, 11533), (356, 11599), (364, 11644), (368, 11665), (369, 11668), (370, 11671), (378, 11707), (382, 11746), (384, 11752), (392, 11779), (413, 11908), (414, 11911), (416, 11929), (435, 12052), (437, 12067), (451, 12196), (453, 12217), (462, 12259), (466, 12286), (467, 12292), (483, 12424), (486, 12436), (498, 12523), (505, 12565), (512, 12601), (538, 12727), (544, 12766), (559, 12895), (567, 12952), (573, 12994), (585, 13087), (592, 13162), (601, 13225), (613, 13306), (616, 13327), (640, 13504), (642, 13510), (668, 13729), (679, 13807), (680, 13825), (682, 13831), (689, 13891), (691, 13909), (694, 13942), (702, 14014), (708, 14053), (712, 14083), (724, 14149), (727, 14197), (736, 14257), (750, 14347), (758, 14407),

Gene: Troje_16 Start: 9601, Stop: 14397, Start Num: 72

Candidate Starts for Troje_16:

(Start: 72 @9601 has 22 MA's), (Start: 76 @9628 has 1 MA's), (78, 9634), (98, 9757), (113, 9859), (118, 9904), (121, 9916), (125, 9934), (128, 9961), (129, 9964), (131, 9979), (140, 10030), (141, 10033), (147, 10090), (148, 10093), (157, 10135), (160, 10153), (166, 10198), (174, 10234), (178, 10267), (182, 10300), (183, 10312), (190, 10366), (193, 10405), (195, 10420), (198, 10429), (201, 10456), (211, 10507), (221, 10567), (224, 10576), (230, 10630), (241, 10693), (244, 10708), (264, 10861), (270, 10888), (278, 10969), (280, 10981), (281, 10987), (284, 11002), (288, 11041), (298, 11119), (304, 11152), (314, 11191), (317, 11209), (318, 11212), (322, 11239), (325, 11296), (328, 11317), (334, 11380), (342, 11428), (347, 11449), (349, 11485), (353, 11527), (356, 11551), (364, 11596), (365, 11599), (368, 11617), (369, 11620), (370, 11623), (382, 11698), (384, 11704), (392, 11731), (401, 11791), (412, 11857), (413, 11860), (414, 11863), (416, 11881), (430, 11980), (433, 11995), (434, 11998), (451, 12148), (453, 12169), (462, 12211), (466, 12238), (467, 12244), (486, 12388), (498, 12475), (505, 12517), (512, 12553), (529, 12628), (538, 12679), (544, 12718), (551, 12796), (559, 12847), (567, 12904), (585, 13042), (592, 13114), (613, 13258), (616, 13279), (640, 13456), (642, 13462), (680, 13786), (682, 13792), (689, 13852), (691, 13870), (694, 13903), (702, 13975), (708, 14014), (712, 14044), (724, 14110), (725, 14128), (727, 14158), (736, 14218), (750, 14308), (758, 14368),

Gene: Typhonomachy_17 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Typhonomachy_17:

(Start: 22 @9605 has 5 MA's), (Start: 25 @9629 has 24 MA's), (28, 9656), (40, 9785), (43, 9860), (68, 10013), (69, 10016), (84, 10112), (87, 10121), (93, 10151), (95, 10157), (97, 10172), (98, 10175), (102, 10196), (111, 10268), (114, 10289), (125, 10355), (127, 10376), (144, 10493), (170, 10655), (176, 10694), (184, 10769), (200, 10928), (205, 10940), (209, 10967), (214, 11012), (215, 11024), (229, 11114), (232, 11132), (235, 11153), (238, 11183), (244, 11207), (246, 11219), (249, 11258), (253, 11291), (255, 11303), (266, 11393), (267, 11396), (271, 11420), (281, 11513), (284, 11528), (288, 11567), (294, 11621), (301, 11663), (310, 11705), (317, 11735), (318, 11738), (329, 11846), (330, 11849), (333, 11900), (347, 11975), (354, 12065), (356, 12077), (362, 12116), (364, 12122), (368, 12143), (369, 12146), (370, 12149), (382, 12224), (392, 12257), (396, 12278), (400, 12308), (408, 12356), (410, 12362), (414, 12389), (434, 12524), (448, 12641), (451, 12674), (453, 12695), (466, 12764), (467, 12770), (468, 12785), (484, 12905), (486, 12914), (498, 12998), (553, 13319), (581, 13538), (588, 13574), (616, 13787), (651, 13979), (661, 14027), (664, 14048), (680, 14156), (689, 14222), (691, 14240), (702, 14345), (707, 14375), (708, 14384), (712, 14414), (724, 14480), (727, 14528), (736, 14588), (749, 14675), (758, 14738),

Gene: UmaThurman_17 Start: 10381, Stop: 15924, Start Num: 8

Candidate Starts for UmaThurman_17:

(Start: 8 @10381 has 36 MA's), (Start: 11 @10396 has 1 MA's), (Start: 12 @10402 has 1 MA's), (Start: 14 @10432 has 1 MA's), (15, 10441), (16, 10444), (18, 10486), (34, 10597), (35, 10618), (59, 10846), (61, 10864), (63, 10879), (64, 10885), (65, 10888), (67, 10906), (73, 10930), (85, 11014), (86, 11017), (95, 11056), (97, 11071), (99, 11080), (124, 11248), (127, 11275), (176, 11593), (196, 11797), (205, 11842), (206, 11848), (209, 11869), (210, 11881), (225, 11971), (229, 12016), (233, 12043), (237, 12073), (249, 12160), (250, 12163), (254, 12202), (271, 12322), (275, 12364), (280, 12409), (281, 12415), (284, 12430), (290, 12484), (294, 12523), (297, 12544), (298, 12547), (301, 12565), (302, 12574), (312, 12613), (314, 12619), (318, 12640), (322, 12667), (346, 12874), (359, 12940), (371, 12979), (377, 12994), (391, 13024), (392, 13027), (400, 13078), (413, 13159), (414, 13162), (420, 13195), (423, 13225), (425, 13249), (469, 13582), (475, 13630), (479, 13675), (481, 13678), (482, 13693), (490, 13738), (492, 13747), (494, 13756), (501, 13807), (514, 13879), (520, 13897), (525, 13918), (540, 14017), (541, 14020), (545, 14053), (550, 14119), (552, 14137), (555, 14152), (558, 14185), (564, 14236), (570, 14287), (576, 14335), (596, 14530), (597, 14533), (610, 14605), (611, 14608), (619, 14674), (620, 14677), (622, 14695), (627, 14755), (634, 14812), (637, 14830), (645, 14911), (646, 14914), (647, 14929), (669, 15088), (674, 15142), (681, 15208), (687, 15262), (688, 15274), (689, 15280), (702, 15403), (706, 15427), (709, 15445), (712, 15469), (713, 15475), (717, 15496), (724, 15535), (738, 15676), (740, 15688), (749, 15739), (753, 15757), (762, 15907),

Gene: Utz_17 Start: 10248, Stop: 15791, Start Num: 8

Candidate Starts for Utz_17:

(Start: 8 @10248 has 36 MA's), (Start: 11 @10263 has 1 MA's), (Start: 12 @10269 has 1 MA's), (Start: 14 @10299 has 1 MA's), (15, 10308), (16, 10311), (18, 10353), (34, 10464), (35, 10485), (41, 10605), (48, 10647), (59, 10713), (61, 10731), (64, 10752), (65, 10755), (67, 10773), (73, 10797), (85, 10881), (86, 10884), (95, 10923), (97, 10938), (99, 10947), (124, 11115), (127, 11142), (144, 11259), (171, 11430), (176, 11460), (196, 11664), (205, 11709), (209, 11736), (210, 11748), (225, 11838), (233, 11910), (237, 11940), (249, 12027), (250, 12030), (254, 12069), (271, 12189), (275, 12231), (280, 12276), (281, 12282), (283, 12294), (284, 12297), (290, 12351), (294, 12390), (297, 12411), (298, 12414), (301, 12432), (312, 12480), (314, 12486), (318, 12507), (322, 12534), (359, 12807), (371, 12846), (377, 12861), (391, 12891), (392, 12894), (400, 12945), (413, 13026), (414, 13029), (420, 13062), (423, 13092), (425, 13116), (436, 13182), (469, 13449), (472, 13467), (475, 13497), (479, 13542), (481, 13545), (482, 13560), (485, 13569), (490, 13605), (492, 13614), (494, 13623), (501, 13674), (514, 13746), (520, 13764), (525, 13785), (540, 13884), (541, 13887), (545, 13920), (550, 13986), (552, 14004), (555, 14019), (558, 14052), (564, 14103), (570, 14154), (596, 14397), (597,

14400), (610, 14472), (611, 14475), (619, 14541), (620, 14544), (622, 14562), (627, 14622), (634, 14679), (637, 14697), (645, 14778), (646, 14781), (647, 14796), (674, 15009), (681, 15075), (688, 15141), (689, 15147), (702, 15270), (706, 15294), (709, 15312), (712, 15336), (713, 15342), (717, 15363), (724, 15402), (738, 15543), (749, 15606), (753, 15624), (756, 15651), (759, 15681), (762, 15774),

Gene: Vine_17 Start: 10381, Stop: 15480, Start Num: 25

Candidate Starts for Vine_17:

(Start: 25 @10381 has 24 MA's), (40, 10537), (54, 10666), (58, 10696), (68, 10765), (71, 10777), (78, 10813), (80, 10822), (84, 10864), (87, 10873), (95, 10909), (99, 10933), (106, 10993), (116, 11047), (120, 11086), (125, 11107), (127, 11128), (150, 11287), (154, 11299), (163, 11362), (170, 11407), (180, 11488), (196, 11647), (200, 11680), (205, 11692), (209, 11719), (215, 11776), (221, 11806), (224, 11818), (236, 11920), (237, 11923), (249, 12010), (255, 12055), (256, 12058), (271, 12172), (281, 12265), (284, 12280), (286, 12301), (290, 12334), (292, 12364), (295, 12376), (301, 12415), (306, 12439), (307, 12442), (313, 12466), (318, 12490), (328, 12595), (339, 12673), (346, 12703), (347, 12706), (349, 12742), (353, 12784), (356, 12808), (358, 12823), (360, 12838), (364, 12853), (369, 12877), (378, 12916), (379, 12931), (380, 12937), (383, 12958), (390, 12982), (392, 12988), (412, 13114), (418, 13144), (424, 13195), (429, 13231), (433, 13252), (434, 13255), (442, 13327), (448, 13372), (451, 13405), (453, 13426), (463, 13480), (473, 13555), (486, 13639), (498, 13726), (536, 13912), (553, 14044), (558, 14074), (575, 14212), (583, 14263), (588, 14293), (599, 14398), (609, 14449), (613, 14479), (644, 14659), (653, 14710), (661, 14752), (664, 14773), (680, 14869), (686, 14917), (689, 14935), (702, 15058), (706, 15082), (708, 15097), (712, 15127), (717, 15154), (719, 15160), (724, 15193), (731, 15262), (733, 15265), (736, 15301), (750, 15391),

Gene: Walrus_18 Start: 10497, Stop: 16019, Start Num: 12

Candidate Starts for Walrus_18:

(Start: 8 @10476 has 36 MA's), (Start: 11 @10491 has 1 MA's), (Start: 12 @10497 has 1 MA's), (Start: 14 @10527 has 1 MA's), (15, 10536), (16, 10539), (18, 10581), (34, 10692), (35, 10713), (41, 10833), (59, 10941), (61, 10959), (65, 10983), (67, 11001), (73, 11025), (85, 11109), (87, 11115), (95, 11151), (97, 11166), (99, 11175), (102, 11190), (106, 11235), (109, 11256), (124, 11343), (127, 11370), (134, 11403), (144, 11487), (154, 11541), (160, 11583), (171, 11658), (176, 11688), (196, 11892), (205, 11937), (229, 12111), (233, 12138), (237, 12168), (249, 12255), (250, 12258), (254, 12297), (256, 12303), (260, 12360), (271, 12417), (275, 12459), (280, 12504), (281, 12510), (284, 12525), (290, 12579), (294, 12618), (297, 12639), (298, 12642), (301, 12660), (307, 12687), (312, 12708), (314, 12714), (318, 12735), (327, 12834), (359, 13035), (363, 13050), (371, 13074), (377, 13089), (391, 13119), (392, 13122), (400, 13173), (413, 13254), (414, 13257), (420, 13290), (423, 13320), (425, 13344), (436, 13410), (469, 13677), (475, 13725), (479, 13770), (481, 13773), (482, 13788), (487, 13806), (490, 13833), (492, 13842), (494, 13851), (501, 13902), (514, 13974), (520, 13992), (525, 14013), (540, 14112), (541, 14115), (545, 14148), (550, 14214), (552, 14232), (555, 14247), (558, 14280), (564, 14331), (570, 14382), (596, 14625), (597, 14628), (610, 14700), (611, 14703), (619, 14769), (620, 14772), (622, 14790), (627, 14850), (634, 14907), (637, 14925), (645, 15006), (646, 15009), (647, 15024), (669, 15183), (674, 15237), (681, 15303), (682, 15309), (688, 15369), (689, 15375), (702, 15498), (706, 15522), (709, 15540), (712, 15564), (713, 15570), (717, 15591), (724, 15630), (738, 15771), (740, 15783), (749, 15834), (753, 15852), (761, 15981), (762, 16002),

Gene: Whack_16 Start: 10349, Stop: 16249, Start Num: 1

Candidate Starts for Whack_16:

(Start: 1 @10349 has 1 MA's), (2, 10358), (3, 10397), (6, 10445), (40, 10874), (43, 10949), (44, 10955), (55, 11018), (56, 11021), (61, 11054), (68, 11102), (69, 11105), (83, 11192), (88, 11213), (91, 11231), (99, 11270), (104, 11306), (108, 11354), (114, 11384), (122, 11444), (136, 11567), (163, 11777), (167, 11819), (191, 12029), (197, 12083), (207, 12134), (216, 12215), (234, 12341), (236, 12359), (265, 12593), (277, 12674), (280, 12710), (281, 12716), (284, 12731), (289, 12782), (290, 12785), (296, 12836), (300, 12860), (301, 12866), (308, 12899), (316, 12926), (318, 12941), (323,

13004), (325, 13025), (331, 13088), (339, 13145), (351, 13247), (374, 13343), (387, 13400), (389, 13406), (390, 13409), (407, 13511), (411, 13529), (415, 13553), (448, 13802), (450, 13823), (458, 13880), (476, 14024), (488, 14081), (503, 14183), (507, 14207), (508, 14210), (517, 14270), (519, 14276), (528, 14324), (539, 14399), (548, 14498), (554, 14549), (555, 14555), (562, 14636), (564, 14645), (601, 14966), (605, 14990), (612, 15026), (616, 15065), (622, 15110), (628, 15170), (632, 15212), (636, 15242), (638, 15245), (658, 15416), (659, 15419), (662, 15446), (675, 15578), (676, 15593), (678, 15599), (679, 15608), (683, 15656), (715, 15905), (725, 15977), (734, 16052), (738, 16097), (743, 16127), (744, 16136), (752, 16172), (754, 16187),

Gene: Whitney_19 Start: 10672, Stop: 16305, Start Num: 22

Candidate Starts for Whitney_19:

(Start: 22 @10672 has 5 MA's), (Start: 27 @10717 has 1 MA's), (29, 10738), (33, 10759), (36, 10804), (Start: 37 @10819 has 1 MA's), (42, 10903), (50, 10945), (51, 10957), (61, 11020), (63, 11035), (65, 11044), (67, 11062), (68, 11068), (78, 11116), (102, 11251), (123, 11401), (127, 11431), (160, 11650), (171, 11725), (176, 11755), (196, 11959), (205, 12004), (206, 12010), (209, 12031), (212, 12055), (220, 12112), (229, 12178), (233, 12205), (235, 12217), (237, 12235), (238, 12247), (244, 12271), (246, 12283), (249, 12322), (250, 12325), (251, 12334), (254, 12364), (258, 12409), (268, 12469), (271, 12484), (274, 12514), (275, 12526), (280, 12571), (281, 12577), (284, 12592), (287, 12622), (289, 12643), (290, 12646), (298, 12709), (302, 12736), (303, 12739), (304, 12742), (305, 12748), (311, 12772), (312, 12775), (314, 12781), (316, 12787), (318, 12802), (321, 12820), (323, 12865), (331, 12949), (332, 12955), (336, 12982), (349, 13075), (350, 13084), (356, 13141), (357, 13153), (365, 13189), (366, 13195), (376, 13237), (378, 13249), (382, 13288), (384, 13294), (385, 13297), (390, 13315), (391, 13318), (392, 13321), (397, 13345), (408, 13420), (415, 13459), (419, 13483), (423, 13516), (433, 13627), (436, 13660), (441, 13723), (445, 13759), (449, 13789), (460, 13867), (461, 13870), (462, 13879), (465, 13903), (475, 13990), (479, 14035), (481, 14038), (482, 14053), (490, 14098), (492, 14107), (494, 14116), (495, 14119), (512, 14224), (523, 14272), (525, 14278), (540, 14377), (541, 14380), (543, 14392), (555, 14509), (558, 14542), (564, 14593), (569, 14623), (574, 14683), (586, 14764), (589, 14785), (590, 14788), (591, 14818), (598, 14881), (600, 14890), (602, 14899), (620, 15013), (623, 15043), (628, 15091), (629, 15094), (631, 15124), (634, 15145), (660, 15343), (666, 15406), (667, 15412), (673, 15463), (692, 15655), (699, 15742), (704, 15769), (705, 15772), (718, 15847), (722, 15871), (725, 15910), (728, 15946), (732, 15967), (741, 16054), (748, 16096), (754, 16129), (755, 16141), (763, 16285),

Gene: William_17 Start: 10217, Stop: 15835, Start Num: 8

Candidate Starts for William_17:

(Start: 7 @10181 has 1 MA's), (Start: 8 @10217 has 36 MA's), (Start: 12 @10238 has 1 MA's), (16, 10280), (18, 10322), (30, 10412), (32, 10421), (34, 10433), (35, 10454), (40, 10520), (42, 10583), (45, 10604), (53, 10646), (54, 10649), (57, 10676), (60, 10697), (61, 10700), (64, 10721), (67, 10742), (77, 10793), (78, 10796), (87, 10856), (117, 11039), (127, 11111), (156, 11297), (171, 11399), (173, 11414), (176, 11429), (181, 11486), (205, 11678), (223, 11798), (233, 11879), (237, 11909), (244, 11945), (249, 11996), (266, 12131), (267, 12134), (271, 12158), (277, 12209), (280, 12245), (281, 12251), (284, 12266), (290, 12320), (294, 12359), (298, 12383), (301, 12401), (312, 12449), (314, 12455), (317, 12473), (318, 12476), (320, 12491), (322, 12503), (324, 12551), (346, 12689), (353, 12770), (356, 12794), (357, 12806), (358, 12809), (365, 12842), (383, 12944), (390, 12971), (391, 12974), (392, 12977), (393, 12983), (402, 13040), (404, 13052), (408, 13076), (411, 13091), (413, 13106), (414, 13109), (418, 13133), (421, 13160), (433, 13241), (444, 13325), (456, 13430), (462, 13463), (469, 13529), (470, 13538), (475, 13577), (477, 13610), (479, 13622), (481, 13625), (482, 13640), (485, 13649), (490, 13685), (492, 13694), (494, 13703), (523, 13859), (524, 13862), (525, 13865), (527, 13886), (541, 13967), (546, 14009), (555, 14096), (558, 14129), (560, 14138), (564, 14180), (579, 14294), (610, 14543), (611, 14546), (614, 14576), (615, 14579), (618, 14603), (619, 14612), (620, 14615), (627, 14693), (634, 14750), (647, 14867), (654, 14918), (674, 15056), (681, 15122), (688, 15188), (689, 15194), (691, 15212), (700, 15305), (702, 15317), (710, 15365), (712, 15383), (713, 15389), (717, 15410), (724, 15449), (738, 15590), (749, 15653), (759, 15728), (762,

15821),

Gene: Wisp_16 Start: 10065, Stop: 15509, Start Num: 14

Candidate Starts for Wisp_16:

(Start: 8 @10014 has 36 MA's), (Start: 11 @10029 has 1 MA's), (Start: 12 @10035 has 1 MA's), (Start: 14 @10065 has 1 MA's), (15, 10074), (16, 10077), (18, 10119), (34, 10230), (35, 10251), (41, 10371), (48, 10413), (54, 10446), (59, 10479), (61, 10497), (63, 10512), (64, 10518), (65, 10521), (67, 10539), (73, 10563), (85, 10647), (95, 10689), (97, 10704), (99, 10713), (124, 10881), (127, 10908), (144, 11025), (171, 11196), (176, 11226), (196, 11430), (205, 11475), (209, 11502), (210, 11514), (225, 11604), (229, 11649), (233, 11676), (237, 11706), (249, 11793), (250, 11796), (254, 11835), (260, 11898), (271, 11955), (275, 11997), (280, 12042), (281, 12048), (283, 12060), (284, 12063), (290, 12117), (294, 12156), (297, 12177), (298, 12180), (301, 12198), (307, 12225), (312, 12246), (314, 12252), (317, 12270), (318, 12273), (319, 12279), (322, 12300), (359, 12573), (367, 12600), (371, 12612), (377, 12627), (391, 12657), (392, 12660), (413, 12792), (414, 12795), (420, 12828), (423, 12858), (425, 12882), (436, 12948), (469, 13215), (475, 13263), (479, 13308), (481, 13311), (482, 13326), (490, 13371), (492, 13380), (494, 13389), (501, 13440), (514, 13512), (520, 13530), (525, 13551), (540, 13650), (541, 13653), (545, 13686), (550, 13752), (552, 13770), (555, 13785), (558, 13818), (564, 13869), (570, 13920), (596, 14163), (597, 14166), (610, 14238), (611, 14241), (619, 14307), (620, 14310), (622, 14328), (627, 14388), (645, 14544), (646, 14547), (647, 14562), (669, 14733), (674, 14787), (683, 14844), (685, 14859), (690, 14907), (695, 14952), (714, 15072), (716, 15081), (723, 15120), (730, 15192), (738, 15261), (740, 15273), (749, 15324), (753, 15342), (759, 15399), (762, 15492),

Gene: Wocket_18 Start: 10497, Stop: 15983, Start Num: 8

Candidate Starts for Wocket_18:

(Start: 8 @10497 has 36 MA's), (Start: 11 @10512 has 1 MA's), (Start: 14 @10548 has 1 MA's), (15, 10557), (16, 10560), (18, 10602), (34, 10713), (35, 10734), (41, 10854), (59, 10962), (61, 10980), (64, 11001), (65, 11004), (67, 11022), (73, 11046), (78, 11076), (85, 11130), (87, 11136), (95, 11172), (97, 11187), (99, 11196), (124, 11364), (127, 11391), (154, 11562), (160, 11604), (171, 11679), (176, 11709), (196, 11913), (205, 11958), (206, 11964), (209, 11985), (210, 11997), (225, 12087), (229, 12132), (233, 12159), (237, 12189), (249, 12276), (254, 12318), (261, 12390), (271, 12438), (275, 12480), (280, 12525), (281, 12531), (284, 12546), (290, 12600), (294, 12639), (297, 12660), (298, 12663), (301, 12681), (307, 12708), (312, 12729), (314, 12735), (318, 12756), (322, 12783), (371, 13095), (377, 13110), (391, 13140), (392, 13143), (400, 13194), (413, 13275), (414, 13278), (420, 13311), (423, 13341), (425, 13365), (436, 13431), (469, 13698), (474, 13740), (475, 13746), (477, 13779), (479, 13791), (481, 13794), (482, 13809), (487, 13827), (490, 13854), (492, 13863), (494, 13872), (512, 13980), (523, 14028), (524, 14031), (525, 14034), (527, 14055), (541, 14136), (542, 14139), (555, 14265), (558, 14298), (563, 14346), (564, 14349), (567, 14364), (570, 14400), (597, 14646), (610, 14718), (611, 14721), (619, 14787), (620, 14790), (622, 14808), (627, 14868), (645, 15024), (647, 15042), (669, 15207), (674, 15261), (683, 15318), (685, 15333), (690, 15381), (695, 15426), (714, 15546), (716, 15555), (723, 15594), (730, 15666), (738, 15735), (749, 15798), (753, 15816), (757, 15846),

Gene: Yarn_15 Start: 9639, Stop: 14426, Start Num: 72

Candidate Starts for Yarn_15:

(Start: 72 @9639 has 22 MA's), (Start: 76 @9666 has 1 MA's), (89, 9744), (98, 9795), (110, 9882), (113, 9897), (121, 9954), (125, 9972), (128, 9999), (129, 10002), (141, 10071), (147, 10128), (157, 10173), (160, 10191), (166, 10236), (174, 10272), (178, 10305), (185, 10353), (186, 10356), (190, 10404), (193, 10443), (195, 10458), (228, 10650), (230, 10668), (245, 10752), (264, 10899), (270, 10926), (280, 11019), (281, 11025), (284, 11040), (288, 11079), (289, 11091), (298, 11157), (314, 11229), (317, 11247), (318, 11250), (322, 11277), (349, 11523), (356, 11589), (364, 11634), (368, 11655), (369, 11658), (370, 11661), (378, 11697), (382, 11736), (384, 11742), (392, 11769), (413, 11898), (414, 11901), (416, 11919), (435, 12042), (437, 12057), (451, 12186), (453, 12207), (462,

12249), (466, 12276), (467, 12282), (483, 12414), (486, 12426), (498, 12513), (505, 12555), (512, 12591), (538, 12717), (544, 12756), (559, 12885), (567, 12942), (573, 12984), (585, 13077), (592, 13152), (601, 13215), (613, 13296), (616, 13317), (640, 13494), (642, 13500), (668, 13719), (679, 13797), (680, 13815), (682, 13821), (689, 13881), (691, 13899), (694, 13932), (702, 14004), (708, 14043), (712, 14073), (724, 14139), (727, 14187), (736, 14247), (750, 14337), (758, 14397),

Gene: Yummy_17 Start: 9515, Stop: 14311, Start Num: 72

Candidate Starts for Yummy_17:

(Start: 72 @9515 has 22 MA's), (Start: 76 @9542 has 1 MA's), (78, 9548), (98, 9671), (113, 9773), (118, 9818), (121, 9830), (125, 9848), (128, 9875), (129, 9878), (131, 9893), (140, 9944), (141, 9947), (147, 10004), (148, 10007), (149, 10010), (157, 10049), (160, 10067), (166, 10112), (174, 10148), (178, 10181), (182, 10214), (183, 10226), (190, 10280), (193, 10319), (195, 10334), (198, 10343), (201, 10370), (211, 10421), (221, 10481), (224, 10490), (230, 10544), (241, 10607), (244, 10622), (251, 10685), (264, 10775), (270, 10802), (280, 10895), (281, 10901), (284, 10916), (288, 10955), (298, 11033), (304, 11066), (314, 11105), (317, 11123), (318, 11126), (322, 11153), (325, 11210), (328, 11231), (342, 11342), (347, 11363), (349, 11399), (353, 11441), (354, 11453), (356, 11465), (364, 11510), (365, 11513), (368, 11531), (369, 11534), (370, 11537), (382, 11612), (392, 11645), (401, 11705), (412, 11771), (413, 11774), (414, 11777), (416, 11795), (430, 11894), (433, 11909), (434, 11912), (451, 12062), (453, 12083), (462, 12125), (466, 12152), (467, 12158), (483, 12290), (486, 12302), (498, 12389), (505, 12431), (512, 12467), (522, 12503), (529, 12542), (538, 12593), (544, 12632), (551, 12710), (559, 12761), (567, 12818), (585, 12956), (592, 13028), (613, 13172), (616, 13193), (640, 13370), (642, 13376), (680, 13700), (682, 13706), (689, 13766), (691, 13784), (694, 13817), (702, 13889), (708, 13928), (712, 13958), (724, 14024), (725, 14042), (727, 14072), (736, 14132), (750, 14222), (758, 14282),

Gene: Zarbodnamra_17 Start: 10273, Stop: 15795, Start Num: 8

Candidate Starts for Zarbodnamra_17:

(Start: 8 @10273 has 36 MA's), (Start: 11 @10288 has 1 MA's), (Start: 12 @10294 has 1 MA's), (Start: 14 @10324 has 1 MA's), (15, 10333), (16, 10336), (18, 10378), (34, 10489), (35, 10510), (59, 10738), (61, 10756), (63, 10771), (64, 10777), (65, 10780), (67, 10798), (73, 10822), (85, 10906), (86, 10909), (95, 10948), (97, 10963), (99, 10972), (124, 11140), (127, 11167), (171, 11455), (176, 11485), (196, 11689), (205, 11734), (209, 11761), (210, 11773), (225, 11863), (229, 11908), (233, 11935), (237, 11965), (249, 12052), (250, 12055), (254, 12094), (263, 12178), (271, 12214), (275, 12256), (280, 12301), (281, 12307), (283, 12319), (284, 12322), (290, 12376), (294, 12415), (297, 12436), (298, 12439), (301, 12457), (302, 12466), (307, 12484), (312, 12505), (314, 12511), (318, 12532), (322, 12559), (328, 12637), (363, 12826), (371, 12850), (376, 12862), (377, 12865), (386, 12880), (391, 12895), (392, 12898), (400, 12949), (413, 13030), (414, 13033), (420, 13066), (423, 13096), (425, 13120), (469, 13453), (475, 13501), (479, 13546), (481, 13549), (482, 13564), (490, 13609), (492, 13618), (494, 13627), (501, 13678), (514, 13750), (520, 13768), (525, 13789), (540, 13888), (541, 13891), (545, 13924), (550, 13990), (552, 14008), (555, 14023), (558, 14056), (564, 14107), (570, 14158), (596, 14401), (597, 14404), (610, 14476), (611, 14479), (619, 14545), (620, 14548), (622, 14566), (627, 14626), (634, 14683), (637, 14701), (645, 14782), (646, 14785), (647, 14800), (669, 14959), (674, 15013), (681, 15079), (682, 15085), (688, 15145), (689, 15151), (702, 15274), (706, 15298), (709, 15316), (712, 15340), (713, 15346), (717, 15367), (724, 15406), (738, 15547), (740, 15559), (749, 15610), (753, 15628), (762, 15778),

Gene: Zareef_20 Start: 10620, Stop: 15749, Start Num: 25

Candidate Starts for Zareef_20:

(Start: 22 @10599 has 5 MA's), (Start: 25 @10620 has 24 MA's), (28, 10647), (40, 10776), (48, 10872), (56, 10923), (66, 10980), (70, 11013), (71, 11016), (84, 11103), (88, 11115), (97, 11163), (98, 11166), (99, 11172), (100, 11175), (105, 11226), (106, 11232), (114, 11280), (125, 11346), (127, 11367), (184, 11760), (185, 11763), (193, 11865), (202, 11922), (204, 11928), (205, 11931), (206, 11937), (209, 11958), (225, 12060), (227, 12087), (237, 12162), (239, 12180), (244, 12198), (246,

12210), (249, 12249), (256, 12297), (260, 12354), (264, 12378), (266, 12384), (281, 12504), (284, 12519), (288, 12558), (297, 12633), (303, 12666), (307, 12681), (308, 12687), (309, 12693), (318, 12729), (329, 12837), (336, 12909), (346, 12963), (356, 13068), (364, 13113), (369, 13137), (377, 13167), (380, 13197), (381, 13209), (382, 13215), (390, 13242), (392, 13248), (406, 13341), (408, 13347), (416, 13398), (425, 13467), (431, 13500), (434, 13515), (435, 13521), (441, 13578), (448, 13632), (450, 13653), (451, 13665), (453, 13686), (454, 13689), (466, 13755), (484, 13896), (498, 13992), (504, 14025), (510, 14058), (513, 14079), (516, 14085), (553, 14322), (558, 14352), (580, 14526), (584, 14556), (588, 14577), (613, 14769), (615, 14778), (635, 14859), (657, 15000), (661, 15006), (680, 15135), (689, 15201), (694, 15252), (702, 15324), (708, 15363), (709, 15366), (712, 15393), (719, 15426), (724, 15459), (733, 15531), (740, 15603), (749, 15657), (751, 15663), (758, 15720),

Gene: ZiggyZoo_16 Start: 10043, Stop: 15586, Start Num: 8

Candidate Starts for ZiggyZoo_16:

(Start: 8 @10043 has 36 MA's), (Start: 11 @10058 has 1 MA's), (Start: 12 @10064 has 1 MA's), (Start: 14 @10094 has 1 MA's), (15, 10103), (16, 10106), (18, 10148), (34, 10259), (35, 10280), (59, 10508), (61, 10526), (63, 10541), (64, 10547), (65, 10550), (67, 10568), (73, 10592), (85, 10676), (87, 10682), (95, 10718), (97, 10733), (99, 10742), (124, 10910), (127, 10937), (144, 11054), (154, 11108), (171, 11225), (176, 11255), (196, 11459), (205, 11504), (209, 11531), (210, 11543), (225, 11633), (229, 11678), (233, 11705), (237, 11735), (249, 11822), (250, 11825), (254, 11864), (271, 11984), (275, 12026), (280, 12071), (281, 12077), (283, 12089), (284, 12092), (290, 12146), (294, 12185), (297, 12206), (298, 12209), (301, 12227), (307, 12254), (312, 12275), (314, 12281), (318, 12302), (322, 12329), (327, 12401), (346, 12536), (363, 12617), (371, 12641), (377, 12656), (391, 12686), (392, 12689), (400, 12740), (413, 12821), (414, 12824), (420, 12857), (423, 12887), (425, 12911), (436, 12977), (469, 13244), (472, 13262), (475, 13292), (479, 13337), (481, 13340), (482, 13355), (485, 13364), (490, 13400), (492, 13409), (494, 13418), (501, 13469), (514, 13541), (520, 13559), (525, 13580), (540, 13679), (541, 13682), (545, 13715), (550, 13781), (552, 13799), (555, 13814), (558, 13847), (564, 13898), (570, 13949), (596, 14192), (597, 14195), (610, 14267), (611, 14270), (619, 14336), (620, 14339), (622, 14357), (627, 14417), (634, 14474), (637, 14492), (645, 14573), (646, 14576), (647, 14591), (669, 14750), (674, 14804), (681, 14870), (682, 14876), (688, 14936), (689, 14942), (694, 14993), (702, 15065), (706, 15089), (709, 15107), (712, 15131), (713, 15137), (717, 15158), (724, 15197), (738, 15338), (740, 15350), (749, 15401), (753, 15419), (762, 15569),