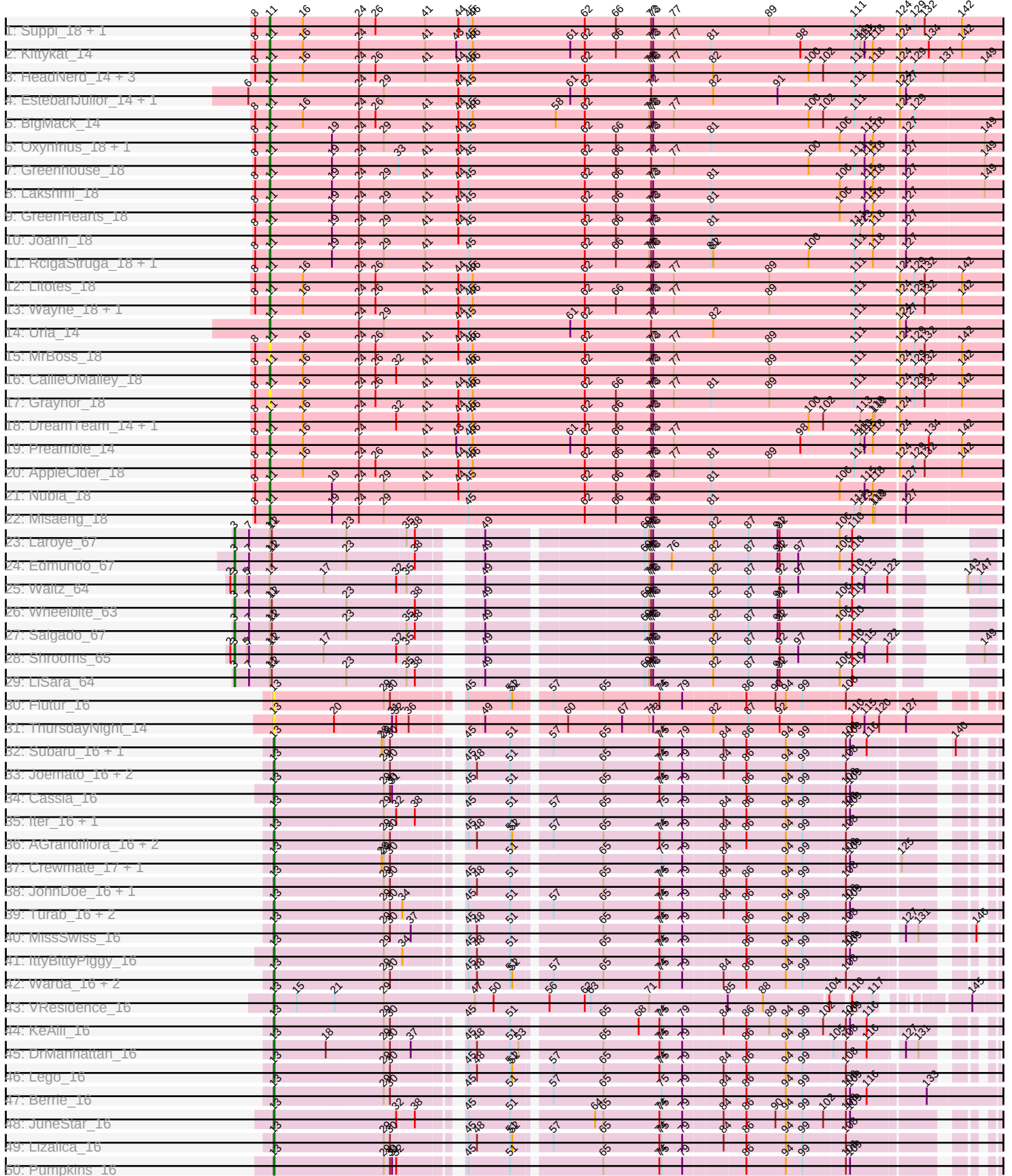
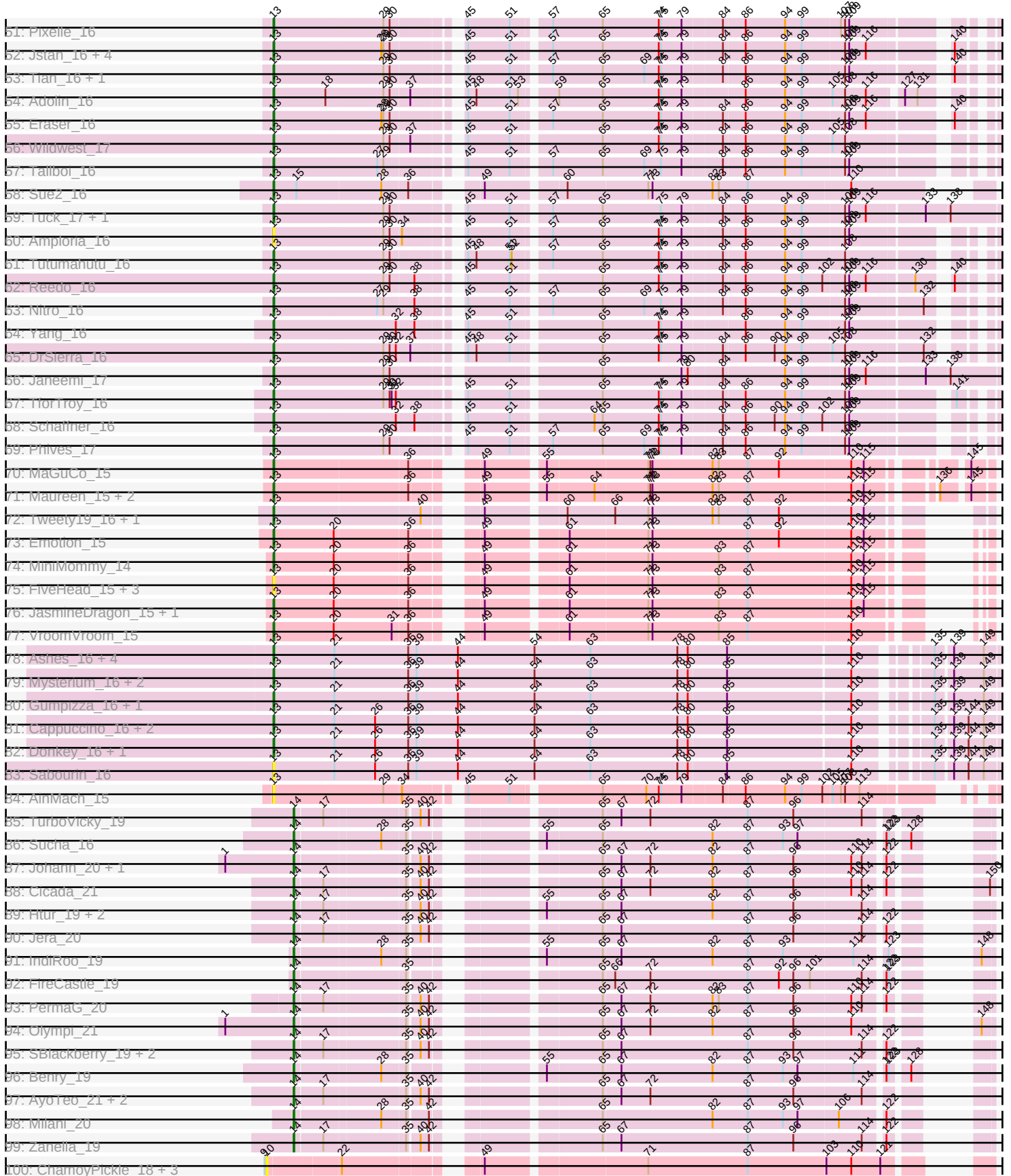


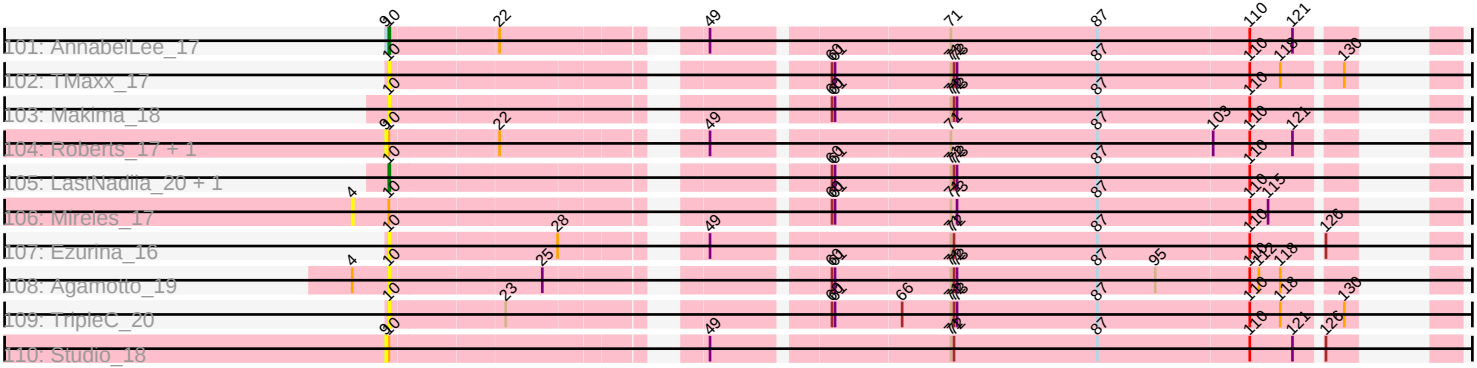
Zoomed Pham 280143



Zoomed Pham 280143



Zoomed Pham 280143



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 280143 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280143 has 166 members, 39 are drafts.

Phages represented in each track:

- Track 1 : Suppi_18, Canowicakte_18
- Track 2 : Kittykat_14
- Track 3 : HeadNerd_14, Moki_14, Bennie_14, Huckleberry_14
- Track 4 : EstebanJulior_14, MamaPearl_14
- Track 5 : BigMack_14
- Track 6 : Oxynfrius_18, Albanese_18
- Track 7 : Greenhouse_18
- Track 8 : Lakshmi_18
- Track 9 : GreenHearts_18
- Track 10 : Joann_18
- Track 11 : RcigaStruga_18, Huntingdon_18
- Track 12 : Litotes_18
- Track 13 : Wayne_18, PartyCup_18
- Track 14 : Urla_14
- Track 15 : MrBoss_18
- Track 16 : CallieOMalley_18
- Track 17 : Graynor_18
- Track 18 : DreamTeam_14, Gisselle_14
- Track 19 : Preamble_14
- Track 20 : AppleCider_18
- Track 21 : Nubia_18
- Track 22 : Misaeng_18
- Track 23 : Laroye_67
- Track 24 : Edmundo_67
- Track 25 : Waltz_64
- Track 26 : Wheelbite_63
- Track 27 : Salgado_67
- Track 28 : Shrooms_65
- Track 29 : LiSara_64
- Track 30 : Flutur_16
- Track 31 : ThursdayNight_14
- Track 32 : Subaru_16, Elezi_16
- Track 33 : Joemato_16, Kaylissa_16, Simpson_18
- Track 34 : Cassia_16
- Track 35 : Iter_16, Ascela_16
- Track 36 : AGrandiflora_16, YesChef_16, Powerpuff_16
- Track 37 : Crewmate_17, ObiToo_16

- Track 38 : JohnDoe_16, Cyan_16
- Track 39 : Turab_16, Adumb2043_16, AEgle_16
- Track 40 : MissSwiss_16
- Track 41 : IttyBittyPiggy_16
- Track 42 : Warda_16, Tbone_16, Mudpuppy_16
- Track 43 : VResidence_16
- Track 44 : KeAlii_16
- Track 45 : DrManhattan_16
- Track 46 : Lego_16
- Track 47 : Berrie_16
- Track 48 : JuneStar_16
- Track 49 : Lizalica_16
- Track 50 : Pumpkins_16
- Track 51 : Pixelle_16
- Track 52 : Jstan_16, London_16, Niobe_16, Skelbel_16, Asa16_16
- Track 53 : Tian_16, Amyev_16
- Track 54 : Adolin_16
- Track 55 : Eraser_16
- Track 56 : Wildwest_17
- Track 57 : Tallboi_16
- Track 58 : Sue2_16
- Track 59 : Tuck_17, Community_16
- Track 60 : Amploria_16
- Track 61 : Tutumahutu_16
- Track 62 : Reedo_16
- Track 63 : Nitro_16
- Track 64 : Yang_16
- Track 65 : DrSierra_16
- Track 66 : Janeemi_17
- Track 67 : TforTroy_16
- Track 68 : Schaffner_16
- Track 69 : Phives_17
- Track 70 : MaGuCo_15
- Track 71 : Maureen_15, IUFootball_15, Liebe_15
- Track 72 : Tweety19_16, Snek_16
- Track 73 : Emotion_15
- Track 74 : MiniMommy_14
- Track 75 : FiveHead_15, Origami_15, LadyAstra_15, JohnThicc_15
- Track 76 : JasmineDragon_15, ShakeltOph_15
- Track 77 : VroomVroom_15
- Track 78 : Ashes_16, RockScotty_16, SpecialK_16, Halsey_16, Moss_16
- Track 79 : Mysterium_16, Beaupre_16, Giorgio_16
- Track 80 : Gumpizza_16, Stuu_16
- Track 81 : Cappuccino_16, Kalimba_16, Sooty_16
- Track 82 : Donkey_16, Gambol_16
- Track 83 : Sabourin_16
- Track 84 : AinMach_15
- Track 85 : TurboVicky_19
- Track 86 : Sucha_16
- Track 87 : Johann_20, Goodman_20
- Track 88 : Cicada_21
- Track 89 : Htur_19, Linayshia_19, Rasovi_19
- Track 90 : Jera_20

- Track 91 : IndiRoo_19
- Track 92 : FireCastle_19
- Track 93 : PermaG_20
- Track 94 : Olympi_21
- Track 95 : SBlackberry_19, Rootkit7_19, Alove_19
- Track 96 : Benry_19
- Track 97 : AyoTeo_21, Labella_21, Typher_21
- Track 98 : Milani_20
- Track 99 : Zanella_19
- Track 100 : ChamoyPickle_18, Gerri43_18, CardboardBox_18, ChipsNGuac_18
- Track 101 : AnnabelLee_17
- Track 102 : TMaxx_17
- Track 103 : Makima_18
- Track 104 : Roberts_17, Neuville_17
- Track 105 : LastNadia_20, Audell_20
- Track 106 : Mireles_17
- Track 107 : Ezurina_16
- Track 108 : Agamoto_19
- Track 109 : TripleC_20
- Track 110 : Studio_18

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

The start number called the most often in the published annotations is 13, it was called in 71 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_16, AGrandiflora_16, Adolin_16, Adumb2043_16, AinMach_15, Amploria_16, Amyev_16, Asa16_16, Ascela_16, Ashes_16, Beaupre_16, Berrie_16, Cappuccino_16, Cassia_16, Community_16, Crewmate_17, Cyan_16, Donkey_16, DrManhattan_16, DrSierra_16, Elezi_16, Emotion_15, Eraser_16, FiveHead_15, Flutur_16, Gambol_16, Giorgio_16, Gumpizza_16, Halsey_16, IUFootball_15, Iter_16, IttyBittyPiggy_16, Janeemi_17, JasmineDragon_15, Joemato_16, JohnDoe_16, JohnThicc_15, Jstan_16, JuneStar_16, Kalimba_16, Kaylissa_16, KeAlii_16, LadyAstra_15, Lego_16, Liebe_15, Lizalica_16, London_16, MaGuCo_15, Maureen_15, MiniMommy_14, MissSwiss_16, Moss_16, Mudpuppy_16, Mysterium_16, Niobe_16, Nitro_16, ObiToo_16, Origami_15, Phives_17, Pixelle_16, Powerpuff_16, Pumpkins_16, Reedo_16, RockScotty_16, Sabourin_16, Schaffner_16, ShakeltOph_15, Simpson_18, Skelbel_16, Snek_16, Sooty_16, SpecialK_16, Stuu_16, Subaru_16, Sue2_16, Tallboi_16, Tbone_16, TforTroy_16, ThursdayNight_14, Tian_16, Tuck_17, Turab_16, Tutumahutu_16, Tweety19_16, VResidence_16, VroomVroom_15, Warda_16, Wildwest_17, Yang_16, YesChef_16,

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

-

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

- Agamoto_19, Albanese_18, Alove_19, AnnabelLee_17, AppleCider_18, Audell_20, AyoTeo_21, Bennie_14, Benry_19, BigMack_14, CallieOMalley_18, Canowicakte_18, CardboardBox_18, ChamoyPickle_18, ChipsNGuac_18, Cicada_21, DreamTeam_14,

Edmundo_67, EstebanJulior_14, Ezurina_16, FireCastle_19, Gerri43_18, Gisselle_14, Goodman_20, Graynor_18, GreenHearts_18, Greenhouse_18, HeadNerd_14, Htur_19, Huckleberry_14, Huntingdon_18, IndiRoo_19, Jera_20, Joann_18, Johann_20, Kittykat_14, Labella_21, Lakshmi_18, Laroye_67, LastNadiia_20, LiSara_64, Linayshia_19, Litotes_18, Makima_18, MamaPearl_14, Milani_20, Mireles_17, Misaeng_18, Moki_14, MrBoss_18, Neuville_17, Nubia_18, Olympi_21, Oxynfrius_18, PartyCup_18, PermaG_20, Preamble_14, Rasovi_19, RcigaStruga_18, Roberts_17, Rootkit7_19, SBlackberry_19, Salgado_67, Shrooms_65, Studio_18, Sucha_16, Suppi_18, TMaxx_17, TripleC_20, TurboVicky_19, Typher_21, Urla_14, Waltz_64, Wayne_18, Wheelbite_63, Zanella_19,

Summary by start number:

Start 3:

- Found in 7 of 166 (4.2%) of genes in pham
- Manual Annotations of this start: 7 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Edmundo_67 (AL), Laroye_67 (AL), LiSara_64 (AL), Salgado_67 (AL), Shrooms_65 (AL), Waltz_64 (AL), Wheelbite_63 (AL),

Start 4:

- Found in 2 of 166 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Mireles_17 (FR),

Start 9:

- Found in 8 of 166 (4.8%) of genes in pham
- No Manual Annotations of this start.
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Neuville_17 (FR), Roberts_17 (FR), Studio_18 (FR),

Start 10:

- Found in 16 of 166 (9.6%) of genes in pham
- Manual Annotations of this start: 2 of 127
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Agamotto_19 (FR), AnnabelleLee_17 (FR), Audell_20 (FR), CardboardBox_18 (FR), ChamoyPickle_18 (FR), ChipsNGuac_18 (FR), Ezurina_16 (FR), Gerri43_18 (FR), LastNadiia_20 (FR), Makima_18 (FR), TMaxx_17 (FR), TripleC_20 (FR),

Start 11:

- Found in 38 of 166 (22.9%) of genes in pham
- Manual Annotations of this start: 29 of 127
- Called 81.6% of time when present
- Phage (with cluster) where this start called: Albanese_18 (AK), AppleCider_18 (AK), Bennie_14 (AK), BigMack_14 (AK), CallieOMalley_18 (AK), Canowicakte_18 (AK), DreamTeam_14 (AK), EstebanJulior_14 (AK), Gisselle_14 (AK), Graynor_18 (AK), GreenHearts_18 (AK), Greenhouse_18 (AK), HeadNerd_14 (AK), Huckleberry_14 (AK), Huntingdon_18 (AK), Joann_18 (AK), Kittykat_14 (AK), Lakshmi_18 (AK),

Litotes_18 (AK), MamaPearl_14 (AK), Misaeng_18 (AK), Moki_14 (AK), MrBoss_18 (AK), Nubia_18 (AK), Oxynfrius_18 (AK), PartyCup_18 (AK), Preamble_14 (AK), RcigaStruga_18 (AK), Suppi_18 (AK), Urla_14 (AK), Wayne_18 (AK),

Start 13:

- Found in 90 of 166 (54.2%) of genes in pham
- Manual Annotations of this start: 71 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_16 (AZ1), AGrandiflora_16 (AZ1), Adolin_16 (AZ1), Adumb2043_16 (AZ1), AinMach_15 (AZ7), Amploria_16 (AZ1), Amyev_16 (AZ1), Asa16_16 (AZ1), Ascela_16 (AZ1), Ashes_16 (AZ5), Beaupre_16 (AZ5), Berrie_16 (AZ1), Cappuccino_16 (AZ5), Cassia_16 (AZ1), Community_16 (AZ1), Crewmate_17 (AZ1), Cyan_16 (AZ1), Donkey_16 (AZ5), DrManhattan_16 (AZ1), DrSierra_16 (AZ1), Elezi_16 (AZ1), Emotion_15 (AZ4), Eraser_16 (AZ1), FiveHead_15 (AZ4), Flutur_16 (AZ), Gambol_16 (AZ5), Giorgio_16 (AZ5), Gumpizza_16 (AZ5), Halsey_16 (AZ5), IUFootball_15 (AZ2), Iter_16 (AZ1), IttyBittyPiggy_16 (AZ1), Janeemi_17 (AZ1), JasmineDragon_15 (AZ4), Joemato_16 (AZ1), JohnDoe_16 (AZ1), JohnThicc_15 (AZ4), Jstan_16 (AZ1), JuneStar_16 (AZ1), Kalimba_16 (AZ5), Kaylissa_16 (AZ1), KeAlii_16 (AZ1), LadyAstra_15 (AZ4), Lego_16 (AZ1), Liebe_15 (AZ2), Lizalica_16 (AZ1), London_16 (AZ1), MaGuCo_15 (AZ2), Maureen_15 (AZ2), MiniMommy_14 (AZ4), MissSwiss_16 (AZ1), Moss_16 (AZ5), Mudpuppy_16 (AZ1), Mysterium_16 (AZ5), Niobe_16 (AZ1), Nitro_16 (AZ1), ObiToo_16 (AZ1), Origami_15 (AZ4), Phives_17 (AZ1), Pixelle_16 (AZ1), Powerpuff_16 (AZ1), Pumpkins_16 (AZ1), Reedo_16 (AZ1), RockScotty_16 (AZ5), Sabourin_16 (AZ5), Schaffner_16 (AZ1), ShakeltOph_15 (AZ4), Simpson_18 (AZ1), Skelbel_16 (AZ1), Snek_16 (AZ3), Sooty_16 (AZ5), SpecialK_16 (AZ5), Stuu_16 (AZ5), Subaru_16 (AZ1), Sue2_16 (AZ1), Tallboi_16 (AZ1), Tbone_16 (AZ1), TforTroy_16 (AZ1), ThursdayNight_14 (AZ), Tian_16 (AZ1), Tuck_17 (AZ1), Turab_16 (AZ1), Tutumahutu_16 (AZ1), Tweety19_16 (AZ3), VResidence_16 (AZ1), VroomVroom_15 (AZ4), Warda_16 (AZ1), Wildwest_17 (AZ1), Yang_16 (AZ1), YesChef_16 (AZ1),

Start 14:

- Found in 22 of 166 (13.3%) of genes in pham
- Manual Annotations of this start: 18 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alove_19 (EJ), AyoTeo_21 (EJ), Benry_19 (EJ), Cicada_21 (EJ), FireCastle_19 (EJ), Goodman_20 (EJ), Htur_19 (EJ), IndiRoo_19 (EJ), Jera_20 (EJ), Johann_20 (EJ), Labella_21 (EJ), Linayshia_19 (EJ), Milani_20 (EJ), Olympi_21 (EJ), PermaG_20 (EJ), Rasovi_19 (EJ), Rootkit7_19 (EJ), SBlackberry_19 (EJ), Sucha_16 (EJ), TurboVicky_19 (EJ), Typher_21 (EJ), Zanella_19 (EJ),

Summary by clusters:

There are 11 clusters represented in this pham: FR, AZ, EJ, AK, AL, AZ1, AZ2, AZ3, AZ4, AZ5, AZ7,

Info for manual annotations of cluster AK:

- Start number 11 was manually annotated 29 times for cluster AK.

Info for manual annotations of cluster AL:

- Start number 3 was manually annotated 7 times for cluster AL.

Info for manual annotations of cluster AZ1:

- Start number 13 was manually annotated 46 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 13 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 13 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 13 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 13 was manually annotated 15 times for cluster AZ5.

Info for manual annotations of cluster EJ:

- Start number 14 was manually annotated 18 times for cluster EJ.

Info for manual annotations of cluster FR:

- Start number 10 was manually annotated 2 times for cluster FR.

Gene Information:

Gene: AEgle_16 Start: 10734, Stop: 13058, Start Num: 13

Candidate Starts for AEgle_16:

(Start: 13 @10734 has 71 MA's), (29, 10890), (30, 10899), (34, 10914), (45, 10980), (51, 11040), (57, 11085), (65, 11157), (74, 11238), (75, 11241), (79, 11271), (84, 11325), (86, 11355), (94, 11412), (99, 11436), (108, 11496), (109, 11502), (166, 11721), (211, 11817), (217, 11850), (240, 11937), (254, 11991), (267, 12033), (279, 12072), (299, 12132), (335, 12273), (373, 12402), (375, 12411), (393, 12522), (424, 12654), (425, 12657), (432, 12690), (446, 12768), (454, 12807), (468, 12867), (485, 12957),

Gene: AGrandiflora_16 Start: 10727, Stop: 13042, Start Num: 13

Candidate Starts for AGrandiflora_16:

(Start: 13 @10727 has 71 MA's), (29, 10883), (30, 10892), (45, 10973), (48, 10985), (51, 11033), (52, 11036), (57, 11078), (65, 11150), (74, 11231), (75, 11234), (79, 11264), (84, 11318), (86, 11348), (94, 11405), (99, 11429), (108, 11489), (166, 11714), (211, 11810), (227, 11873), (229, 11882), (240, 11930), (243, 11939), (246, 11951), (254, 11984), (267, 12026), (279, 12065), (299, 12125), (335, 12266), (353, 12341), (355, 12353), (373, 12395), (375, 12404), (381, 12428), (391, 12497), (393, 12515), (421, 12626), (424, 12647), (425, 12650), (432, 12683), (446, 12761), (454, 12800), (468, 12860), (474, 12890), (485, 12941), (492, 12986), (497, 13031),

Gene: Adolin_16 Start: 10723, Stop: 12957, Start Num: 13

Candidate Starts for Adolin_16:

(Start: 13 @10723 has 71 MA's), (18, 10798), (29, 10879), (30, 10888), (37, 10915), (45, 10969), (48, 10981), (51, 11029), (53, 11041), (59, 11083), (65, 11146), (74, 11227), (75, 11230), (79, 11260), (86, 11344), (94, 11401), (99, 11425), (105, 11467), (108, 11485), (116, 11515), (127, 11554), (131, 11572), (158, 11644), (159, 11647), (164, 11665), (200, 11710), (216, 11767), (227, 11806), (229,

11815), (240, 11863), (243, 11872), (267, 11959), (271, 11971), (279, 11998), (283, 12016), (299, 12058), (326, 12160), (340, 12220), (356, 12292), (370, 12319), (373, 12328), (389, 12418), (392, 12439), (402, 12472), (416, 12526), (419, 12547), (444, 12679), (450, 12709), (489, 12892),

Gene: Adumb2043_16 Start: 10733, Stop: 13057, Start Num: 13

Candidate Starts for Adumb2043_16:

(Start: 13 @10733 has 71 MA's), (29, 10889), (30, 10898), (34, 10913), (45, 10979), (51, 11039), (57, 11084), (65, 11156), (74, 11237), (75, 11240), (79, 11270), (84, 11324), (86, 11354), (94, 11411), (99, 11435), (108, 11495), (109, 11501), (166, 11720), (211, 11816), (217, 11849), (240, 11936), (254, 11990), (267, 12032), (279, 12071), (299, 12131), (335, 12272), (373, 12401), (375, 12410), (393, 12521), (424, 12653), (425, 12656), (432, 12689), (446, 12767), (454, 12806), (468, 12866), (485, 12956),

Gene: Agamoto_19 Start: 12614, Stop: 14902, Start Num: 10

Candidate Starts for Agamoto_19:

(4, 12578), (Start: 10 @12614 has 2 MA's), (25, 12755), (60, 12974), (61, 12977), (71, 13088), (72, 13091), (73, 13094), (87, 13232), (95, 13289), (110, 13379), (112, 13388), (118, 13409), (161, 13550), (162, 13556), (215, 13715), (227, 13757), (237, 13790), (243, 13814), (252, 13850), (258, 13871), (268, 13913), (270, 13919), (271, 13922), (293, 14003), (299, 14030), (302, 14045), (305, 14057), (311, 14081), (315, 14096), (317, 14102), (321, 14114), (322, 14120), (328, 14141), (329, 14144), (332, 14156), (336, 14174), (385, 14363), (392, 14408), (395, 14429), (396, 14432), (421, 14528), (424, 14549), (425, 14552), (432, 14585), (454, 14702), (459, 14726), (460, 14735), (466, 14753), (484, 14843), (487, 14864),

Gene: AinMach_15 Start: 9852, Stop: 12212, Start Num: 13

Candidate Starts for AinMach_15:

(Start: 13 @9852 has 71 MA's), (29, 10008), (34, 10032), (45, 10098), (51, 10158), (65, 10275), (70, 10338), (74, 10356), (75, 10359), (79, 10389), (84, 10443), (86, 10473), (94, 10530), (99, 10554), (102, 10584), (105, 10596), (107, 10608), (108, 10614), (113, 10635), (240, 10980), (243, 10989), (299, 11175), (341, 11346), (353, 11391), (354, 11400), (360, 11424), (370, 11436), (377, 11460), (379, 11469), (381, 11478), (405, 11610), (417, 11655), (421, 11688), (424, 11709), (425, 11712), (441, 11796), (450, 11838), (468, 11928), (474, 11958),

Gene: Albanese_18 Start: 12660, Stop: 15221, Start Num: 11

Candidate Starts for Albanese_18:

(8, 12639), (Start: 11 @12660 has 29 MA's), (19, 12750), (24, 12789), (29, 12825), (41, 12885), (44, 12933), (45, 12948), (62, 13116), (66, 13161), (72, 13212), (73, 13215), (81, 13299), (106, 13485), (115, 13521), (118, 13533), (127, 13575), (149, 13686), (186, 13884), (210, 13977), (215, 14001), (216, 14004), (236, 14082), (237, 14088), (244, 14115), (251, 14145), (267, 14208), (272, 14223), (274, 14232), (275, 14235), (278, 14244), (284, 14268), (288, 14280), (289, 14286), (293, 14301), (294, 14307), (295, 14310), (300, 14331), (303, 14346), (307, 14361), (311, 14379), (313, 14385), (317, 14400), (320, 14409), (322, 14418), (331, 14451), (332, 14454), (335, 14466), (336, 14472), (339, 14484), (354, 14550), (358, 14565), (373, 14595), (375, 14604), (393, 14715), (404, 14751), (412, 14772), (424, 14847), (425, 14850), (436, 14904), (442, 14943), (454, 15000), (459, 15024), (470, 15066), (477, 15093), (489, 15162),

Gene: Alove_19 Start: 13340, Stop: 15328, Start Num: 14

Candidate Starts for Alove_19:

(Start: 14 @13340 has 18 MA's), (17, 13379), (35, 13490), (40, 13505), (42, 13517), (65, 13709), (67, 13733), (87, 13916), (96, 13982), (114, 14078), (122, 14102), (155, 14189), (186, 14291), (193, 14315), (208, 14384), (216, 14417), (276, 14582), (295, 14615), (330, 14642), (333, 14660), (374, 14762), (377, 14774), (378, 14780), (391, 14861), (437, 15035), (449, 15101), (461, 15161), (464, 15170), (491, 15302),

Gene: Amploria_16 Start: 10733, Stop: 13057, Start Num: 13

Candidate Starts for Amploria_16:

(Start: 13 @10733 has 71 MA's), (29, 10889), (30, 10898), (34, 10913), (45, 10979), (51, 11039), (57, 11084), (65, 11156), (74, 11237), (75, 11240), (79, 11270), (84, 11324), (86, 11354), (94, 11411), (99, 11435), (108, 11495), (109, 11501), (166, 11720), (211, 11816), (217, 11849), (240, 11936), (254, 11990), (267, 12032), (279, 12071), (299, 12131), (335, 12272), (373, 12401), (375, 12410), (393, 12521), (424, 12653), (425, 12656), (446, 12767), (454, 12806), (468, 12866), (485, 12956),

Gene: Amyev_16 Start: 10746, Stop: 13070, Start Num: 13

Candidate Starts for Amyev_16:

(Start: 13 @10746 has 71 MA's), (29, 10902), (30, 10911), (45, 10992), (51, 11052), (57, 11097), (65, 11169), (69, 11229), (74, 11250), (75, 11253), (79, 11283), (84, 11337), (86, 11367), (94, 11424), (99, 11448), (108, 11508), (109, 11514), (140, 11634), (166, 11733), (211, 11829), (229, 11901), (240, 11949), (246, 11970), (254, 12003), (267, 12045), (279, 12084), (299, 12144), (302, 12159), (320, 12225), (350, 12348), (352, 12357), (373, 12414), (375, 12423), (385, 12480), (386, 12483), (393, 12534), (424, 12666), (425, 12669), (446, 12780), (454, 12819), (459, 12843), (485, 12969),

Gene: AnnabelLee_17 Start: 9570, Stop: 11855, Start Num: 10

Candidate Starts for AnnabelLee_17:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (110, 10335), (121, 10377), (175, 10545), (184, 10566), (204, 10620), (240, 10761), (244, 10773), (252, 10806), (256, 10821), (270, 10875), (271, 10878), (278, 10902), (288, 10938), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (300, 10989), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: AppleCider_18 Start: 12612, Stop: 15167, Start Num: 11

Candidate Starts for AppleCider_18:

(8, 12591), (Start: 11 @12612 has 29 MA's), (16, 12660), (24, 12741), (26, 12765), (41, 12837), (44, 12885), (45, 12900), (46, 12906), (62, 13068), (66, 13113), (72, 13164), (73, 13167), (77, 13197), (81, 13251), (89, 13335), (111, 13458), (124, 13518), (129, 13536), (132, 13551), (142, 13602), (186, 13833), (205, 13902), (210, 13926), (214, 13944), (215, 13950), (230, 14004), (233, 14016), (237, 14037), (243, 14061), (265, 14148), (272, 14172), (273, 14178), (274, 14181), (278, 14193), (283, 14214), (284, 14217), (286, 14223), (288, 14229), (292, 14247), (293, 14250), (294, 14256), (300, 14280), (304, 14301), (307, 14310), (311, 14328), (317, 14349), (320, 14358), (322, 14367), (331, 14400), (332, 14403), (333, 14412), (335, 14415), (347, 14466), (393, 14664), (395, 14676), (403, 14697), (404, 14700), (424, 14796), (425, 14799), (436, 14853), (442, 14892), (454, 14949), (465, 14991), (477, 15039), (483, 15081), (489, 15111),

Gene: Asa16_16 Start: 10703, Stop: 13027, Start Num: 13

Candidate Starts for Asa16_16:

(Start: 13 @10703 has 71 MA's), (28, 10856), (29, 10859), (30, 10868), (45, 10949), (51, 11009), (57, 11054), (65, 11126), (74, 11207), (75, 11210), (79, 11240), (84, 11294), (86, 11324), (94, 11381), (99, 11405), (108, 11465), (109, 11471), (116, 11495), (140, 11591), (166, 11690), (211, 11786), (217, 11819), (229, 11858), (240, 11906), (254, 11960), (267, 12002), (279, 12041), (283, 12059), (299, 12101), (323, 12194), (371, 12365), (375, 12380), (393, 12491), (424, 12623), (425, 12626), (432, 12659), (446, 12737), (454, 12776), (468, 12836), (485, 12926),

Gene: Ascela_16 Start: 10739, Stop: 13054, Start Num: 13

Candidate Starts for Ascela_16:

(Start: 13 @10739 has 71 MA's), (29, 10895), (32, 10913), (38, 10937), (45, 10985), (51, 11045), (57, 11090), (65, 11162), (75, 11246), (79, 11276), (84, 11330), (86, 11360), (94, 11417), (99, 11441), (108, 11501), (109, 11507), (166, 11726), (229, 11894), (240, 11942), (267, 12038), (279, 12077), (283, 12095), (299, 12137), (304, 12161), (320, 12218), (323, 12230), (350, 12341), (371, 12401), (375, 12416), (393, 12527), (421, 12638), (424, 12659), (425, 12662), (432, 12695), (446, 12773), (454, 12812), (474, 12902), (478, 12914), (492, 12998),

Gene: Ashes_16 Start: 10335, Stop: 12755, Start Num: 13

Candidate Starts for Ashes_16:

(Start: 13 @10335 has 71 MA's), (21, 10422), (36, 10527), (39, 10539), (44, 10599), (54, 10710), (63, 10791), (78, 10917), (80, 10932), (85, 10986), (110, 11160), (135, 11244), (139, 11265), (149, 11307), (183, 11433), (186, 11454), (195, 11487), (209, 11544), (220, 11586), (225, 11601), (237, 11652), (250, 11688), (251, 11694), (283, 11796), (289, 11817), (301, 11859), (317, 11919), (318, 11925), (332, 11973), (354, 12069), (395, 12246), (402, 12258), (415, 12309), (429, 12390), (442, 12459), (450, 12495), (468, 12576), (471, 12591), (485, 12663), (489, 12687),

Gene: Audell_20 Start: 12894, Stop: 15182, Start Num: 10

Candidate Starts for Audell_20:

(Start: 10 @12894 has 2 MA's), (60, 13254), (61, 13257), (71, 13368), (72, 13371), (73, 13374), (87, 13512), (110, 13659), (161, 13830), (177, 13878), (218, 14010), (243, 14094), (246, 14106), (252, 14130), (262, 14172), (267, 14190), (271, 14202), (292, 14280), (293, 14283), (299, 14310), (303, 14328), (305, 14337), (311, 14361), (315, 14376), (317, 14382), (321, 14394), (322, 14400), (332, 14436), (339, 14466), (354, 14532), (392, 14688), (395, 14709), (396, 14712), (424, 14829), (425, 14832), (432, 14865), (454, 14982), (459, 15006), (484, 15123),

Gene: AyoTeo_21 Start: 13467, Stop: 15455, Start Num: 14

Candidate Starts for AyoTeo_21:

(Start: 14 @13467 has 18 MA's), (17, 13506), (35, 13617), (40, 13632), (42, 13644), (65, 13836), (67, 13860), (72, 13902), (87, 14043), (96, 14109), (114, 14205), (155, 14316), (186, 14418), (193, 14442), (208, 14511), (216, 14544), (276, 14709), (295, 14742), (327, 14757), (330, 14769), (333, 14787), (377, 14901), (378, 14907), (437, 15162), (449, 15228), (461, 15288), (491, 15429),

Gene: Beaupre_16 Start: 10336, Stop: 12756, Start Num: 13

Candidate Starts for Beaupre_16:

(Start: 13 @10336 has 71 MA's), (21, 10423), (36, 10528), (39, 10540), (44, 10600), (54, 10711), (63, 10792), (78, 10918), (80, 10933), (85, 10987), (110, 11161), (135, 11245), (139, 11266), (149, 11308), (183, 11434), (186, 11455), (195, 11488), (209, 11545), (220, 11587), (225, 11602), (237, 11653), (250, 11689), (251, 11695), (283, 11797), (289, 11818), (301, 11860), (317, 11920), (318, 11926), (332, 11974), (354, 12070), (392, 12226), (395, 12247), (402, 12259), (415, 12310), (442, 12460), (450, 12496), (468, 12577), (485, 12664), (489, 12688),

Gene: Bennie_14 Start: 9720, Stop: 12287, Start Num: 11

Candidate Starts for Bennie_14:

(8, 9699), (Start: 11 @9720 has 29 MA's), (16, 9768), (24, 9849), (26, 9873), (41, 9945), (44, 9993), (45, 10008), (46, 10014), (62, 10176), (71, 10269), (72, 10272), (73, 10275), (77, 10305), (82, 10362), (100, 10500), (102, 10521), (111, 10566), (118, 10593), (124, 10626), (129, 10644), (137, 10686), (149, 10743), (204, 11007), (210, 11034), (214, 11052), (215, 11058), (221, 11082), (228, 11103), (236, 11139), (242, 11166), (250, 11196), (251, 11202), (264, 11253), (273, 11286), (284, 11325), (286, 11331), (288, 11337), (290, 11346), (293, 11358), (294, 11364), (300, 11388), (304, 11409), (307, 11418), (317, 11457), (322, 11475), (331, 11508), (332, 11511), (335, 11523), (338, 11538), (351, 11589), (358, 11622), (369, 11640), (376, 11664), (383, 11706), (393, 11772), (395, 11784), (412, 11829), (424, 11904), (425, 11907), (436, 11961), (442, 12000), (448, 12027), (454, 12057), (457, 12069), (459, 12081), (460, 12090), (477, 12156), (483, 12198), (489, 12228),

Gene: Benry_19 Start: 11509, Stop: 13800, Start Num: 14

Candidate Starts for Benry_19:

(Start: 14 @11509 has 18 MA's), (28, 11626), (35, 11659), (55, 11800), (65, 11878), (67, 11902), (82, 12034), (87, 12085), (93, 12136), (97, 12157), (111, 12235), (122, 12271), (123, 12274), (128, 12295), (154, 12352), (178, 12436), (192, 12481), (193, 12484), (197, 12502), (201, 12520), (206, 12544), (245, 12706), (261, 12772), (271, 12805), (277, 12826), (286, 12859), (287, 12862), (330, 13030), (333, 13048), (339, 13069), (357, 13147), (373, 13180), (390, 13279), (396, 13315), (397, 13321), (410, 13348), (418, 13387), (424, 13432), (427, 13444), (429, 13456), (431, 13465), (432, 13468), (454, 13582), (467, 13633), (468, 13639), (469, 13648),

Gene: Berrie_16 Start: 10711, Stop: 13188, Start Num: 13

Candidate Starts for Berrie_16:

(Start: 13 @10711 has 71 MA's), (29, 10867), (30, 10876), (45, 10957), (51, 11017), (57, 11062), (65, 11134), (75, 11218), (79, 11248), (84, 11302), (86, 11332), (94, 11389), (99, 11413), (108, 11473), (109, 11479), (116, 11503), (133, 11581), (152, 11713), (156, 11749), (166, 11791), (194, 11890), (212, 11962), (221, 12001), (229, 12028), (240, 12076), (254, 12130), (267, 12172), (278, 12208), (283, 12229), (299, 12271), (323, 12364), (350, 12475), (353, 12487), (371, 12535), (375, 12550), (424, 12793), (425, 12796), (446, 12907), (454, 12946), (471, 13021), (474, 13036), (492, 13132),

Gene: BigMack_14 Start: 9716, Stop: 12277, Start Num: 11

Candidate Starts for BigMack_14:

(8, 9695), (Start: 11 @9716 has 29 MA's), (16, 9764), (24, 9845), (26, 9869), (41, 9941), (44, 9989), (45, 10004), (46, 10010), (58, 10130), (62, 10172), (71, 10265), (72, 10268), (73, 10271), (77, 10301), (100, 10496), (102, 10517), (111, 10562), (124, 10622), (129, 10640), (172, 10892), (204, 11003), (210, 11030), (214, 11048), (215, 11054), (221, 11078), (224, 11087), (236, 11135), (242, 11162), (243, 11165), (250, 11192), (251, 11198), (254, 11210), (264, 11249), (268, 11264), (272, 11276), (273, 11282), (274, 11285), (277, 11294), (284, 11321), (286, 11327), (288, 11333), (290, 11342), (293, 11354), (294, 11360), (295, 11363), (307, 11414), (316, 11450), (317, 11453), (331, 11504), (332, 11507), (333, 11516), (335, 11519), (338, 11534), (358, 11618), (387, 11726), (393, 11768), (424, 11900), (425, 11903), (436, 11957), (442, 11996), (452, 12044), (454, 12053), (459, 12077), (477, 12146), (479, 12152), (489, 12218),

Gene: CallieOMalley_18 Start: 12612, Stop: 15167, Start Num: 11

Candidate Starts for CallieOMalley_18:

(8, 12591), (Start: 11 @12612 has 29 MA's), (16, 12660), (24, 12741), (26, 12765), (32, 12795), (41, 12837), (45, 12900), (46, 12906), (62, 13068), (72, 13164), (73, 13167), (77, 13197), (89, 13335), (111, 13458), (124, 13518), (129, 13536), (132, 13551), (142, 13602), (186, 13833), (205, 13902), (210, 13926), (214, 13944), (215, 13950), (230, 14004), (233, 14016), (237, 14037), (243, 14061), (265, 14148), (272, 14172), (273, 14178), (274, 14181), (278, 14193), (283, 14214), (284, 14217), (286, 14223), (288, 14229), (290, 14238), (292, 14247), (293, 14250), (294, 14256), (300, 14280), (304, 14301), (307, 14310), (311, 14328), (317, 14349), (320, 14358), (322, 14367), (331, 14400), (332, 14403), (333, 14412), (335, 14415), (347, 14466), (376, 14556), (393, 14664), (395, 14676), (403, 14697), (404, 14700), (424, 14796), (425, 14799), (436, 14853), (442, 14892), (454, 14949), (465, 14991), (477, 15039), (483, 15081), (489, 15111),

Gene: Canowicakte_18 Start: 12647, Stop: 15202, Start Num: 11

Candidate Starts for Canowicakte_18:

(8, 12626), (Start: 11 @12647 has 29 MA's), (16, 12695), (24, 12776), (26, 12800), (41, 12872), (44, 12920), (45, 12935), (46, 12941), (62, 13103), (66, 13148), (72, 13199), (73, 13202), (77, 13232), (89, 13370), (111, 13493), (124, 13553), (129, 13571), (132, 13586), (142, 13637), (186, 13868), (205, 13937), (210, 13961), (214, 13979), (215, 13985), (230, 14039), (233, 14051), (237, 14072), (243, 14096), (265, 14183), (272, 14207), (273, 14213), (274, 14216), (278, 14228), (283, 14249), (284,

14252), (286, 14258), (288, 14264), (290, 14273), (292, 14282), (293, 14285), (294, 14291), (300, 14315), (304, 14336), (307, 14345), (311, 14363), (317, 14384), (320, 14393), (322, 14402), (331, 14435), (332, 14438), (333, 14447), (335, 14450), (347, 14501), (376, 14591), (393, 14699), (395, 14711), (403, 14732), (404, 14735), (424, 14831), (425, 14834), (436, 14888), (442, 14927), (454, 14984), (465, 15026), (477, 15074), (483, 15116), (489, 15146),

Gene: Cappuccino_16 Start: 10243, Stop: 12663, Start Num: 13

Candidate Starts for Cappuccino_16:

(Start: 13 @10243 has 71 MA's), (21, 10330), (26, 10387), (36, 10435), (39, 10447), (44, 10507), (54, 10618), (63, 10699), (78, 10825), (80, 10840), (85, 10894), (110, 11068), (135, 11152), (139, 11173), (144, 11194), (149, 11215), (155, 11266), (183, 11341), (186, 11362), (195, 11395), (209, 11452), (220, 11494), (225, 11509), (237, 11560), (250, 11596), (283, 11704), (289, 11725), (301, 11767), (304, 11779), (318, 11833), (332, 11881), (354, 11977), (392, 12133), (395, 12154), (402, 12166), (415, 12217), (442, 12367), (450, 12403), (457, 12436), (489, 12595),

Gene: CardboardBox_18 Start: 9570, Stop: 11855, Start Num: 10

Candidate Starts for CardboardBox_18:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: Cassia_16 Start: 10826, Stop: 13150, Start Num: 13

Candidate Starts for Cassia_16:

(Start: 13 @10826 has 71 MA's), (29, 10982), (30, 10991), (31, 10994), (45, 11072), (51, 11132), (65, 11249), (74, 11330), (75, 11333), (79, 11363), (86, 11447), (94, 11504), (99, 11528), (108, 11588), (109, 11594), (166, 11813), (229, 11981), (240, 12029), (254, 12083), (267, 12125), (279, 12164), (299, 12224), (323, 12317), (359, 12470), (369, 12482), (385, 12560), (386, 12563), (393, 12614), (424, 12746), (425, 12749), (446, 12860), (454, 12899),

Gene: ChamoyPickle_18 Start: 9570, Stop: 11855, Start Num: 10

Candidate Starts for ChamoyPickle_18:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: ChipsNGuac_18 Start: 9570, Stop: 11855, Start Num: 10

Candidate Starts for ChipsNGuac_18:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421),

(424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691),
(473, 11736), (493, 11850),

Gene: Cicada_21 Start: 13577, Stop: 15565, Start Num: 14

Candidate Starts for Cicada_21:

(Start: 14 @13577 has 18 MA's), (17, 13616), (35, 13727), (40, 13742), (42, 13754), (65, 13946), (67, 13970), (72, 14012), (82, 14102), (87, 14153), (96, 14219), (110, 14300), (114, 14315), (122, 14339),
(150, 14402), (155, 14426), (186, 14528), (193, 14552), (208, 14621), (216, 14654), (295, 14852),
(330, 14879), (333, 14897), (354, 14951), (374, 14999), (377, 15011), (378, 15017), (388, 15083),
(390, 15095), (437, 15272), (442, 15308), (449, 15338), (461, 15398), (491, 15539),

Gene: Community_16 Start: 11793, Stop: 14270, Start Num: 13

Candidate Starts for Community_16:

(Start: 13 @11793 has 71 MA's), (29, 11949), (30, 11958), (45, 12039), (51, 12099), (57, 12144), (65, 12216), (75, 12300), (79, 12330), (84, 12384), (86, 12414), (94, 12471), (99, 12495), (108, 12555),
(109, 12561), (116, 12585), (133, 12663), (138, 12696), (156, 12831), (166, 12873), (194, 12972),
(212, 13044), (221, 13083), (229, 13110), (240, 13158), (249, 13191), (267, 13254), (283, 13311),
(299, 13353), (302, 13368), (323, 13446), (353, 13569), (371, 13617), (375, 13632), (391, 13725),
(393, 13743), (395, 13755), (424, 13875), (425, 13878), (446, 13989), (454, 14028), (474, 14118),

Gene: Crewmate_17 Start: 11180, Stop: 13486, Start Num: 13

Candidate Starts for Crewmate_17:

(Start: 13 @11180 has 71 MA's), (28, 11333), (29, 11336), (30, 11345), (51, 11486), (65, 11603), (75, 11687), (79, 11717), (84, 11771), (94, 11858), (99, 11882), (108, 11942), (109, 11948), (125, 12014),
(165, 12164), (166, 12167), (227, 12326), (229, 12335), (240, 12383), (254, 12437), (267, 12479),
(279, 12518), (299, 12578), (302, 12593), (323, 12671), (335, 12719), (353, 12794), (355, 12806),
(373, 12848), (375, 12857), (393, 12968), (424, 13100), (425, 13103), (446, 13214), (454, 13253),
(467, 13307), (471, 13328), (474, 13343), (489, 13421),

Gene: Cyan_16 Start: 10730, Stop: 13045, Start Num: 13

Candidate Starts for Cyan_16:

(Start: 13 @10730 has 71 MA's), (29, 10886), (30, 10895), (45, 10976), (48, 10988), (51, 11036), (65, 11153), (74, 11234), (75, 11237), (79, 11267), (84, 11321), (86, 11351), (94, 11408), (99, 11432), (108, 11492), (166, 11717), (211, 11813), (229, 11885), (240, 11933), (254, 11987), (267, 12029), (279, 12068), (299, 12128), (375, 12407), (381, 12431), (385, 12464), (386, 12467), (393, 12518), (421, 12629), (424, 12650), (425, 12653), (432, 12686), (446, 12764), (454, 12803), (468, 12863), (474, 12893), (485, 12944), (492, 12989), (497, 13034),

Gene: Donkey_16 Start: 10243, Stop: 12663, Start Num: 13

Candidate Starts for Donkey_16:

(Start: 13 @10243 has 71 MA's), (21, 10330), (26, 10387), (36, 10435), (39, 10447), (44, 10507), (54, 10618), (63, 10699), (78, 10825), (80, 10840), (85, 10894), (110, 11068), (135, 11152), (139, 11173),
(144, 11194), (149, 11215), (155, 11266), (183, 11341), (186, 11362), (195, 11395), (209, 11452),
(220, 11494), (225, 11509), (237, 11560), (250, 11596), (283, 11704), (289, 11725), (301, 11767),
(304, 11779), (318, 11833), (332, 11881), (354, 11977), (392, 12133), (395, 12154), (402, 12166),
(415, 12217), (442, 12367), (450, 12403), (468, 12484), (489, 12595),

Gene: DrManhattan_16 Start: 10713, Stop: 12947, Start Num: 13

Candidate Starts for DrManhattan_16:

(Start: 13 @10713 has 71 MA's), (18, 10788), (29, 10869), (30, 10878), (37, 10905), (45, 10959), (48, 10971), (51, 11019), (53, 11031), (65, 11136), (74, 11217), (75, 11220), (79, 11250), (86, 11334), (94, 11391), (99, 11415), (105, 11457), (108, 11475), (116, 11505), (127, 11544), (131, 11562), (158, 11634), (159, 11637), (164, 11655), (200, 11700), (216, 11757), (227, 11796), (229, 11805), (240,

11853), (243, 11862), (267, 11949), (271, 11961), (279, 11988), (283, 12006), (299, 12048), (326, 12150), (340, 12210), (353, 12264), (356, 12282), (370, 12309), (373, 12318), (389, 12408), (392, 12429), (402, 12462), (416, 12516), (419, 12537), (444, 12669), (450, 12699), (481, 12828), (489, 12882),

Gene: DrSierra_16 Start: 10741, Stop: 13035, Start Num: 13

Candidate Starts for DrSierra_16:

(Start: 13 @10741 has 71 MA's), (29, 10897), (30, 10906), (32, 10915), (37, 10933), (45, 10987), (48, 10999), (51, 11047), (65, 11164), (74, 11245), (75, 11248), (79, 11278), (84, 11332), (86, 11362), (90, 11404), (94, 11419), (99, 11443), (105, 11485), (108, 11503), (132, 11608), (166, 11728), (216, 11848), (221, 11869), (227, 11887), (229, 11896), (240, 11944), (243, 11953), (254, 11998), (267, 12040), (279, 12079), (283, 12097), (299, 12139), (326, 12241), (336, 12286), (340, 12301), (353, 12355), (356, 12373), (370, 12400), (373, 12409), (389, 12499), (402, 12553), (416, 12607), (419, 12628), (444, 12760), (450, 12790), (489, 12970),

Gene: DreamTeam_14 Start: 9784, Stop: 12330, Start Num: 11

Candidate Starts for DreamTeam_14:

(8, 9763), (Start: 11 @9784 has 29 MA's), (16, 9832), (24, 9913), (32, 9967), (41, 10009), (44, 10057), (45, 10072), (46, 10078), (62, 10240), (66, 10285), (72, 10336), (73, 10339), (100, 10564), (102, 10585), (113, 10639), (118, 10657), (119, 10660), (124, 10690), (195, 11026), (208, 11080), (210, 11086), (214, 11104), (215, 11110), (228, 11155), (235, 11188), (236, 11191), (247, 11239), (248, 11242), (251, 11254), (253, 11263), (265, 11308), (267, 11317), (273, 11338), (277, 11350), (278, 11353), (284, 11377), (286, 11383), (288, 11389), (293, 11410), (294, 11416), (299, 11437), (304, 11461), (307, 11470), (311, 11488), (317, 11509), (318, 11515), (331, 11560), (332, 11563), (333, 11572), (335, 11575), (358, 11674), (359, 11680), (380, 11734), (393, 11824), (424, 11956), (425, 11959), (436, 12013), (442, 12052), (446, 12070), (452, 12100), (454, 12109), (465, 12151), (489, 12271),

Gene: Edmundo_67 Start: 37140, Stop: 40157, Start Num: 3

Candidate Starts for Edmundo_67:

(Start: 3 @37140 has 7 MA's), (7, 37161), (Start: 11 @37191 has 29 MA's), (12, 37194), (23, 37299), (38, 37392), (49, 37452), (69, 37662), (71, 37668), (72, 37671), (73, 37674), (76, 37701), (82, 37761), (87, 37812), (91, 37854), (92, 37857), (97, 37884), (106, 37941), (110, 37959), (156, 38109), (171, 38169), (185, 38202), (187, 38211), (202, 38277), (207, 38301), (231, 38397), (242, 38445), (243, 38448), (246, 38460), (251, 38481), (254, 38493), (267, 38544), (295, 38637), (298, 38652), (317, 38727), (327, 38760), (330, 38772), (332, 38781), (339, 38811), (342, 38826), (344, 38835), (348, 38850), (361, 38904), (378, 38943), (396, 39069), (433, 39219), (438, 39240), (443, 39273), (445, 39276), (447, 39294), (453, 39318), (456, 39330), (459, 39351), (486, 39486), (490, 39507), (493, 39528), (498, 39570), (499, 39573), (502, 39681), (503, 39705), (504, 39714), (506, 39768), (507, 39777), (509, 39840), (511, 39870), (512, 39879), (514, 39978), (515, 39984), (517, 40014), (518, 40053), (520, 40140),

Gene: Elezi_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Elezi_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: Emotion_15 Start: 9044, Stop: 11284, Start Num: 13

Candidate Starts for Emotion_15:

(Start: 13 @9044 has 71 MA's), (20, 9131), (36, 9233), (49, 9299), (61, 9404), (71, 9515), (73, 9521), (87, 9659), (92, 9704), (110, 9806), (115, 9824), (161, 9938), (205, 10034), (226, 10121), (238, 10160), (244, 10184), (250, 10208), (252, 10217), (257, 10235), (263, 10262), (278, 10313), (280, 10325), (296, 10382), (308, 10436), (320, 10478), (352, 10607), (373, 10664), (395, 10796), (396, 10799), (424, 10916), (442, 11012), (444, 11018), (450, 11048),

Gene: Eraser_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Eraser_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (217, 11820), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837),

Gene: EstebanJulior_14 Start: 9752, Stop: 12301, Start Num: 11

Candidate Starts for EstebanJulior_14:

(6, 9722), (Start: 11 @9752 has 29 MA's), (24, 9881), (29, 9917), (44, 10025), (45, 10040), (61, 10187), (62, 10208), (72, 10304), (82, 10394), (91, 10487), (111, 10598), (124, 10658), (127, 10667), (183, 10940), (195, 10994), (204, 11027), (208, 11048), (210, 11054), (214, 11072), (236, 11159), (251, 11222), (265, 11276), (267, 11285), (273, 11306), (277, 11318), (278, 11321), (284, 11345), (286, 11351), (288, 11357), (290, 11366), (293, 11378), (294, 11384), (299, 11405), (307, 11438), (310, 11453), (311, 11456), (317, 11477), (318, 11483), (322, 11495), (331, 11528), (332, 11531), (333, 11540), (335, 11543), (338, 11558), (358, 11642), (375, 11681), (393, 11792), (395, 11804), (412, 11849), (424, 11924), (425, 11927), (436, 11981), (452, 12068), (454, 12077), (459, 12101), (461, 12113), (477, 12170), (479, 12176), (489, 12242), (496, 12284),

Gene: Ezurina_16 Start: 9139, Stop: 11424, Start Num: 10

Candidate Starts for Ezurina_16:

(Start: 10 @9139 has 2 MA's), (28, 9295), (49, 9397), (71, 9613), (72, 9616), (87, 9757), (110, 9904), (126, 9967), (163, 10084), (176, 10117), (184, 10135), (219, 10258), (241, 10333), (252, 10375), (253, 10381), (264, 10423), (267, 10435), (268, 10438), (269, 10441), (284, 10495), (290, 10516), (292, 10525), (293, 10528), (295, 10537), (297, 10546), (298, 10552), (302, 10570), (303, 10573), (305, 10582), (310, 10603), (313, 10612), (316, 10624), (332, 10681), (338, 10708), (339, 10711), (354, 10777), (375, 10831), (384, 10885), (385, 10888), (387, 10900), (396, 10957), (397, 10963), (410, 10990), (419, 11041), (424, 11074), (425, 11077), (442, 11170), (444, 11176), (454, 11227), (459, 11251), (460, 11260), (461, 11263), (493, 11419),

Gene: FireCastle_19 Start: 13235, Stop: 15373, Start Num: 14

Candidate Starts for FireCastle_19:

(Start: 14 @13235 has 18 MA's), (35, 13385), (65, 13604), (66, 13619), (72, 13670), (87, 13811), (92, 13856), (96, 13877), (101, 13901), (114, 13973), (122, 13997), (123, 14000), (153, 14069), (154, 14078), (155, 14084), (178, 14162), (181, 14168), (193, 14210), (208, 14279), (212, 14294), (216, 14312), (233, 14345), (239, 14378), (276, 14477), (287, 14501), (295, 14534), (358, 14756), (376, 14798), (378, 14807), (388, 14873), (427, 15017), (437, 15062), (440, 15083), (442, 15098), (449, 15128), (461, 15188), (468, 15212),

Gene: FiveHead_15 Start: 8974, Stop: 11217, Start Num: 13

Candidate Starts for FiveHead_15:

(Start: 13 @8974 has 71 MA's), (20, 9061), (36, 9163), (49, 9229), (61, 9334), (71, 9445), (73, 9451), (83, 9547), (87, 9589), (110, 9736), (115, 9754), (159, 9856), (215, 10012), (238, 10090), (250, 10138), (252, 10147), (257, 10165), (267, 10207), (270, 10216), (278, 10243), (286, 10273), (294, 10306), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (372, 10591),

(424, 10846), (427, 10858), (442, 10942), (444, 10948), (450, 10978),

Gene: Flutur_16 Start: 10730, Stop: 13045, Start Num: 13

Candidate Starts for Flutur_16:

(Start: 13 @10730 has 71 MA's), (29, 10886), (30, 10895), (45, 10976), (51, 11036), (52, 11039), (57, 11081), (65, 11153), (74, 11234), (75, 11237), (79, 11267), (86, 11351), (90, 11393), (94, 11408), (99, 11432), (108, 11492), (166, 11717), (211, 11813), (227, 11876), (229, 11885), (240, 11933), (243, 11942), (246, 11954), (254, 11987), (267, 12029), (279, 12068), (299, 12128), (335, 12269), (353, 12344), (355, 12356), (373, 12398), (375, 12407), (381, 12431), (391, 12500), (393, 12518), (395, 12530), (421, 12629), (424, 12650), (425, 12653), (432, 12686), (446, 12764), (454, 12803), (468, 12863), (485, 12944), (492, 12989), (497, 13034),

Gene: Gambol_16 Start: 10243, Stop: 12663, Start Num: 13

Candidate Starts for Gambol_16:

(Start: 13 @10243 has 71 MA's), (21, 10330), (26, 10387), (36, 10435), (39, 10447), (44, 10507), (54, 10618), (63, 10699), (78, 10825), (80, 10840), (85, 10894), (110, 11068), (135, 11152), (139, 11173), (144, 11194), (149, 11215), (155, 11266), (183, 11341), (186, 11362), (195, 11395), (209, 11452), (220, 11494), (225, 11509), (237, 11560), (250, 11596), (283, 11704), (289, 11725), (301, 11767), (304, 11779), (318, 11833), (332, 11881), (354, 11977), (392, 12133), (395, 12154), (402, 12166), (415, 12217), (442, 12367), (450, 12403), (468, 12484), (489, 12595),

Gene: Gerri43_18 Start: 9570, Stop: 11855, Start Num: 10

Candidate Starts for Gerri43_18:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: Giorgio_16 Start: 10343, Stop: 12763, Start Num: 13

Candidate Starts for Giorgio_16:

(Start: 13 @10343 has 71 MA's), (21, 10430), (36, 10535), (39, 10547), (44, 10607), (54, 10718), (63, 10799), (78, 10925), (80, 10940), (85, 10994), (110, 11168), (135, 11252), (139, 11273), (149, 11315), (183, 11441), (186, 11462), (195, 11495), (209, 11552), (220, 11594), (225, 11609), (237, 11660), (250, 11696), (251, 11702), (283, 11804), (289, 11825), (301, 11867), (317, 11927), (318, 11933), (332, 11981), (354, 12077), (392, 12233), (395, 12254), (402, 12266), (415, 12317), (442, 12467), (450, 12503), (468, 12584), (485, 12671), (489, 12695),

Gene: Gisselle_14 Start: 9784, Stop: 12330, Start Num: 11

Candidate Starts for Gisselle_14:

(8, 9763), (Start: 11 @9784 has 29 MA's), (16, 9832), (24, 9913), (32, 9967), (41, 10009), (44, 10057), (45, 10072), (46, 10078), (62, 10240), (66, 10285), (72, 10336), (73, 10339), (100, 10564), (102, 10585), (113, 10639), (118, 10657), (119, 10660), (124, 10690), (195, 11026), (208, 11080), (210, 11086), (214, 11104), (215, 11110), (228, 11155), (235, 11188), (236, 11191), (247, 11239), (248, 11242), (251, 11254), (253, 11263), (265, 11308), (267, 11317), (273, 11338), (277, 11350), (278, 11353), (284, 11377), (286, 11383), (288, 11389), (293, 11410), (294, 11416), (299, 11437), (304, 11461), (307, 11470), (311, 11488), (317, 11509), (318, 11515), (331, 11560), (332, 11563), (333, 11572), (335, 11575), (358, 11674), (359, 11680), (380, 11734), (393, 11824), (424, 11956), (425, 11959), (436, 12013), (442, 12052), (446, 12070), (452, 12100), (454, 12109), (465, 12151), (489, 12271),

Gene: Goodman_20 Start: 13490, Stop: 15478, Start Num: 14

Candidate Starts for Goodman_20:

(1, 13391), (Start: 14 @13490 has 18 MA's), (35, 13640), (40, 13655), (42, 13667), (65, 13859), (67, 13883), (72, 13925), (82, 14015), (87, 14066), (96, 14132), (110, 14213), (114, 14228), (122, 14252), (155, 14339), (186, 14441), (193, 14465), (208, 14534), (216, 14567), (295, 14765), (330, 14792), (333, 14810), (354, 14864), (374, 14912), (377, 14924), (378, 14930), (388, 14996), (390, 15008), (391, 15011), (437, 15185), (442, 15221), (449, 15251), (461, 15311), (491, 15452),

Gene: Graynor_18 Start: 12633, Stop: 15188, Start Num: 11

Candidate Starts for Graynor_18:

(8, 12612), (Start: 11 @12633 has 29 MA's), (16, 12681), (24, 12762), (26, 12786), (41, 12858), (44, 12906), (45, 12921), (46, 12927), (62, 13089), (66, 13134), (72, 13185), (73, 13188), (77, 13218), (81, 13272), (89, 13356), (111, 13479), (124, 13539), (129, 13557), (132, 13572), (142, 13623), (186, 13854), (193, 13878), (210, 13947), (214, 13965), (215, 13971), (230, 14025), (233, 14037), (237, 14058), (243, 14082), (265, 14169), (272, 14193), (273, 14199), (274, 14202), (278, 14214), (283, 14235), (284, 14238), (286, 14244), (288, 14250), (292, 14268), (293, 14271), (294, 14277), (300, 14301), (304, 14322), (307, 14331), (311, 14349), (317, 14370), (320, 14379), (322, 14388), (331, 14421), (332, 14424), (333, 14433), (335, 14436), (347, 14487), (376, 14577), (393, 14685), (395, 14697), (403, 14718), (404, 14721), (424, 14817), (425, 14820), (436, 14874), (442, 14913), (454, 14970), (465, 15012), (477, 15060), (483, 15102), (489, 15132),

Gene: GreenHearts_18 Start: 12707, Stop: 15268, Start Num: 11

Candidate Starts for GreenHearts_18:

(8, 12686), (Start: 11 @12707 has 29 MA's), (19, 12797), (24, 12836), (29, 12872), (41, 12932), (44, 12980), (45, 12995), (62, 13163), (66, 13208), (72, 13259), (73, 13262), (81, 13346), (106, 13532), (115, 13568), (118, 13580), (127, 13622), (186, 13931), (210, 14024), (214, 14042), (215, 14048), (236, 14129), (237, 14135), (244, 14162), (251, 14192), (267, 14255), (272, 14270), (274, 14279), (275, 14282), (278, 14291), (284, 14315), (288, 14327), (289, 14333), (293, 14348), (294, 14354), (295, 14357), (300, 14378), (303, 14393), (307, 14408), (311, 14426), (313, 14432), (317, 14447), (320, 14456), (322, 14465), (331, 14498), (332, 14501), (335, 14513), (336, 14519), (339, 14531), (354, 14597), (358, 14612), (373, 14642), (375, 14651), (393, 14762), (404, 14798), (412, 14819), (424, 14894), (425, 14897), (436, 14951), (442, 14990), (454, 15047), (459, 15071), (470, 15113), (477, 15140), (489, 15209),

Gene: Greenhouse_18 Start: 12631, Stop: 15192, Start Num: 11

Candidate Starts for Greenhouse_18:

(8, 12610), (Start: 11 @12631 has 29 MA's), (19, 12721), (24, 12760), (33, 12817), (41, 12856), (44, 12904), (45, 12919), (62, 13087), (66, 13132), (72, 13183), (77, 13216), (100, 13411), (111, 13477), (115, 13492), (118, 13504), (127, 13546), (149, 13657), (157, 13744), (186, 13855), (195, 13888), (210, 13948), (215, 13972), (216, 13975), (236, 14053), (237, 14059), (238, 14062), (244, 14086), (251, 14116), (267, 14179), (272, 14194), (273, 14200), (274, 14203), (278, 14215), (284, 14239), (288, 14251), (289, 14257), (293, 14272), (294, 14278), (295, 14281), (300, 14302), (303, 14317), (307, 14332), (311, 14350), (313, 14356), (317, 14371), (320, 14380), (331, 14422), (332, 14425), (335, 14437), (336, 14443), (339, 14455), (351, 14503), (354, 14521), (358, 14536), (373, 14566), (375, 14575), (393, 14686), (404, 14722), (412, 14743), (424, 14818), (425, 14821), (436, 14875), (442, 14914), (454, 14971), (459, 14995), (470, 15037), (477, 15064), (489, 15133),

Gene: Gumpizza_16 Start: 10336, Stop: 12756, Start Num: 13

Candidate Starts for Gumpizza_16:

(Start: 13 @10336 has 71 MA's), (21, 10423), (36, 10528), (39, 10540), (44, 10600), (54, 10711), (63, 10792), (78, 10918), (80, 10933), (85, 10987), (110, 11161), (135, 11245), (139, 11266), (149, 11308), (183, 11434), (186, 11455), (195, 11488), (209, 11545), (220, 11587), (225, 11602), (237, 11653),

(250, 11689), (251, 11695), (283, 11797), (289, 11818), (301, 11860), (317, 11920), (318, 11926), (332, 11974), (354, 12070), (392, 12226), (395, 12247), (402, 12259), (415, 12310), (442, 12460), (450, 12496), (485, 12664), (489, 12688),

Gene: Halsey_16 Start: 10335, Stop: 12755, Start Num: 13

Candidate Starts for Halsey_16:

(Start: 13 @10335 has 71 MA's), (21, 10422), (36, 10527), (39, 10539), (44, 10599), (54, 10710), (63, 10791), (78, 10917), (80, 10932), (85, 10986), (110, 11160), (135, 11244), (139, 11265), (149, 11307), (183, 11433), (186, 11454), (195, 11487), (209, 11544), (220, 11586), (225, 11601), (237, 11652), (250, 11688), (251, 11694), (283, 11796), (289, 11817), (301, 11859), (317, 11919), (318, 11925), (332, 11973), (354, 12069), (395, 12246), (402, 12258), (415, 12309), (429, 12390), (442, 12459), (450, 12495), (468, 12576), (471, 12591), (485, 12663), (489, 12687),

Gene: HeadNerd_14 Start: 9720, Stop: 12287, Start Num: 11

Candidate Starts for HeadNerd_14:

(8, 9699), (Start: 11 @9720 has 29 MA's), (16, 9768), (24, 9849), (26, 9873), (41, 9945), (44, 9993), (45, 10008), (46, 10014), (62, 10176), (71, 10269), (72, 10272), (73, 10275), (77, 10305), (82, 10362), (100, 10500), (102, 10521), (111, 10566), (118, 10593), (124, 10626), (129, 10644), (137, 10686), (149, 10743), (204, 11007), (210, 11034), (214, 11052), (215, 11058), (221, 11082), (228, 11103), (236, 11139), (242, 11166), (250, 11196), (251, 11202), (264, 11253), (273, 11286), (284, 11325), (286, 11331), (288, 11337), (290, 11346), (293, 11358), (294, 11364), (300, 11388), (304, 11409), (307, 11418), (317, 11457), (322, 11475), (331, 11508), (332, 11511), (335, 11523), (338, 11538), (351, 11589), (358, 11622), (369, 11640), (376, 11664), (383, 11706), (393, 11772), (395, 11784), (412, 11829), (424, 11904), (425, 11907), (436, 11961), (442, 12000), (448, 12027), (454, 12057), (457, 12069), (459, 12081), (460, 12090), (477, 12156), (483, 12198), (489, 12228),

Gene: Htur_19 Start: 13514, Stop: 15508, Start Num: 14

Candidate Starts for Htur_19:

(Start: 14 @13514 has 18 MA's), (17, 13553), (35, 13664), (40, 13679), (42, 13691), (55, 13805), (65, 13883), (67, 13907), (82, 14039), (87, 14090), (96, 14156), (114, 14252), (155, 14363), (193, 14489), (206, 14549), (212, 14573), (216, 14591), (233, 14624), (284, 14771), (295, 14789), (331, 14822), (335, 14837), (358, 14903), (408, 15062), (410, 15068), (411, 15074), (424, 15152), (428, 15167), (437, 15209), (449, 15275), (464, 15344), (491, 15482),

Gene: Huckleberry_14 Start: 9720, Stop: 12287, Start Num: 11

Candidate Starts for Huckleberry_14:

(8, 9699), (Start: 11 @9720 has 29 MA's), (16, 9768), (24, 9849), (26, 9873), (41, 9945), (44, 9993), (45, 10008), (46, 10014), (62, 10176), (71, 10269), (72, 10272), (73, 10275), (77, 10305), (82, 10362), (100, 10500), (102, 10521), (111, 10566), (118, 10593), (124, 10626), (129, 10644), (137, 10686), (149, 10743), (204, 11007), (210, 11034), (214, 11052), (215, 11058), (221, 11082), (228, 11103), (236, 11139), (242, 11166), (250, 11196), (251, 11202), (264, 11253), (273, 11286), (284, 11325), (286, 11331), (288, 11337), (290, 11346), (293, 11358), (294, 11364), (300, 11388), (304, 11409), (307, 11418), (317, 11457), (322, 11475), (331, 11508), (332, 11511), (335, 11523), (338, 11538), (351, 11589), (358, 11622), (369, 11640), (376, 11664), (383, 11706), (393, 11772), (395, 11784), (412, 11829), (424, 11904), (425, 11907), (436, 11961), (442, 12000), (448, 12027), (454, 12057), (457, 12069), (459, 12081), (460, 12090), (477, 12156), (483, 12198), (489, 12228),

Gene: Huntingdon_18 Start: 12617, Stop: 15178, Start Num: 11

Candidate Starts for Huntingdon_18:

(8, 12596), (Start: 11 @12617 has 29 MA's), (19, 12707), (24, 12746), (29, 12782), (41, 12842), (45, 12905), (62, 13073), (66, 13118), (71, 13166), (72, 13169), (73, 13172), (81, 13256), (82, 13259), (100, 13397), (111, 13463), (118, 13490), (127, 13532), (186, 13841), (195, 13874), (210, 13934), (215, 13958), (236, 14039), (237, 14045), (238, 14048), (244, 14072), (251, 14102), (257, 14123), (269,

14171), (273, 14186), (278, 14201), (284, 14225), (288, 14237), (289, 14243), (293, 14258), (294, 14264), (303, 14303), (304, 14309), (307, 14318), (311, 14336), (313, 14342), (316, 14354), (317, 14357), (320, 14366), (325, 14384), (331, 14408), (332, 14411), (335, 14423), (339, 14441), (354, 14507), (358, 14522), (373, 14552), (375, 14561), (386, 14621), (393, 14672), (404, 14708), (424, 14804), (425, 14807), (436, 14861), (442, 14900), (448, 14927), (454, 14957), (459, 14981), (470, 15023), (477, 15050), (489, 15119),

Gene: IUFootball_15 Start: 9206, Stop: 11569, Start Num: 13

Candidate Starts for IUFootball_15:

(Start: 13 @9206 has 71 MA's), (36, 9395), (49, 9461), (55, 9536), (64, 9602), (71, 9677), (72, 9680), (73, 9683), (82, 9770), (83, 9779), (87, 9821), (110, 9968), (115, 9986), (136, 10061), (145, 10094), (151, 10127), (190, 10268), (230, 10391), (232, 10400), (244, 10439), (248, 10457), (252, 10472), (267, 10532), (269, 10538), (271, 10544), (274, 10556), (275, 10559), (290, 10613), (293, 10625), (296, 10637), (299, 10652), (317, 10724), (322, 10742), (325, 10751), (329, 10766), (332, 10778), (336, 10796), (339, 10808), (392, 11030), (424, 11171), (425, 11174), (432, 11207), (435, 11222), (436, 11228), (442, 11267), (454, 11324), (463, 11366), (474, 11414),

Gene: IndiRoo_19 Start: 11519, Stop: 13810, Start Num: 14

Candidate Starts for IndiRoo_19:

(Start: 14 @11519 has 18 MA's), (28, 11636), (35, 11669), (55, 11810), (65, 11888), (67, 11912), (82, 12044), (87, 12095), (93, 12146), (111, 12245), (123, 12284), (148, 12332), (154, 12362), (178, 12446), (193, 12494), (197, 12512), (208, 12563), (225, 12629), (245, 12716), (261, 12782), (266, 12797), (271, 12815), (277, 12836), (286, 12869), (333, 13058), (339, 13079), (341, 13091), (343, 13100), (357, 13157), (373, 13190), (378, 13211), (390, 13289), (392, 13301), (397, 13331), (410, 13358), (424, 13442), (427, 13454), (431, 13475), (432, 13478), (454, 13592), (467, 13643), (469, 13658),

Gene: Iter_16 Start: 10739, Stop: 13054, Start Num: 13

Candidate Starts for Iter_16:

(Start: 13 @10739 has 71 MA's), (29, 10895), (32, 10913), (38, 10937), (45, 10985), (51, 11045), (57, 11090), (65, 11162), (75, 11246), (79, 11276), (84, 11330), (86, 11360), (94, 11417), (99, 11441), (108, 11501), (109, 11507), (166, 11726), (229, 11894), (240, 11942), (267, 12038), (279, 12077), (283, 12095), (299, 12137), (304, 12161), (320, 12218), (323, 12230), (350, 12341), (371, 12401), (375, 12416), (393, 12527), (421, 12638), (424, 12659), (425, 12662), (432, 12695), (446, 12773), (454, 12812), (474, 12902), (478, 12914), (492, 12998),

Gene: IttyBittyPiggy_16 Start: 10723, Stop: 13035, Start Num: 13

Candidate Starts for IttyBittyPiggy_16:

(Start: 13 @10723 has 71 MA's), (29, 10879), (34, 10903), (45, 10969), (48, 10981), (51, 11029), (65, 11146), (74, 11227), (75, 11230), (79, 11260), (86, 11344), (94, 11401), (99, 11425), (108, 11485), (109, 11491), (217, 11839), (229, 11878), (240, 11926), (254, 11980), (267, 12022), (279, 12061), (299, 12121), (323, 12214), (360, 12370), (370, 12382), (373, 12391), (393, 12511), (424, 12643), (425, 12646), (446, 12757), (454, 12796), (459, 12820), (468, 12856), (471, 12871), (489, 12970),

Gene: Janeemi_17 Start: 11821, Stop: 14298, Start Num: 13

Candidate Starts for Janeemi_17:

(Start: 13 @11821 has 71 MA's), (29, 11977), (30, 11986), (65, 12244), (79, 12358), (80, 12367), (84, 12412), (94, 12499), (99, 12523), (108, 12583), (109, 12589), (116, 12613), (133, 12691), (138, 12724), (156, 12859), (166, 12901), (212, 13072), (221, 13111), (229, 13138), (240, 13186), (267, 13282), (279, 13321), (283, 13339), (287, 13351), (299, 13381), (320, 13462), (353, 13597), (371, 13645), (375, 13660), (391, 13753), (393, 13771), (395, 13783), (424, 13903), (425, 13906), (446, 14017), (454, 14056), (471, 14131), (474, 14146),

Gene: JasmineDragon_15 Start: 8971, Stop: 11214, Start Num: 13

Candidate Starts for JasmineDragon_15:

(Start: 13 @8971 has 71 MA's), (20, 9058), (36, 9160), (49, 9226), (61, 9331), (71, 9442), (73, 9448), (83, 9544), (87, 9586), (110, 9733), (115, 9751), (161, 9868), (169, 9895), (189, 9928), (205, 9964), (215, 10012), (226, 10051), (238, 10090), (250, 10138), (252, 10147), (254, 10156), (257, 10165), (267, 10207), (278, 10243), (280, 10255), (293, 10300), (294, 10306), (300, 10330), (308, 10366), (313, 10384), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (396, 10729), (424, 10846), (442, 10942), (444, 10948), (450, 10978),

Gene: Jera_20 Start: 12587, Stop: 14575, Start Num: 14

Candidate Starts for Jera_20:

(Start: 14 @12587 has 18 MA's), (17, 12626), (35, 12737), (40, 12752), (42, 12764), (65, 12956), (67, 12980), (87, 13163), (96, 13229), (114, 13325), (122, 13349), (155, 13436), (186, 13538), (193, 13562), (208, 13631), (216, 13664), (233, 13697), (276, 13829), (330, 13889), (350, 13940), (374, 14009), (377, 14021), (378, 14027), (437, 14282), (449, 14348), (461, 14408), (491, 14549),

Gene: Joann_18 Start: 12611, Stop: 15172, Start Num: 11

Candidate Starts for Joann_18:

(8, 12590), (Start: 11 @12611 has 29 MA's), (19, 12701), (24, 12740), (29, 12776), (41, 12836), (44, 12884), (45, 12899), (62, 13067), (66, 13112), (72, 13163), (73, 13166), (81, 13250), (111, 13457), (113, 13466), (118, 13484), (127, 13526), (186, 13835), (195, 13868), (210, 13928), (215, 13952), (236, 14033), (237, 14039), (238, 14042), (244, 14066), (251, 14096), (257, 14117), (273, 14180), (278, 14195), (284, 14219), (288, 14231), (289, 14237), (293, 14252), (294, 14258), (295, 14261), (300, 14282), (303, 14297), (307, 14312), (311, 14330), (313, 14336), (317, 14351), (320, 14360), (322, 14369), (331, 14402), (332, 14405), (335, 14417), (336, 14423), (339, 14435), (354, 14501), (358, 14516), (386, 14615), (393, 14666), (395, 14678), (403, 14699), (424, 14798), (425, 14801), (436, 14855), (442, 14894), (454, 14951), (459, 14975), (470, 15017), (477, 15044), (489, 15113),

Gene: Joemato_16 Start: 10730, Stop: 13045, Start Num: 13

Candidate Starts for Joemato_16:

(Start: 13 @10730 has 71 MA's), (29, 10886), (30, 10895), (45, 10976), (48, 10988), (51, 11036), (65, 11153), (74, 11234), (75, 11237), (79, 11267), (84, 11321), (86, 11351), (94, 11408), (99, 11432), (108, 11492), (166, 11717), (211, 11813), (229, 11885), (240, 11933), (254, 11987), (267, 12029), (279, 12068), (299, 12128), (375, 12407), (381, 12431), (385, 12464), (386, 12467), (393, 12518), (421, 12629), (424, 12650), (425, 12653), (432, 12686), (446, 12764), (451, 12785), (454, 12803), (468, 12863), (474, 12893), (485, 12944), (492, 12989), (497, 13034),

Gene: Johann_20 Start: 13490, Stop: 15478, Start Num: 14

Candidate Starts for Johann_20:

(1, 13391), (Start: 14 @13490 has 18 MA's), (35, 13640), (40, 13655), (42, 13667), (65, 13859), (67, 13883), (72, 13925), (82, 14015), (87, 14066), (96, 14132), (110, 14213), (114, 14228), (122, 14252), (155, 14339), (186, 14441), (193, 14465), (208, 14534), (216, 14567), (295, 14765), (330, 14792), (333, 14810), (354, 14864), (374, 14912), (377, 14924), (378, 14930), (388, 14996), (390, 15008), (391, 15011), (437, 15185), (442, 15221), (449, 15251), (461, 15311), (491, 15452),

Gene: JohnDoe_16 Start: 10725, Stop: 13040, Start Num: 13

Candidate Starts for JohnDoe_16:

(Start: 13 @10725 has 71 MA's), (29, 10881), (30, 10890), (45, 10971), (48, 10983), (51, 11031), (65, 11148), (74, 11229), (75, 11232), (79, 11262), (84, 11316), (86, 11346), (94, 11403), (99, 11427), (108, 11487), (166, 11712), (211, 11808), (229, 11880), (240, 11928), (254, 11982), (267, 12024), (279, 12063), (299, 12123), (375, 12402), (381, 12426), (385, 12459), (386, 12462), (393, 12513), (421, 12624), (424, 12645), (425, 12648), (432, 12681), (446, 12759), (454, 12798), (468, 12858), (474, 12888), (485, 12939), (492, 12984), (497, 13029),

Gene: JohnThicc_15 Start: 8974, Stop: 11217, Start Num: 13

Candidate Starts for JohnThicc_15:

(Start: 13 @8974 has 71 MA's), (20, 9061), (36, 9163), (49, 9229), (61, 9334), (71, 9445), (73, 9451), (83, 9547), (87, 9589), (110, 9736), (115, 9754), (159, 9856), (215, 10012), (238, 10090), (250, 10138), (252, 10147), (257, 10165), (267, 10207), (270, 10216), (278, 10243), (286, 10273), (294, 10306), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (372, 10591), (424, 10846), (427, 10858), (442, 10942), (444, 10948), (450, 10978),

Gene: Jstan_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Jstan_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (217, 11820), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: JuneStar_16 Start: 10824, Stop: 13148, Start Num: 13

Candidate Starts for JuneStar_16:

(Start: 13 @10824 has 71 MA's), (32, 10998), (38, 11022), (45, 11070), (51, 11130), (64, 11235), (65, 11247), (74, 11328), (75, 11331), (79, 11361), (84, 11415), (86, 11445), (90, 11487), (94, 11502), (99, 11526), (102, 11556), (108, 11586), (109, 11592), (166, 11811), (217, 11940), (229, 11979), (240, 12027), (246, 12048), (254, 12081), (267, 12123), (279, 12162), (299, 12222), (323, 12315), (340, 12384), (393, 12612), (421, 12723), (424, 12744), (425, 12747), (446, 12858), (454, 12897),

Gene: Kalimba_16 Start: 10244, Stop: 12664, Start Num: 13

Candidate Starts for Kalimba_16:

(Start: 13 @10244 has 71 MA's), (21, 10331), (26, 10388), (36, 10436), (39, 10448), (44, 10508), (54, 10619), (63, 10700), (78, 10826), (80, 10841), (85, 10895), (110, 11069), (135, 11153), (139, 11174), (144, 11195), (149, 11216), (155, 11267), (183, 11342), (186, 11363), (195, 11396), (209, 11453), (220, 11495), (225, 11510), (237, 11561), (250, 11597), (283, 11705), (289, 11726), (301, 11768), (304, 11780), (318, 11834), (332, 11882), (354, 11978), (392, 12134), (395, 12155), (402, 12167), (415, 12218), (442, 12368), (450, 12404), (457, 12437), (489, 12596),

Gene: Kaylissa_16 Start: 10731, Stop: 13046, Start Num: 13

Candidate Starts for Kaylissa_16:

(Start: 13 @10731 has 71 MA's), (29, 10887), (30, 10896), (45, 10977), (48, 10989), (51, 11037), (65, 11154), (74, 11235), (75, 11238), (79, 11268), (84, 11322), (86, 11352), (94, 11409), (99, 11433), (108, 11493), (166, 11718), (211, 11814), (229, 11886), (240, 11934), (254, 11988), (267, 12030), (279, 12069), (299, 12129), (375, 12408), (381, 12432), (385, 12465), (386, 12468), (393, 12519), (421, 12630), (424, 12651), (425, 12654), (432, 12687), (446, 12765), (451, 12786), (454, 12804), (468, 12864), (474, 12894), (485, 12945), (492, 12990), (497, 13035),

Gene: KeAlii_16 Start: 10771, Stop: 13071, Start Num: 13

Candidate Starts for KeAlii_16:

(Start: 13 @10771 has 71 MA's), (29, 10927), (30, 10936), (45, 11017), (51, 11077), (65, 11194), (68, 11245), (74, 11275), (75, 11278), (79, 11308), (84, 11362), (86, 11392), (89, 11425), (94, 11449), (99, 11473), (102, 11503), (108, 11533), (109, 11539), (116, 11563), (171, 11776), (211, 11857), (221, 11902), (229, 11929), (240, 11977), (267, 12073), (279, 12112), (280, 12121), (301, 12184), (302, 12187), (326, 12274), (334, 12310), (340, 12334), (375, 12451), (379, 12466), (389, 12532), (409, 12607), (426, 12703), (444, 12793), (450, 12823), (462, 12877), (468, 12898), (489, 13006),

Gene: Kittykat_14 Start: 9756, Stop: 12314, Start Num: 11

Candidate Starts for Kittykat_14:

(8, 9735), (Start: 11 @9756 has 29 MA's), (16, 9804), (24, 9885), (41, 9981), (43, 10026), (45, 10044), (46, 10050), (61, 10191), (62, 10212), (66, 10257), (72, 10308), (73, 10311), (77, 10341), (81, 10395), (98, 10524), (111, 10602), (113, 10611), (115, 10617), (118, 10629), (124, 10662), (134, 10704), (142, 10749), (157, 10869), (158, 10872), (180, 10947), (195, 11010), (210, 11070), (214, 11088), (215, 11094), (217, 11106), (223, 11124), (236, 11175), (237, 11181), (243, 11205), (247, 11223), (251, 11238), (253, 11247), (265, 11292), (267, 11301), (273, 11322), (277, 11334), (278, 11337), (283, 11358), (284, 11361), (286, 11367), (288, 11373), (293, 11394), (294, 11400), (299, 11421), (304, 11445), (307, 11454), (309, 11466), (311, 11472), (317, 11493), (331, 11544), (332, 11547), (333, 11556), (335, 11559), (359, 11664), (369, 11676), (375, 11697), (387, 11766), (393, 11808), (395, 11820), (396, 11823), (403, 11841), (404, 11844), (424, 11940), (425, 11943), (436, 11997), (442, 12036), (446, 12054), (452, 12084), (454, 12093), (465, 12135), (489, 12255),

Gene: Labella_21 Start: 13470, Stop: 15458, Start Num: 14

Candidate Starts for Labella_21:

(Start: 14 @13470 has 18 MA's), (17, 13509), (35, 13620), (40, 13635), (42, 13647), (65, 13839), (67, 13863), (72, 13905), (87, 14046), (96, 14112), (114, 14208), (155, 14319), (186, 14421), (193, 14445), (208, 14514), (216, 14547), (276, 14712), (295, 14745), (327, 14760), (330, 14772), (333, 14790), (377, 14904), (378, 14910), (437, 15165), (449, 15231), (461, 15291), (491, 15432),

Gene: LadyAstra_15 Start: 8974, Stop: 11217, Start Num: 13

Candidate Starts for LadyAstra_15:

(Start: 13 @8974 has 71 MA's), (20, 9061), (36, 9163), (49, 9229), (61, 9334), (71, 9445), (73, 9451), (83, 9547), (87, 9589), (110, 9736), (115, 9754), (159, 9856), (215, 10012), (238, 10090), (250, 10138), (252, 10147), (257, 10165), (267, 10207), (270, 10216), (278, 10243), (286, 10273), (294, 10306), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (372, 10591), (424, 10846), (427, 10858), (442, 10942), (444, 10948), (450, 10978),

Gene: Lakshmi_18 Start: 12636, Stop: 15197, Start Num: 11

Candidate Starts for Lakshmi_18:

(8, 12615), (Start: 11 @12636 has 29 MA's), (19, 12726), (24, 12765), (29, 12801), (41, 12861), (44, 12909), (45, 12924), (62, 13092), (66, 13137), (72, 13188), (73, 13191), (81, 13275), (106, 13461), (115, 13497), (118, 13509), (127, 13551), (149, 13662), (186, 13860), (210, 13953), (215, 13977), (216, 13980), (236, 14058), (237, 14064), (244, 14091), (251, 14121), (267, 14184), (272, 14199), (274, 14208), (275, 14211), (278, 14220), (284, 14244), (288, 14256), (289, 14262), (293, 14277), (294, 14283), (295, 14286), (300, 14307), (303, 14322), (307, 14337), (311, 14355), (313, 14361), (317, 14376), (320, 14385), (322, 14394), (331, 14427), (332, 14430), (335, 14442), (336, 14448), (339, 14460), (354, 14526), (358, 14541), (373, 14571), (375, 14580), (393, 14691), (404, 14727), (412, 14748), (424, 14823), (425, 14826), (436, 14880), (439, 14895), (442, 14919), (454, 14976), (459, 15000), (470, 15042), (477, 15069), (489, 15138),

Gene: Laroye_67 Start: 36530, Stop: 39547, Start Num: 3

Candidate Starts for Laroye_67:

(Start: 3 @36530 has 7 MA's), (7, 36551), (Start: 11 @36581 has 29 MA's), (12, 36584), (23, 36689), (35, 36773), (38, 36782), (49, 36842), (69, 37052), (71, 37058), (72, 37061), (73, 37064), (82, 37151), (87, 37202), (91, 37244), (92, 37247), (106, 37331), (110, 37349), (156, 37499), (185, 37592), (187, 37601), (207, 37691), (231, 37787), (235, 37805), (238, 37817), (242, 37835), (243, 37838), (246, 37850), (251, 37871), (254, 37883), (267, 37934), (295, 38027), (316, 38114), (327, 38150), (330, 38162), (332, 38171), (339, 38201), (342, 38216), (344, 38225), (361, 38294), (378, 38333), (396, 38459), (420, 38534), (433, 38609), (438, 38630), (443, 38663), (445, 38666), (453, 38708), (456, 38720), (459, 38741), (472, 38795), (490, 38897), (498, 38960), (502, 39071), (504, 39104), (506, 39158), (507, 39167), (511, 39260), (512, 39269), (514, 39368), (515, 39374), (517, 39404), (518,

39443), (520, 39530),

Gene: LastNadiia_20 Start: 11846, Stop: 14134, Start Num: 10

Candidate Starts for LastNadiia_20:

(Start: 10 @11846 has 2 MA's), (60, 12206), (61, 12209), (71, 12320), (72, 12323), (73, 12326), (87, 12464), (110, 12611), (161, 12782), (177, 12830), (218, 12962), (243, 13046), (246, 13058), (252, 13082), (262, 13124), (267, 13142), (271, 13154), (292, 13232), (293, 13235), (299, 13262), (303, 13280), (305, 13289), (311, 13313), (315, 13328), (317, 13334), (321, 13346), (322, 13352), (332, 13388), (339, 13418), (354, 13484), (392, 13640), (395, 13661), (396, 13664), (424, 13781), (425, 13784), (432, 13817), (454, 13934), (459, 13958), (484, 14075),

Gene: Lego_16 Start: 10730, Stop: 13045, Start Num: 13

Candidate Starts for Lego_16:

(Start: 13 @10730 has 71 MA's), (29, 10886), (30, 10895), (45, 10976), (48, 10988), (51, 11036), (52, 11039), (57, 11081), (65, 11153), (74, 11234), (75, 11237), (79, 11267), (84, 11321), (86, 11351), (94, 11408), (99, 11432), (108, 11492), (166, 11717), (211, 11813), (227, 11876), (229, 11885), (240, 11933), (243, 11942), (246, 11954), (254, 11987), (267, 12029), (279, 12068), (299, 12128), (335, 12269), (353, 12344), (355, 12356), (373, 12398), (375, 12407), (381, 12431), (393, 12518), (421, 12629), (424, 12650), (425, 12653), (432, 12686), (446, 12764), (454, 12803), (468, 12863), (474, 12893), (485, 12944), (492, 12989), (497, 13034),

Gene: LiSara_64 Start: 36692, Stop: 39709, Start Num: 3

Candidate Starts for LiSara_64:

(Start: 3 @36692 has 7 MA's), (7, 36713), (Start: 11 @36743 has 29 MA's), (12, 36746), (23, 36851), (35, 36935), (38, 36944), (49, 37004), (69, 37214), (71, 37220), (72, 37223), (73, 37226), (82, 37313), (87, 37364), (91, 37406), (92, 37409), (106, 37493), (110, 37511), (156, 37661), (185, 37754), (187, 37763), (207, 37853), (231, 37949), (238, 37979), (242, 37997), (243, 38000), (246, 38012), (251, 38033), (254, 38045), (267, 38096), (295, 38189), (316, 38276), (327, 38312), (330, 38324), (332, 38333), (339, 38363), (342, 38378), (344, 38387), (361, 38456), (378, 38495), (396, 38621), (420, 38696), (433, 38771), (438, 38792), (443, 38825), (445, 38828), (453, 38870), (456, 38882), (459, 38903), (472, 38957), (490, 39059), (498, 39122), (502, 39233), (504, 39266), (506, 39320), (507, 39329), (510, 39398), (511, 39422), (512, 39431), (514, 39530), (515, 39536), (517, 39566), (518, 39605), (520, 39692),

Gene: Liebe_15 Start: 9206, Stop: 11569, Start Num: 13

Candidate Starts for Liebe_15:

(Start: 13 @9206 has 71 MA's), (36, 9395), (49, 9461), (55, 9536), (64, 9602), (71, 9677), (72, 9680), (73, 9683), (82, 9770), (83, 9779), (87, 9821), (110, 9968), (115, 9986), (136, 10061), (145, 10094), (151, 10127), (190, 10268), (230, 10391), (232, 10400), (244, 10439), (248, 10457), (252, 10472), (267, 10532), (269, 10538), (271, 10544), (274, 10556), (275, 10559), (290, 10613), (293, 10625), (296, 10637), (299, 10652), (317, 10724), (322, 10742), (325, 10751), (329, 10766), (332, 10778), (336, 10796), (339, 10808), (392, 11030), (424, 11171), (425, 11174), (432, 11207), (435, 11222), (436, 11228), (442, 11267), (454, 11324), (463, 11366), (474, 11414),

Gene: Linayshia_19 Start: 13506, Stop: 15500, Start Num: 14

Candidate Starts for Linayshia_19:

(Start: 14 @13506 has 18 MA's), (17, 13545), (35, 13656), (40, 13671), (42, 13683), (55, 13797), (65, 13875), (67, 13899), (82, 14031), (87, 14082), (96, 14148), (114, 14244), (155, 14355), (193, 14481), (206, 14541), (212, 14565), (216, 14583), (233, 14616), (284, 14763), (295, 14781), (331, 14814), (335, 14829), (358, 14895), (408, 15054), (410, 15060), (411, 15066), (424, 15144), (428, 15159), (437, 15201), (449, 15267), (464, 15336), (491, 15474),

Gene: Litotes_18 Start: 12597, Stop: 15152, Start Num: 11

Candidate Starts for Litotes_18:

(8, 12576), (Start: 11 @12597 has 29 MA's), (16, 12645), (24, 12726), (26, 12750), (41, 12822), (44, 12870), (45, 12885), (46, 12891), (62, 13053), (72, 13149), (73, 13152), (77, 13182), (89, 13320), (111, 13443), (124, 13503), (129, 13521), (132, 13536), (142, 13587), (186, 13818), (205, 13887), (210, 13911), (214, 13929), (215, 13935), (230, 13989), (233, 14001), (237, 14022), (243, 14046), (265, 14133), (272, 14157), (273, 14163), (274, 14166), (278, 14178), (283, 14199), (284, 14202), (286, 14208), (288, 14214), (292, 14232), (293, 14235), (294, 14241), (304, 14286), (307, 14295), (311, 14313), (317, 14334), (320, 14343), (322, 14352), (331, 14385), (332, 14388), (333, 14397), (335, 14400), (347, 14451), (393, 14649), (395, 14661), (403, 14682), (404, 14685), (424, 14781), (425, 14784), (436, 14838), (442, 14877), (454, 14934), (465, 14976), (477, 15024), (483, 15066), (489, 15096),

Gene: Lizalica_16 Start: 10715, Stop: 13030, Start Num: 13

Candidate Starts for Lizalica_16:

(Start: 13 @10715 has 71 MA's), (29, 10871), (30, 10880), (45, 10961), (48, 10973), (51, 11021), (52, 11024), (57, 11066), (65, 11138), (74, 11219), (75, 11222), (79, 11252), (84, 11306), (86, 11336), (94, 11393), (99, 11417), (108, 11477), (166, 11702), (211, 11798), (229, 11870), (240, 11918), (254, 11972), (267, 12014), (279, 12053), (299, 12113), (335, 12254), (373, 12383), (375, 12392), (381, 12416), (391, 12485), (393, 12503), (421, 12614), (424, 12635), (425, 12638), (432, 12671), (446, 12749), (454, 12788), (468, 12848), (474, 12878), (485, 12929), (492, 12974), (497, 13019),

Gene: London_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for London_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (217, 11820), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: MaGuCo_15 Start: 9140, Stop: 11503, Start Num: 13

Candidate Starts for MaGuCo_15:

(Start: 13 @9140 has 71 MA's), (36, 9329), (49, 9395), (55, 9470), (71, 9611), (72, 9614), (73, 9617), (82, 9704), (83, 9713), (87, 9755), (92, 9800), (110, 9902), (115, 9920), (145, 10028), (151, 10061), (190, 10202), (224, 10304), (230, 10325), (232, 10334), (244, 10373), (248, 10391), (251, 10403), (252, 10406), (267, 10466), (269, 10472), (271, 10478), (274, 10490), (275, 10493), (280, 10514), (290, 10547), (293, 10559), (296, 10571), (299, 10586), (317, 10658), (321, 10670), (322, 10676), (325, 10685), (329, 10700), (332, 10712), (336, 10730), (339, 10742), (392, 10964), (424, 11105), (425, 11108), (432, 11141), (436, 11162), (442, 11201), (454, 11258), (463, 11300), (474, 11348),

Gene: Makima_18 Start: 10929, Stop: 13217, Start Num: 10

Candidate Starts for Makima_18:

(Start: 10 @10929 has 2 MA's), (60, 11289), (61, 11292), (71, 11403), (72, 11406), (73, 11409), (87, 11547), (110, 11694), (161, 11865), (177, 11913), (252, 12165), (257, 12183), (267, 12225), (272, 12240), (292, 12315), (293, 12318), (299, 12345), (303, 12363), (305, 12372), (311, 12396), (315, 12411), (317, 12417), (321, 12429), (322, 12435), (332, 12471), (378, 12633), (392, 12723), (395, 12744), (396, 12747), (409, 12777), (424, 12864), (425, 12867), (432, 12900), (454, 13017), (459, 13041), (466, 13068), (484, 13158),

Gene: MamaPearl_14 Start: 9752, Stop: 12301, Start Num: 11

Candidate Starts for MamaPearl_14:

(6, 9722), (Start: 11 @9752 has 29 MA's), (24, 9881), (29, 9917), (44, 10025), (45, 10040), (61, 10187), (62, 10208), (72, 10304), (82, 10394), (91, 10487), (111, 10598), (124, 10658), (127, 10667), (183,

10940), (195, 10994), (204, 11027), (208, 11048), (210, 11054), (214, 11072), (236, 11159), (251, 11222), (265, 11276), (267, 11285), (273, 11306), (277, 11318), (278, 11321), (284, 11345), (286, 11351), (288, 11357), (290, 11366), (293, 11378), (294, 11384), (299, 11405), (307, 11438), (310, 11453), (311, 11456), (317, 11477), (318, 11483), (322, 11495), (331, 11528), (332, 11531), (333, 11540), (335, 11543), (338, 11558), (358, 11642), (375, 11681), (393, 11792), (395, 11804), (412, 11849), (424, 11924), (425, 11927), (436, 11981), (452, 12068), (454, 12077), (459, 12101), (461, 12113), (477, 12170), (479, 12176), (489, 12242), (496, 12284),

Gene: Maureen_15 Start: 9206, Stop: 11569, Start Num: 13

Candidate Starts for Maureen_15:

(Start: 13 @9206 has 71 MA's), (36, 9395), (49, 9461), (55, 9536), (64, 9602), (71, 9677), (72, 9680), (73, 9683), (82, 9770), (83, 9779), (87, 9821), (110, 9968), (115, 9986), (136, 10061), (145, 10094), (151, 10127), (190, 10268), (230, 10391), (232, 10400), (244, 10439), (248, 10457), (252, 10472), (267, 10532), (269, 10538), (271, 10544), (274, 10556), (275, 10559), (290, 10613), (293, 10625), (296, 10637), (299, 10652), (317, 10724), (322, 10742), (325, 10751), (329, 10766), (332, 10778), (336, 10796), (339, 10808), (392, 11030), (424, 11171), (425, 11174), (432, 11207), (435, 11222), (436, 11228), (442, 11267), (454, 11324), (463, 11366), (474, 11414),

Gene: Milani_20 Start: 12168, Stop: 14459, Start Num: 14

Candidate Starts for Milani_20:

(Start: 14 @12168 has 18 MA's), (28, 12285), (35, 12318), (42, 12345), (65, 12537), (82, 12693), (87, 12744), (93, 12795), (97, 12816), (106, 12873), (122, 12930), (155, 13017), (161, 13044), (167, 13065), (178, 13095), (179, 13098), (208, 13212), (243, 13356), (271, 13464), (286, 13518), (313, 13629), (333, 13707), (339, 13728), (341, 13740), (347, 13761), (357, 13806), (381, 13872), (390, 13938), (396, 13974), (397, 13980), (410, 14007), (418, 14046), (424, 14091), (425, 14094), (427, 14103), (429, 14115), (431, 14124), (432, 14127), (454, 14241), (467, 14292), (468, 14298),

Gene: MiniMommy_14 Start: 8972, Stop: 11215, Start Num: 13

Candidate Starts for MiniMommy_14:

(Start: 13 @8972 has 71 MA's), (20, 9059), (36, 9161), (49, 9227), (61, 9332), (71, 9443), (73, 9449), (83, 9545), (87, 9587), (110, 9734), (115, 9752), (161, 9869), (169, 9896), (189, 9929), (205, 9965), (215, 10013), (226, 10052), (238, 10091), (244, 10115), (250, 10139), (252, 10148), (254, 10157), (257, 10166), (267, 10208), (278, 10244), (280, 10256), (293, 10301), (294, 10307), (300, 10331), (308, 10367), (313, 10385), (320, 10409), (322, 10418), (326, 10430), (331, 10451), (332, 10454), (339, 10484), (396, 10730), (424, 10847), (442, 10943), (444, 10949), (450, 10979),

Gene: Mireles_17 Start: 9296, Stop: 11623, Start Num: 4

Candidate Starts for Mireles_17:

(4, 9296), (Start: 10 @9332 has 2 MA's), (60, 9692), (61, 9695), (71, 9806), (73, 9812), (87, 9950), (110, 10097), (115, 10115), (162, 10274), (170, 10301), (202, 10376), (229, 10484), (248, 10553), (252, 10568), (257, 10586), (258, 10589), (264, 10616), (267, 10628), (268, 10631), (270, 10637), (280, 10676), (290, 10709), (293, 10721), (295, 10730), (302, 10763), (303, 10766), (332, 10874), (339, 10904), (346, 10934), (347, 10937), (359, 10991), (372, 11012), (373, 11015), (379, 11039), (392, 11126), (395, 11147), (396, 11150), (424, 11267), (425, 11270), (432, 11303), (442, 11363), (454, 11420), (459, 11444), (460, 11453), (475, 11513), (484, 11564), (488, 11591),

Gene: Misaeng_18 Start: 12684, Stop: 15242, Start Num: 11

Candidate Starts for Misaeng_18:

(8, 12663), (Start: 11 @12684 has 29 MA's), (19, 12774), (24, 12813), (29, 12849), (45, 12972), (62, 13140), (66, 13185), (72, 13236), (73, 13239), (81, 13323), (111, 13530), (113, 13539), (118, 13557), (119, 13560), (127, 13599), (158, 13800), (171, 13851), (186, 13905), (210, 13998), (215, 14022), (234, 14091), (236, 14103), (237, 14109), (238, 14112), (244, 14136), (251, 14166), (257, 14187), (269, 14235), (273, 14250), (275, 14256), (278, 14265), (284, 14289), (288, 14301), (289, 14307),

(293, 14322), (294, 14328), (295, 14331), (303, 14367), (304, 14373), (307, 14382), (311, 14400), (313, 14406), (317, 14421), (320, 14430), (325, 14448), (331, 14472), (332, 14475), (335, 14487), (339, 14505), (354, 14571), (358, 14586), (373, 14616), (375, 14625), (379, 14640), (386, 14685), (393, 14736), (404, 14772), (424, 14868), (425, 14871), (436, 14925), (442, 14964), (454, 15021), (459, 15045), (470, 15087), (477, 15114), (489, 15183),

Gene: MissSwiss_16 Start: 10713, Stop: 12947, Start Num: 13

Candidate Starts for MissSwiss_16:

(Start: 13 @10713 has 71 MA's), (29, 10869), (30, 10878), (37, 10905), (45, 10959), (48, 10971), (51, 11019), (65, 11136), (74, 11217), (75, 11220), (79, 11250), (86, 11334), (94, 11391), (99, 11415), (108, 11475), (127, 11544), (131, 11562), (146, 11613), (158, 11634), (164, 11655), (200, 11700), (227, 11796), (229, 11805), (240, 11853), (243, 11862), (267, 11949), (302, 12063), (326, 12150), (336, 12195), (340, 12210), (376, 12330), (379, 12342), (389, 12408), (395, 12450), (402, 12462), (410, 12486), (414, 12507), (416, 12516), (419, 12537), (426, 12579), (444, 12669), (450, 12699), (462, 12753), (489, 12882),

Gene: Moki_14 Start: 9720, Stop: 12287, Start Num: 11

Candidate Starts for Moki_14:

(8, 9699), (Start: 11 @9720 has 29 MA's), (16, 9768), (24, 9849), (26, 9873), (41, 9945), (44, 9993), (45, 10008), (46, 10014), (62, 10176), (71, 10269), (72, 10272), (73, 10275), (77, 10305), (82, 10362), (100, 10500), (102, 10521), (111, 10566), (118, 10593), (124, 10626), (129, 10644), (137, 10686), (149, 10743), (204, 11007), (210, 11034), (214, 11052), (215, 11058), (221, 11082), (228, 11103), (236, 11139), (242, 11166), (250, 11196), (251, 11202), (264, 11253), (273, 11286), (284, 11325), (286, 11331), (288, 11337), (290, 11346), (293, 11358), (294, 11364), (300, 11388), (304, 11409), (307, 11418), (317, 11457), (322, 11475), (331, 11508), (332, 11511), (335, 11523), (338, 11538), (351, 11589), (358, 11622), (369, 11640), (376, 11664), (383, 11706), (393, 11772), (395, 11784), (412, 11829), (424, 11904), (425, 11907), (436, 11961), (442, 12000), (448, 12027), (454, 12057), (457, 12069), (459, 12081), (460, 12090), (477, 12156), (483, 12198), (489, 12228),

Gene: Moss_16 Start: 10335, Stop: 12755, Start Num: 13

Candidate Starts for Moss_16:

(Start: 13 @10335 has 71 MA's), (21, 10422), (36, 10527), (39, 10539), (44, 10599), (54, 10710), (63, 10791), (78, 10917), (80, 10932), (85, 10986), (110, 11160), (135, 11244), (139, 11265), (149, 11307), (183, 11433), (186, 11454), (195, 11487), (209, 11544), (220, 11586), (225, 11601), (237, 11652), (250, 11688), (251, 11694), (283, 11796), (289, 11817), (301, 11859), (317, 11919), (318, 11925), (332, 11973), (354, 12069), (395, 12246), (402, 12258), (415, 12309), (429, 12390), (442, 12459), (450, 12495), (468, 12576), (471, 12591), (485, 12663), (489, 12687),

Gene: MrBoss_18 Start: 12597, Stop: 15152, Start Num: 11

Candidate Starts for MrBoss_18:

(8, 12576), (Start: 11 @12597 has 29 MA's), (16, 12645), (24, 12726), (26, 12750), (41, 12822), (44, 12870), (45, 12885), (46, 12891), (62, 13053), (72, 13149), (73, 13152), (77, 13182), (89, 13320), (111, 13443), (124, 13503), (129, 13521), (132, 13536), (142, 13587), (186, 13818), (205, 13887), (210, 13911), (214, 13929), (215, 13935), (230, 13989), (233, 14001), (237, 14022), (243, 14046), (265, 14133), (272, 14157), (273, 14163), (274, 14166), (278, 14178), (283, 14199), (284, 14202), (286, 14208), (288, 14214), (292, 14232), (293, 14235), (294, 14241), (304, 14286), (307, 14295), (311, 14313), (317, 14334), (320, 14343), (322, 14352), (332, 14388), (333, 14397), (335, 14400), (338, 14415), (347, 14451), (376, 14541), (393, 14649), (395, 14661), (403, 14682), (404, 14685), (424, 14781), (425, 14784), (436, 14838), (442, 14877), (454, 14934), (465, 14976), (477, 15024), (483, 15066), (489, 15096),

Gene: Mudpuppy_16 Start: 10729, Stop: 13044, Start Num: 13

Candidate Starts for Mudpuppy_16:

(Start: 13 @10729 has 71 MA's), (29, 10885), (30, 10894), (45, 10975), (48, 10987), (51, 11035), (52, 11038), (57, 11080), (65, 11152), (74, 11233), (75, 11236), (79, 11266), (84, 11320), (86, 11350), (94, 11407), (99, 11431), (108, 11491), (166, 11716), (211, 11812), (227, 11875), (229, 11884), (240, 11932), (246, 11953), (254, 11986), (267, 12028), (279, 12067), (299, 12127), (335, 12268), (373, 12397), (375, 12406), (381, 12430), (385, 12463), (391, 12499), (393, 12517), (421, 12628), (424, 12649), (425, 12652), (432, 12685), (446, 12763), (454, 12802), (468, 12862), (474, 12892), (485, 12943), (492, 12988), (497, 13033),

Gene: Mysterium_16 Start: 10336, Stop: 12756, Start Num: 13

Candidate Starts for Mysterium_16:

(Start: 13 @10336 has 71 MA's), (21, 10423), (36, 10528), (39, 10540), (44, 10600), (54, 10711), (63, 10792), (78, 10918), (80, 10933), (85, 10987), (110, 11161), (135, 11245), (139, 11266), (149, 11308), (183, 11434), (186, 11455), (195, 11488), (209, 11545), (220, 11587), (225, 11602), (237, 11653), (250, 11689), (251, 11695), (283, 11797), (289, 11818), (301, 11860), (317, 11920), (318, 11926), (332, 11974), (354, 12070), (392, 12226), (395, 12247), (402, 12259), (415, 12310), (442, 12460), (450, 12496), (468, 12577), (485, 12664), (489, 12688),

Gene: Neuville_17 Start: 9567, Stop: 11855, Start Num: 9

Candidate Starts for Neuville_17:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: Niobe_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Niobe_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (217, 11820), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: Nitro_16 Start: 10728, Stop: 13052, Start Num: 13

Candidate Starts for Nitro_16:

(Start: 13 @10728 has 71 MA's), (27, 10875), (29, 10884), (38, 10926), (45, 10974), (51, 11034), (57, 11079), (65, 11151), (69, 11211), (75, 11235), (79, 11265), (84, 11319), (86, 11349), (94, 11406), (99, 11430), (108, 11490), (109, 11496), (132, 11595), (165, 11712), (211, 11811), (229, 11883), (240, 11931), (267, 12027), (279, 12066), (283, 12084), (299, 12126), (302, 12141), (323, 12219), (371, 12390), (375, 12405), (385, 12462), (391, 12498), (393, 12516), (424, 12648), (425, 12651), (432, 12684), (446, 12762), (454, 12801), (468, 12861), (485, 12951), (492, 12996), (497, 13041),

Gene: Nubia_18 Start: 12596, Stop: 15157, Start Num: 11

Candidate Starts for Nubia_18:

(8, 12575), (Start: 11 @12596 has 29 MA's), (19, 12686), (24, 12725), (29, 12761), (41, 12821), (44, 12869), (45, 12884), (62, 13052), (66, 13097), (72, 13148), (73, 13151), (81, 13235), (106, 13421), (115, 13457), (118, 13469), (127, 13511), (186, 13820), (210, 13913), (214, 13931), (215, 13937), (236, 14018), (237, 14024), (244, 14051), (251, 14081), (267, 14144), (272, 14159), (273, 14165), (274, 14168), (278, 14180), (284, 14204), (288, 14216), (289, 14222), (293, 14237), (294, 14243),

(295, 14246), (300, 14267), (303, 14282), (304, 14288), (307, 14297), (311, 14315), (313, 14321), (317, 14336), (320, 14345), (322, 14354), (331, 14387), (332, 14390), (335, 14402), (336, 14408), (339, 14420), (351, 14468), (354, 14486), (358, 14501), (373, 14531), (375, 14540), (386, 14600), (393, 14651), (404, 14687), (412, 14708), (424, 14783), (425, 14786), (436, 14840), (442, 14879), (454, 14936), (459, 14960), (470, 15002), (477, 15029), (489, 15098),

Gene: ObiToo_16 Start: 10917, Stop: 13223, Start Num: 13

Candidate Starts for ObiToo_16:

(Start: 13 @10917 has 71 MA's), (28, 11070), (29, 11073), (30, 11082), (51, 11223), (65, 11340), (75, 11424), (79, 11454), (84, 11508), (94, 11595), (99, 11619), (108, 11679), (109, 11685), (125, 11751), (165, 11901), (166, 11904), (227, 12063), (229, 12072), (240, 12120), (254, 12174), (267, 12216), (279, 12255), (299, 12315), (302, 12330), (323, 12408), (335, 12456), (353, 12531), (355, 12543), (373, 12585), (375, 12594), (393, 12705), (424, 12837), (425, 12840), (446, 12951), (454, 12990), (467, 13044), (471, 13065), (474, 13080), (489, 13158),

Gene: Olympi_21 Start: 13480, Stop: 15465, Start Num: 14

Candidate Starts for Olympi_21:

(1, 13381), (Start: 14 @13480 has 18 MA's), (35, 13630), (40, 13645), (42, 13657), (65, 13849), (67, 13873), (72, 13915), (82, 14005), (87, 14056), (96, 14122), (110, 14203), (148, 14293), (153, 14314), (155, 14329), (193, 14455), (208, 14524), (216, 14557), (295, 14755), (330, 14782), (333, 14800), (354, 14854), (374, 14902), (377, 14914), (378, 14920), (388, 14986), (390, 14998), (391, 15001), (437, 15175), (442, 15211), (449, 15241), (461, 15301), (491, 15439),

Gene: Origami_15 Start: 8974, Stop: 11217, Start Num: 13

Candidate Starts for Origami_15:

(Start: 13 @8974 has 71 MA's), (20, 9061), (36, 9163), (49, 9229), (61, 9334), (71, 9445), (73, 9451), (83, 9547), (87, 9589), (110, 9736), (115, 9754), (159, 9856), (215, 10012), (238, 10090), (250, 10138), (252, 10147), (257, 10165), (267, 10207), (270, 10216), (278, 10243), (286, 10273), (294, 10306), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (372, 10591), (424, 10846), (427, 10858), (442, 10942), (444, 10948), (450, 10978),

Gene: Oxynfrius_18 Start: 12609, Stop: 15170, Start Num: 11

Candidate Starts for Oxynfrius_18:

(8, 12588), (Start: 11 @12609 has 29 MA's), (19, 12699), (24, 12738), (29, 12774), (41, 12834), (44, 12882), (45, 12897), (62, 13065), (66, 13110), (72, 13161), (73, 13164), (81, 13248), (106, 13434), (115, 13470), (118, 13482), (127, 13524), (149, 13635), (186, 13833), (210, 13926), (215, 13950), (216, 13953), (236, 14031), (237, 14037), (244, 14064), (251, 14094), (267, 14157), (272, 14172), (274, 14181), (275, 14184), (278, 14193), (284, 14217), (288, 14229), (289, 14235), (293, 14250), (294, 14256), (295, 14259), (300, 14280), (303, 14295), (307, 14310), (311, 14328), (313, 14334), (317, 14349), (320, 14358), (322, 14367), (331, 14400), (332, 14403), (335, 14415), (336, 14421), (339, 14433), (354, 14499), (358, 14514), (373, 14544), (375, 14553), (393, 14664), (404, 14700), (412, 14721), (424, 14796), (425, 14799), (436, 14853), (442, 14892), (454, 14949), (459, 14973), (470, 15015), (477, 15042), (489, 15111),

Gene: PartyCup_18 Start: 12644, Stop: 15199, Start Num: 11

Candidate Starts for PartyCup_18:

(8, 12623), (Start: 11 @12644 has 29 MA's), (16, 12692), (24, 12773), (26, 12797), (41, 12869), (44, 12917), (45, 12932), (46, 12938), (62, 13100), (66, 13145), (72, 13196), (73, 13199), (77, 13229), (89, 13367), (111, 13490), (124, 13550), (129, 13568), (132, 13583), (142, 13634), (186, 13865), (205, 13934), (210, 13958), (214, 13976), (215, 13982), (230, 14036), (233, 14048), (237, 14069), (243, 14093), (265, 14180), (272, 14204), (273, 14210), (274, 14213), (278, 14225), (283, 14246), (284, 14249), (286, 14255), (288, 14261), (292, 14279), (293, 14282), (294, 14288), (304, 14333), (307, 14342), (311, 14360), (317, 14381), (320, 14390), (322, 14399), (331, 14432), (332, 14435), (333,

14444), (335, 14447), (347, 14498), (376, 14588), (393, 14696), (395, 14708), (403, 14729), (404, 14732), (424, 14828), (425, 14831), (436, 14885), (442, 14924), (454, 14981), (465, 15023), (477, 15071), (483, 15113), (489, 15143),

Gene: PermaG_20 Start: 13551, Stop: 15539, Start Num: 14

Candidate Starts for PermaG_20:

(Start: 14 @13551 has 18 MA's), (17, 13590), (35, 13701), (40, 13716), (42, 13728), (65, 13920), (67, 13944), (72, 13986), (82, 14076), (83, 14085), (87, 14127), (96, 14193), (110, 14274), (114, 14289), (122, 14313), (153, 14385), (155, 14400), (186, 14502), (193, 14526), (208, 14595), (216, 14628), (239, 14694), (295, 14826), (330, 14853), (354, 14925), (369, 14958), (377, 14985), (378, 14991), (383, 15024), (437, 15246), (442, 15282), (449, 15312), (461, 15372), (491, 15513),

Gene: Phives_17 Start: 11806, Stop: 14130, Start Num: 13

Candidate Starts for Phives_17:

(Start: 13 @11806 has 71 MA's), (29, 11962), (30, 11971), (45, 12052), (51, 12112), (57, 12157), (65, 12229), (69, 12289), (74, 12310), (75, 12313), (79, 12343), (84, 12397), (86, 12427), (94, 12484), (99, 12508), (108, 12568), (109, 12574), (166, 12793), (217, 12922), (227, 12952), (229, 12961), (240, 13009), (246, 13030), (254, 13063), (267, 13105), (279, 13144), (299, 13204), (302, 13219), (323, 13297), (337, 13354), (360, 13453), (370, 13465), (373, 13474), (381, 13507), (385, 13540), (386, 13543), (393, 13594), (424, 13726), (425, 13729), (446, 13840), (454, 13879), (468, 13939), (480, 13990), (485, 14029),

Gene: Pixelle_16 Start: 10749, Stop: 13073, Start Num: 13

Candidate Starts for Pixelle_16:

(Start: 13 @10749 has 71 MA's), (29, 10905), (30, 10914), (45, 10995), (51, 11055), (57, 11100), (65, 11172), (74, 11253), (75, 11256), (79, 11286), (84, 11340), (86, 11370), (94, 11427), (99, 11451), (107, 11505), (108, 11511), (109, 11517), (166, 11736), (229, 11904), (240, 11952), (246, 11973), (254, 12006), (267, 12048), (279, 12087), (299, 12147), (302, 12162), (320, 12228), (350, 12351), (373, 12417), (375, 12426), (385, 12483), (386, 12486), (393, 12537), (424, 12669), (425, 12672), (446, 12783), (454, 12822), (459, 12846), (485, 12972),

Gene: Powerpuff_16 Start: 10781, Stop: 13096, Start Num: 13

Candidate Starts for Powerpuff_16:

(Start: 13 @10781 has 71 MA's), (29, 10937), (30, 10946), (45, 11027), (48, 11039), (51, 11087), (52, 11090), (57, 11132), (65, 11204), (74, 11285), (75, 11288), (79, 11318), (84, 11372), (86, 11402), (94, 11459), (99, 11483), (108, 11543), (166, 11768), (211, 11864), (227, 11927), (229, 11936), (240, 11984), (243, 11993), (246, 12005), (254, 12038), (267, 12080), (279, 12119), (299, 12179), (335, 12320), (353, 12395), (355, 12407), (373, 12449), (375, 12458), (381, 12482), (391, 12551), (393, 12569), (421, 12680), (424, 12701), (425, 12704), (432, 12737), (446, 12815), (454, 12854), (468, 12914), (474, 12944), (485, 12995), (492, 13040), (497, 13085),

Gene: Preamble_14 Start: 9721, Stop: 12279, Start Num: 11

Candidate Starts for Preamble_14:

(8, 9700), (Start: 11 @9721 has 29 MA's), (16, 9769), (24, 9850), (41, 9946), (43, 9991), (45, 10009), (46, 10015), (61, 10156), (62, 10177), (66, 10222), (72, 10273), (73, 10276), (77, 10306), (98, 10489), (111, 10567), (113, 10576), (115, 10582), (118, 10594), (124, 10627), (134, 10669), (142, 10714), (157, 10834), (158, 10837), (195, 10975), (210, 11035), (214, 11053), (215, 11059), (223, 11089), (236, 11140), (237, 11146), (247, 11188), (251, 11203), (253, 11212), (265, 11257), (267, 11266), (273, 11287), (277, 11299), (278, 11302), (283, 11323), (284, 11326), (286, 11332), (288, 11338), (293, 11359), (294, 11365), (299, 11386), (304, 11410), (307, 11419), (311, 11437), (317, 11458), (331, 11509), (332, 11512), (333, 11521), (335, 11524), (359, 11629), (370, 11644), (375, 11662), (387, 11731), (393, 11773), (395, 11785), (403, 11806), (404, 11809), (424, 11905), (425, 11908), (436, 11962), (442, 12001), (446, 12019), (452, 12049), (454, 12058), (465, 12100), (489, 12220),

Gene: Pumpkins_16 Start: 10836, Stop: 13160, Start Num: 13

Candidate Starts for Pumpkins_16:

(Start: 13 @10836 has 71 MA's), (29, 10992), (30, 11001), (31, 11004), (32, 11010), (45, 11082), (51, 11142), (65, 11259), (74, 11340), (75, 11343), (79, 11373), (86, 11457), (94, 11514), (99, 11538), (108, 11598), (109, 11604), (166, 11823), (229, 11991), (240, 12039), (254, 12093), (267, 12135), (279, 12174), (323, 12327), (359, 12480), (369, 12492), (385, 12570), (386, 12573), (393, 12624), (424, 12756), (425, 12759), (432, 12792), (446, 12870), (454, 12909),

Gene: Rasovi_19 Start: 13514, Stop: 15508, Start Num: 14

Candidate Starts for Rasovi_19:

(Start: 14 @13514 has 18 MA's), (17, 13553), (35, 13664), (40, 13679), (42, 13691), (55, 13805), (65, 13883), (67, 13907), (82, 14039), (87, 14090), (96, 14156), (114, 14252), (155, 14363), (193, 14489), (206, 14549), (212, 14573), (216, 14591), (233, 14624), (284, 14771), (295, 14789), (331, 14822), (335, 14837), (358, 14903), (408, 15062), (410, 15068), (411, 15074), (424, 15152), (428, 15167), (437, 15209), (449, 15275), (464, 15344), (491, 15482),

Gene: RcigaStruga_18 Start: 12617, Stop: 15178, Start Num: 11

Candidate Starts for RcigaStruga_18:

(8, 12596), (Start: 11 @12617 has 29 MA's), (19, 12707), (24, 12746), (29, 12782), (41, 12842), (45, 12905), (62, 13073), (66, 13118), (71, 13166), (72, 13169), (73, 13172), (81, 13256), (82, 13259), (100, 13397), (111, 13463), (118, 13490), (127, 13532), (186, 13841), (195, 13874), (210, 13934), (215, 13958), (236, 14039), (237, 14045), (238, 14048), (244, 14072), (251, 14102), (257, 14123), (269, 14171), (273, 14186), (278, 14201), (284, 14225), (288, 14237), (289, 14243), (293, 14258), (294, 14264), (303, 14303), (304, 14309), (307, 14318), (311, 14336), (313, 14342), (316, 14354), (317, 14357), (320, 14366), (325, 14384), (331, 14408), (332, 14411), (335, 14423), (339, 14441), (354, 14507), (358, 14522), (373, 14552), (375, 14561), (386, 14621), (393, 14672), (404, 14708), (424, 14804), (425, 14807), (436, 14861), (442, 14900), (448, 14927), (454, 14957), (459, 14981), (470, 15023), (477, 15050), (489, 15119),

Gene: Reedo_16 Start: 10781, Stop: 13090, Start Num: 13

Candidate Starts for Reedo_16:

(Start: 13 @10781 has 71 MA's), (29, 10937), (30, 10946), (38, 10979), (45, 11027), (51, 11087), (65, 11204), (74, 11285), (75, 11288), (79, 11318), (84, 11372), (86, 11402), (94, 11459), (99, 11483), (102, 11513), (108, 11543), (109, 11549), (116, 11573), (130, 11636), (140, 11669), (161, 11747), (211, 11864), (262, 12062), (267, 12080), (279, 12119), (284, 12140), (299, 12179), (302, 12194), (312, 12233), (324, 12275), (340, 12341), (379, 12473), (387, 12527), (389, 12539), (409, 12614), (412, 12626), (426, 12710), (434, 12746), (444, 12800), (450, 12830), (476, 12944), (489, 13022),

Gene: Roberts_17 Start: 9567, Stop: 11855, Start Num: 9

Candidate Starts for Roberts_17:

(9, 9567), (Start: 10 @9570 has 2 MA's), (22, 9669), (49, 9828), (71, 10044), (87, 10188), (103, 10299), (110, 10335), (121, 10377), (163, 10515), (175, 10545), (176, 10548), (184, 10566), (199, 10608), (220, 10692), (228, 10716), (241, 10764), (252, 10806), (253, 10812), (264, 10854), (269, 10872), (280, 10914), (284, 10926), (290, 10947), (295, 10968), (297, 10977), (298, 10983), (302, 11001), (303, 11004), (310, 11034), (313, 11043), (332, 11112), (338, 11139), (339, 11142), (354, 11208), (359, 11229), (373, 11253), (379, 11277), (384, 11316), (395, 11385), (397, 11394), (410, 11421), (424, 11505), (425, 11508), (442, 11601), (444, 11607), (454, 11658), (459, 11682), (460, 11691), (473, 11736), (493, 11850),

Gene: RockScotty_16 Start: 10335, Stop: 12755, Start Num: 13

Candidate Starts for RockScotty_16:

(Start: 13 @10335 has 71 MA's), (21, 10422), (36, 10527), (39, 10539), (44, 10599), (54, 10710), (63, 10791), (78, 10917), (80, 10932), (85, 10986), (110, 11160), (135, 11244), (139, 11265), (149, 11307), (183, 11433), (186, 11454), (195, 11487), (209, 11544), (220, 11586), (225, 11601), (237, 11652), (250, 11688), (251, 11694), (283, 11796), (289, 11817), (301, 11859), (317, 11919), (318, 11925), (332, 11973), (354, 12069), (395, 12246), (402, 12258), (415, 12309), (429, 12390), (442, 12459), (450, 12495), (468, 12576), (471, 12591), (485, 12663), (489, 12687),

Gene: Rootkit7_19 Start: 13340, Stop: 15328, Start Num: 14

Candidate Starts for Rootkit7_19:

(Start: 14 @13340 has 18 MA's), (17, 13379), (35, 13490), (40, 13505), (42, 13517), (65, 13709), (67, 13733), (87, 13916), (96, 13982), (114, 14078), (122, 14102), (155, 14189), (186, 14291), (193, 14315), (208, 14384), (216, 14417), (276, 14582), (295, 14615), (330, 14642), (333, 14660), (374, 14762), (377, 14774), (378, 14780), (391, 14861), (437, 15035), (449, 15101), (461, 15161), (464, 15170), (491, 15302),

Gene: SBlackberry_19 Start: 13346, Stop: 15334, Start Num: 14

Candidate Starts for SBlackberry_19:

(Start: 14 @13346 has 18 MA's), (17, 13385), (35, 13496), (40, 13511), (42, 13523), (65, 13715), (67, 13739), (87, 13922), (96, 13988), (114, 14084), (122, 14108), (155, 14195), (186, 14297), (193, 14321), (208, 14390), (216, 14423), (276, 14588), (295, 14621), (330, 14648), (333, 14666), (374, 14768), (377, 14780), (378, 14786), (391, 14867), (437, 15041), (449, 15107), (461, 15167), (464, 15176), (491, 15308),

Gene: Sabourin_16 Start: 10242, Stop: 12662, Start Num: 13

Candidate Starts for Sabourin_16:

(Start: 13 @10242 has 71 MA's), (21, 10329), (26, 10386), (36, 10434), (39, 10446), (44, 10506), (54, 10617), (63, 10698), (78, 10824), (80, 10839), (85, 10893), (110, 11067), (135, 11151), (139, 11172), (144, 11193), (149, 11214), (183, 11340), (186, 11361), (195, 11394), (209, 11451), (220, 11493), (225, 11508), (237, 11559), (250, 11595), (283, 11703), (289, 11724), (301, 11766), (304, 11778), (318, 11832), (332, 11880), (354, 11976), (392, 12132), (395, 12153), (402, 12165), (415, 12216), (442, 12366), (450, 12402), (468, 12483), (489, 12594),

Gene: Salgado_67 Start: 36346, Stop: 39363, Start Num: 3

Candidate Starts for Salgado_67:

(Start: 3 @36346 has 7 MA's), (7, 36367), (Start: 11 @36397 has 29 MA's), (12, 36400), (23, 36505), (35, 36589), (38, 36598), (49, 36658), (69, 36868), (71, 36874), (72, 36877), (73, 36880), (82, 36967), (87, 37018), (91, 37060), (92, 37063), (106, 37147), (110, 37165), (156, 37315), (165, 37354), (185, 37408), (187, 37417), (207, 37507), (231, 37603), (238, 37633), (242, 37651), (243, 37654), (246, 37666), (251, 37687), (254, 37699), (267, 37750), (295, 37843), (316, 37930), (327, 37966), (330, 37978), (332, 37987), (339, 38017), (342, 38032), (344, 38041), (361, 38110), (378, 38149), (396, 38275), (420, 38350), (433, 38425), (438, 38446), (443, 38479), (445, 38482), (453, 38524), (456, 38536), (459, 38557), (472, 38611), (490, 38713), (498, 38776), (502, 38887), (504, 38920), (506, 38974), (507, 38983), (511, 39076), (512, 39085), (514, 39184), (515, 39190), (517, 39220), (518, 39259), (520, 39346),

Gene: Schaffner_16 Start: 10823, Stop: 13147, Start Num: 13

Candidate Starts for Schaffner_16:

(Start: 13 @10823 has 71 MA's), (32, 10997), (38, 11021), (45, 11069), (51, 11129), (64, 11234), (65, 11246), (74, 11327), (75, 11330), (79, 11360), (84, 11414), (86, 11444), (90, 11486), (94, 11501), (99, 11525), (102, 11555), (108, 11585), (109, 11591), (166, 11810), (217, 11939), (229, 11978), (240, 12026), (246, 12047), (254, 12080), (267, 12122), (279, 12161), (299, 12221), (323, 12314), (359, 12467), (369, 12479), (385, 12557), (386, 12560), (393, 12611), (424, 12743), (425, 12746), (432, 12779), (446, 12857), (454, 12896),

Gene: ShakeltOph_15 Start: 8971, Stop: 11214, Start Num: 13

Candidate Starts for ShakeltOph_15:

(Start: 13 @8971 has 71 MA's), (20, 9058), (36, 9160), (49, 9226), (61, 9331), (71, 9442), (73, 9448), (83, 9544), (87, 9586), (110, 9733), (115, 9751), (161, 9868), (169, 9895), (189, 9928), (205, 9964), (215, 10012), (226, 10051), (238, 10090), (250, 10138), (252, 10147), (254, 10156), (257, 10165), (267, 10207), (278, 10243), (280, 10255), (293, 10300), (294, 10306), (300, 10330), (308, 10366), (313, 10384), (320, 10408), (322, 10417), (326, 10429), (331, 10450), (332, 10453), (339, 10483), (396, 10729), (424, 10846), (442, 10942), (444, 10948), (450, 10978),

Gene: Shrooms_65 Start: 34492, Stop: 37881, Start Num: 3

Candidate Starts for Shrooms_65:

(2, 34486), (Start: 3 @34492 has 7 MA's), (5, 34510), (7, 34513), (Start: 11 @34543 has 29 MA's), (12, 34546), (17, 34621), (32, 34723), (35, 34735), (49, 34804), (71, 35020), (72, 35023), (73, 35026), (82, 35113), (87, 35164), (92, 35209), (97, 35236), (110, 35311), (115, 35329), (122, 35362), (149, 35431), (160, 35491), (161, 35494), (173, 35560), (174, 35566), (179, 35587), (182, 35602), (187, 35644), (197, 35698), (203, 35722), (204, 35728), (207, 35743), (209, 35752), (230, 35833), (237, 35866), (246, 35902), (254, 35935), (267, 35986), (278, 36016), (294, 36076), (295, 36079), (316, 36166), (320, 36178), (322, 36187), (332, 36223), (335, 36235), (339, 36253), (345, 36280), (357, 36331), (362, 36364), (363, 36409), (364, 36427), (365, 36433), (366, 36445), (367, 36463), (368, 36472), (378, 36517), (387, 36586), (394, 36631), (397, 36649), (398, 36673), (399, 36676), (400, 36685), (401, 36697), (402, 36709), (406, 36751), (407, 36817), (423, 36907), (430, 36940), (433, 36958), (443, 37012), (445, 37015), (455, 37066), (456, 37069), (459, 37090), (461, 37102), (468, 37126), (469, 37135), (474, 37156), (490, 37246), (493, 37267), (498, 37309), (500, 37327), (501, 37399), (502, 37420), (503, 37444), (504, 37453), (505, 37474), (506, 37507), (511, 37609), (513, 37654), (516, 37720), (518, 37777),

Gene: Simpson_18 Start: 10730, Stop: 13045, Start Num: 13

Candidate Starts for Simpson_18:

(Start: 13 @10730 has 71 MA's), (29, 10886), (30, 10895), (45, 10976), (48, 10988), (51, 11036), (65, 11153), (74, 11234), (75, 11237), (79, 11267), (84, 11321), (86, 11351), (94, 11408), (99, 11432), (108, 11492), (166, 11717), (211, 11813), (229, 11885), (240, 11933), (254, 11987), (267, 12029), (279, 12068), (299, 12128), (375, 12407), (381, 12431), (385, 12464), (386, 12467), (393, 12518), (421, 12629), (424, 12650), (425, 12653), (432, 12686), (446, 12764), (451, 12785), (454, 12803), (468, 12863), (474, 12893), (485, 12944), (492, 12989), (497, 13034),

Gene: Skelbel_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Skelbel_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (217, 11820), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: Snek_16 Start: 9838, Stop: 12117, Start Num: 13

Candidate Starts for Snek_16:

(Start: 13 @9838 has 71 MA's), (40, 10042), (49, 10093), (60, 10195), (66, 10261), (71, 10309), (73, 10315), (82, 10402), (83, 10411), (87, 10453), (92, 10498), (110, 10600), (115, 10618), (161, 10747), (165, 10762), (185, 10804), (196, 10825), (202, 10840), (230, 10951), (250, 11023), (252, 11032), (254, 11041), (258, 11053), (269, 11098), (271, 11104), (275, 11119), (280, 11140), (293, 11185), (311, 11263), (332, 11338), (336, 11356), (379, 11503), (396, 11614), (416, 11677), (419, 11698), (423, 11725), (426, 11740), (444, 11830), (450, 11860), (464, 11926), (489, 12052), (495, 12091),

Gene: Sooty_16 Start: 10245, Stop: 12665, Start Num: 13

Candidate Starts for Sooty_16:

(Start: 13 @10245 has 71 MA's), (21, 10332), (26, 10389), (36, 10437), (39, 10449), (44, 10509), (54, 10620), (63, 10701), (78, 10827), (80, 10842), (85, 10896), (110, 11070), (135, 11154), (139, 11175), (144, 11196), (149, 11217), (155, 11268), (183, 11343), (186, 11364), (195, 11397), (209, 11454), (220, 11496), (225, 11511), (237, 11562), (250, 11598), (283, 11706), (289, 11727), (301, 11769), (304, 11781), (318, 11835), (332, 11883), (354, 11979), (392, 12135), (395, 12156), (402, 12168), (415, 12219), (442, 12369), (450, 12405), (457, 12438), (489, 12597),

Gene: SpecialK_16 Start: 10242, Stop: 12662, Start Num: 13

Candidate Starts for SpecialK_16:

(Start: 13 @10242 has 71 MA's), (21, 10329), (36, 10434), (39, 10446), (44, 10506), (54, 10617), (63, 10698), (78, 10824), (80, 10839), (85, 10893), (110, 11067), (135, 11151), (139, 11172), (149, 11214), (183, 11340), (186, 11361), (195, 11394), (209, 11451), (220, 11493), (225, 11508), (237, 11559), (250, 11595), (251, 11601), (283, 11703), (289, 11724), (301, 11766), (317, 11826), (318, 11832), (332, 11880), (354, 11976), (395, 12153), (402, 12165), (415, 12216), (429, 12297), (442, 12366), (450, 12402), (468, 12483), (471, 12498), (485, 12570), (489, 12594),

Gene: Studio_18 Start: 9327, Stop: 11615, Start Num: 9

Candidate Starts for Studio_18:

(9, 9327), (Start: 10 @9330 has 2 MA's), (49, 9588), (71, 9804), (72, 9807), (87, 9948), (110, 10095), (121, 10137), (126, 10158), (175, 10305), (177, 10314), (199, 10368), (201, 10371), (202, 10374), (238, 10509), (252, 10566), (264, 10614), (284, 10686), (290, 10707), (295, 10728), (297, 10737), (298, 10743), (302, 10761), (303, 10764), (305, 10773), (309, 10791), (313, 10803), (318, 10824), (320, 10827), (321, 10830), (332, 10872), (338, 10899), (339, 10902), (375, 11022), (382, 11055), (384, 11076), (385, 11079), (396, 11148), (397, 11154), (424, 11265), (425, 11268), (442, 11361), (444, 11367), (452, 11409), (454, 11418), (459, 11442), (460, 11451), (466, 11469), (493, 11610),

Gene: Stuu_16 Start: 10335, Stop: 12755, Start Num: 13

Candidate Starts for Stuu_16:

(Start: 13 @10335 has 71 MA's), (21, 10422), (36, 10527), (39, 10539), (44, 10599), (54, 10710), (63, 10791), (78, 10917), (80, 10932), (85, 10986), (110, 11160), (135, 11244), (139, 11265), (149, 11307), (183, 11433), (186, 11454), (195, 11487), (209, 11544), (220, 11586), (225, 11601), (237, 11652), (250, 11688), (251, 11694), (283, 11796), (289, 11817), (301, 11859), (317, 11919), (318, 11925), (332, 11973), (354, 12069), (392, 12225), (395, 12246), (402, 12258), (415, 12309), (442, 12459), (450, 12495), (485, 12663), (489, 12687),

Gene: Subaru_16 Start: 10704, Stop: 13028, Start Num: 13

Candidate Starts for Subaru_16:

(Start: 13 @10704 has 71 MA's), (28, 10857), (29, 10860), (30, 10869), (45, 10950), (51, 11010), (57, 11055), (65, 11127), (74, 11208), (75, 11211), (79, 11241), (84, 11295), (86, 11325), (94, 11382), (99, 11406), (108, 11466), (109, 11472), (116, 11496), (140, 11592), (166, 11691), (211, 11787), (229, 11859), (240, 11907), (254, 11961), (267, 12003), (279, 12042), (283, 12060), (299, 12102), (323, 12195), (371, 12366), (375, 12381), (393, 12492), (424, 12624), (425, 12627), (432, 12660), (446, 12738), (454, 12777), (468, 12837), (485, 12927),

Gene: Sucha_16 Start: 10506, Stop: 12797, Start Num: 14

Candidate Starts for Sucha_16:

(Start: 14 @10506 has 18 MA's), (28, 10623), (35, 10656), (55, 10797), (65, 10875), (82, 11031), (87, 11082), (93, 11133), (97, 11154), (122, 11268), (123, 11271), (128, 11292), (154, 11349), (192, 11478), (193, 11481), (197, 11499), (201, 11517), (206, 11541), (245, 11703), (266, 11784), (271, 11802), (277, 11823), (286, 11856), (287, 11859), (314, 11964), (319, 11988), (339, 12066), (340,

12069), (347, 12099), (357, 12144), (373, 12177), (390, 12276), (396, 12312), (397, 12318), (410, 12345), (418, 12384), (424, 12429), (427, 12441), (429, 12453), (431, 12462), (432, 12465), (454, 12579), (467, 12630), (469, 12645),

Gene: Sue2_16 Start: 10752, Stop: 13142, Start Num: 13

Candidate Starts for Sue2_16:

(Start: 13 @10752 has 71 MA's), (15, 10785), (28, 10905), (36, 10941), (49, 11007), (60, 11109), (71, 11223), (73, 11229), (82, 11316), (83, 11325), (87, 11367), (110, 11514), (188, 11790), (208, 11874), (236, 11985), (255, 12063), (257, 12069), (259, 12078), (266, 12105), (293, 12204), (317, 12303), (321, 12315), (328, 12342), (332, 12357), (333, 12366), (336, 12375), (347, 12420), (375, 12507), (383, 12552), (412, 12675), (422, 12732), (424, 12750), (425, 12753), (435, 12801), (446, 12864), (454, 12903), (489, 13077),

Gene: Suppi_18 Start: 12647, Stop: 15202, Start Num: 11

Candidate Starts for Suppi_18:

(8, 12626), (Start: 11 @12647 has 29 MA's), (16, 12695), (24, 12776), (26, 12800), (41, 12872), (44, 12920), (45, 12935), (46, 12941), (62, 13103), (66, 13148), (72, 13199), (73, 13202), (77, 13232), (89, 13370), (111, 13493), (124, 13553), (129, 13571), (132, 13586), (142, 13637), (186, 13868), (205, 13937), (210, 13961), (214, 13979), (215, 13985), (230, 14039), (233, 14051), (237, 14072), (243, 14096), (265, 14183), (272, 14207), (273, 14213), (274, 14216), (278, 14228), (283, 14249), (284, 14252), (286, 14258), (288, 14264), (290, 14273), (292, 14282), (293, 14285), (294, 14291), (300, 14315), (304, 14336), (307, 14345), (311, 14363), (317, 14384), (320, 14393), (322, 14402), (331, 14435), (332, 14438), (333, 14447), (335, 14450), (347, 14501), (376, 14591), (393, 14699), (395, 14711), (403, 14732), (404, 14735), (424, 14831), (425, 14834), (436, 14888), (442, 14927), (454, 14984), (465, 15026), (477, 15074), (483, 15116), (489, 15146),

Gene: TMaxx_17 Start: 9424, Stop: 11712, Start Num: 10

Candidate Starts for TMaxx_17:

(Start: 10 @9424 has 2 MA's), (60, 9784), (61, 9787), (71, 9898), (72, 9901), (73, 9904), (87, 10042), (110, 10189), (118, 10219), (130, 10270), (161, 10360), (189, 10441), (213, 10516), (222, 10552), (226, 10564), (227, 10567), (237, 10600), (252, 10660), (268, 10723), (270, 10729), (271, 10732), (277, 10753), (279, 10759), (282, 10774), (290, 10801), (293, 10813), (295, 10822), (299, 10840), (302, 10855), (303, 10858), (305, 10867), (307, 10873), (309, 10885), (317, 10912), (322, 10930), (328, 10951), (332, 10966), (392, 11218), (395, 11239), (396, 11242), (424, 11359), (425, 11362), (442, 11455), (454, 11512), (459, 11536), (460, 11545), (466, 11563), (478, 11614), (482, 11629), (484, 11653),

Gene: Tallboi_16 Start: 10731, Stop: 13055, Start Num: 13

Candidate Starts for Tallboi_16:

(Start: 13 @10731 has 71 MA's), (27, 10878), (29, 10887), (45, 10977), (51, 11037), (57, 11082), (65, 11154), (69, 11214), (75, 11238), (79, 11268), (84, 11322), (86, 11352), (94, 11409), (99, 11433), (108, 11493), (109, 11499), (166, 11718), (229, 11886), (240, 11934), (254, 11988), (267, 12030), (279, 12069), (299, 12129), (323, 12222), (373, 12399), (375, 12408), (393, 12519), (424, 12651), (425, 12654), (432, 12687), (446, 12765), (454, 12804), (468, 12864), (474, 12894), (485, 12954),

Gene: Tbone_16 Start: 10734, Stop: 13049, Start Num: 13

Candidate Starts for Tbone_16:

(Start: 13 @10734 has 71 MA's), (29, 10890), (30, 10899), (45, 10980), (48, 10992), (51, 11040), (52, 11043), (57, 11085), (65, 11157), (74, 11238), (75, 11241), (79, 11271), (84, 11325), (86, 11355), (94, 11412), (99, 11436), (108, 11496), (166, 11721), (211, 11817), (227, 11880), (229, 11889), (240, 11937), (246, 11958), (254, 11991), (267, 12033), (279, 12072), (299, 12132), (335, 12273), (373, 12402), (375, 12411), (381, 12435), (385, 12468), (391, 12504), (393, 12522), (421, 12633), (424, 12654), (425, 12657), (432, 12690), (446, 12768), (454, 12807), (468, 12867), (474, 12897), (485,

12948), (492, 12993), (497, 13038),

Gene: TforTroy_16 Start: 10854, Stop: 13178, Start Num: 13

Candidate Starts for TforTroy_16:

(Start: 13 @10854 has 71 MA's), (29, 11010), (30, 11019), (31, 11022), (32, 11028), (45, 11100), (51, 11160), (65, 11277), (74, 11358), (75, 11361), (79, 11391), (84, 11445), (86, 11475), (94, 11532), (99, 11556), (108, 11616), (109, 11622), (141, 11745), (166, 11841), (229, 12009), (240, 12057), (254, 12111), (267, 12153), (279, 12192), (299, 12252), (323, 12345), (355, 12480), (370, 12513), (373, 12522), (393, 12642), (424, 12774), (425, 12777), (446, 12888), (454, 12927),

Gene: ThursdayNight_14 Start: 9237, Stop: 11804, Start Num: 13

Candidate Starts for ThursdayNight_14:

(Start: 13 @9237 has 71 MA's), (20, 9324), (31, 9405), (32, 9411), (36, 9426), (49, 9492), (60, 9594), (67, 9669), (71, 9708), (73, 9714), (82, 9801), (87, 9852), (92, 9897), (110, 9999), (115, 10017), (120, 10038), (127, 10074), (168, 10332), (216, 10578), (232, 10638), (248, 10695), (250, 10701), (252, 10710), (269, 10776), (271, 10782), (275, 10797), (278, 10806), (293, 10863), (300, 10893), (313, 10947), (317, 10962), (322, 10980), (326, 10992), (332, 11016), (336, 11034), (352, 11100), (424, 11409), (425, 11412), (438, 11478), (442, 11505), (454, 11562), (460, 11595), (474, 11646), (494, 11760),

Gene: Tian_16 Start: 10746, Stop: 13070, Start Num: 13

Candidate Starts for Tian_16:

(Start: 13 @10746 has 71 MA's), (29, 10902), (30, 10911), (45, 10992), (51, 11052), (57, 11097), (65, 11169), (69, 11229), (74, 11250), (75, 11253), (79, 11283), (84, 11337), (86, 11367), (94, 11424), (99, 11448), (108, 11508), (109, 11514), (140, 11634), (166, 11733), (211, 11829), (229, 11901), (240, 11949), (246, 11970), (254, 12003), (267, 12045), (279, 12084), (299, 12144), (302, 12159), (320, 12225), (350, 12348), (352, 12357), (373, 12414), (375, 12423), (385, 12480), (386, 12483), (393, 12534), (424, 12666), (425, 12669), (446, 12780), (454, 12819), (459, 12843), (485, 12969),

Gene: TripleC_20 Start: 12930, Stop: 15218, Start Num: 10

Candidate Starts for TripleC_20:

(Start: 10 @12930 has 2 MA's), (23, 13035), (60, 13290), (61, 13293), (66, 13356), (71, 13404), (72, 13407), (73, 13410), (87, 13548), (110, 13695), (118, 13725), (130, 13776), (161, 13866), (189, 13947), (210, 14007), (222, 14058), (226, 14070), (227, 14073), (252, 14166), (257, 14184), (258, 14187), (268, 14229), (270, 14235), (271, 14238), (278, 14262), (294, 14325), (295, 14328), (299, 14346), (305, 14373), (311, 14397), (315, 14412), (317, 14418), (321, 14430), (322, 14436), (328, 14457), (329, 14460), (332, 14472), (336, 14490), (373, 14613), (378, 14634), (392, 14724), (395, 14745), (396, 14748), (409, 14778), (421, 14844), (424, 14865), (425, 14868), (432, 14901), (442, 14961), (454, 15018), (459, 15042), (460, 15051), (482, 15135), (484, 15159),

Gene: Tuck_17 Start: 11773, Stop: 14250, Start Num: 13

Candidate Starts for Tuck_17:

(Start: 13 @11773 has 71 MA's), (29, 11929), (30, 11938), (45, 12019), (51, 12079), (57, 12124), (65, 12196), (75, 12280), (79, 12310), (84, 12364), (86, 12394), (94, 12451), (99, 12475), (108, 12535), (109, 12541), (116, 12565), (133, 12643), (138, 12676), (156, 12811), (166, 12853), (194, 12952), (212, 13024), (221, 13063), (229, 13090), (240, 13138), (249, 13171), (267, 13234), (283, 13291), (299, 13333), (302, 13348), (323, 13426), (353, 13549), (371, 13597), (375, 13612), (391, 13705), (393, 13723), (395, 13735), (424, 13855), (425, 13858), (446, 13969), (454, 14008), (474, 14098),

Gene: Turab_16 Start: 10733, Stop: 13057, Start Num: 13

Candidate Starts for Turab_16:

(Start: 13 @10733 has 71 MA's), (29, 10889), (30, 10898), (34, 10913), (45, 10979), (51, 11039), (57, 11084), (65, 11156), (74, 11237), (75, 11240), (79, 11270), (84, 11324), (86, 11354), (94, 11411), (99,

11435), (108, 11495), (109, 11501), (166, 11720), (211, 11816), (217, 11849), (240, 11936), (254, 11990), (267, 12032), (279, 12071), (299, 12131), (335, 12272), (373, 12401), (375, 12410), (393, 12521), (424, 12653), (425, 12656), (432, 12689), (446, 12767), (454, 12806), (468, 12866), (485, 12956),

Gene: TurboVicky_19 Start: 13340, Stop: 15328, Start Num: 14

Candidate Starts for TurboVicky_19:

(Start: 14 @13340 has 18 MA's), (17, 13379), (35, 13490), (40, 13505), (42, 13517), (65, 13709), (67, 13733), (72, 13775), (87, 13916), (96, 13982), (114, 14078), (155, 14189), (186, 14291), (193, 14315), (208, 14384), (216, 14417), (276, 14582), (327, 14630), (330, 14642), (333, 14660), (374, 14762), (377, 14774), (378, 14780), (437, 15035), (449, 15101), (461, 15161), (491, 15302),

Gene: Tutumahutu_16 Start: 10781, Stop: 13096, Start Num: 13

Candidate Starts for Tutumahutu_16:

(Start: 13 @10781 has 71 MA's), (29, 10937), (30, 10946), (45, 11027), (48, 11039), (51, 11087), (52, 11090), (57, 11132), (65, 11204), (74, 11285), (75, 11288), (79, 11318), (84, 11372), (86, 11402), (94, 11459), (99, 11483), (108, 11543), (166, 11768), (211, 11864), (227, 11927), (229, 11936), (240, 11984), (243, 11993), (246, 12005), (254, 12038), (267, 12080), (279, 12119), (299, 12179), (335, 12320), (353, 12395), (355, 12407), (373, 12449), (375, 12458), (381, 12482), (391, 12551), (393, 12569), (395, 12581), (421, 12680), (424, 12701), (425, 12704), (432, 12737), (446, 12815), (454, 12854), (468, 12914), (474, 12944), (485, 12995), (492, 13040), (497, 13085),

Gene: Tweety19_16 Start: 9837, Stop: 12116, Start Num: 13

Candidate Starts for Tweety19_16:

(Start: 13 @9837 has 71 MA's), (40, 10041), (49, 10092), (60, 10194), (66, 10260), (71, 10308), (73, 10314), (82, 10401), (83, 10410), (87, 10452), (92, 10497), (110, 10599), (115, 10617), (161, 10746), (165, 10761), (185, 10803), (196, 10824), (202, 10839), (230, 10950), (250, 11022), (252, 11031), (254, 11040), (258, 11052), (269, 11097), (271, 11103), (275, 11118), (280, 11139), (293, 11184), (311, 11262), (332, 11337), (336, 11355), (379, 11502), (396, 11613), (416, 11676), (419, 11697), (423, 11724), (426, 11739), (444, 11829), (450, 11859), (464, 11925), (489, 12051), (495, 12090),

Gene: Typher_21 Start: 13470, Stop: 15458, Start Num: 14

Candidate Starts for Typher_21:

(Start: 14 @13470 has 18 MA's), (17, 13509), (35, 13620), (40, 13635), (42, 13647), (65, 13839), (67, 13863), (72, 13905), (87, 14046), (96, 14112), (114, 14208), (155, 14319), (186, 14421), (193, 14445), (208, 14514), (216, 14547), (276, 14712), (295, 14745), (327, 14760), (330, 14772), (333, 14790), (377, 14904), (378, 14910), (437, 15165), (449, 15231), (461, 15291), (491, 15432),

Gene: Urla_14 Start: 9754, Stop: 12303, Start Num: 11

Candidate Starts for Urla_14:

(Start: 11 @9754 has 29 MA's), (24, 9883), (29, 9919), (44, 10027), (45, 10042), (61, 10189), (62, 10210), (72, 10306), (82, 10396), (111, 10600), (124, 10660), (127, 10669), (195, 10996), (208, 11050), (210, 11056), (214, 11074), (224, 11113), (236, 11161), (251, 11224), (265, 11278), (272, 11302), (273, 11308), (284, 11347), (288, 11359), (292, 11377), (293, 11380), (294, 11386), (295, 11389), (299, 11407), (307, 11440), (311, 11458), (317, 11479), (320, 11488), (322, 11497), (331, 11530), (332, 11533), (333, 11542), (335, 11545), (338, 11560), (358, 11644), (376, 11686), (393, 11794), (395, 11806), (412, 11851), (413, 11860), (424, 11926), (425, 11929), (436, 11983), (442, 12022), (452, 12070), (454, 12079), (459, 12103), (461, 12115), (477, 12172), (479, 12178), (489, 12244), (496, 12286),

Gene: VResidence_16 Start: 10828, Stop: 13143, Start Num: 13

Candidate Starts for VResidence_16:

(Start: 13 @10828 has 71 MA's), (15, 10861), (21, 10915), (29, 10984), (47, 11116), (50, 11143), (56, 11224), (62, 11275), (63, 11284), (71, 11368), (85, 11479), (88, 11530), (104, 11620), (110, 11644), (117, 11671), (145, 11764), (198, 11956), (205, 11983), (216, 12016), (225, 12049), (241, 12067), (243, 12073), (260, 12115), (262, 12124), (266, 12136), (285, 12190), (291, 12214), (305, 12256), (307, 12262), (320, 12310), (332, 12355), (336, 12373), (339, 12385), (350, 12430), (373, 12496), (375, 12505), (422, 12730), (424, 12748), (425, 12751), (438, 12817), (446, 12862), (450, 12880), (454, 12901), (480, 13012), (489, 13078),

Gene: VroomVroom_15 Start: 8983, Stop: 11226, Start Num: 13

Candidate Starts for VroomVroom_15:

(Start: 13 @8983 has 71 MA's), (20, 9070), (31, 9151), (36, 9172), (49, 9238), (61, 9343), (71, 9454), (73, 9460), (83, 9556), (87, 9598), (110, 9745), (161, 9880), (169, 9907), (189, 9940), (215, 10024), (226, 10063), (238, 10102), (244, 10126), (250, 10150), (252, 10159), (257, 10177), (263, 10204), (267, 10219), (278, 10255), (280, 10267), (293, 10312), (294, 10318), (308, 10378), (313, 10396), (320, 10420), (331, 10462), (332, 10465), (339, 10495), (372, 10603), (424, 10858), (427, 10870), (442, 10954), (444, 10960), (450, 10990),

Gene: Waltz_64 Start: 34787, Stop: 37879, Start Num: 3

Candidate Starts for Waltz_64:

(2, 34781), (Start: 3 @34787 has 7 MA's), (5, 34805), (7, 34808), (Start: 11 @34838 has 29 MA's), (17, 34916), (32, 35018), (35, 35030), (49, 35099), (71, 35315), (72, 35318), (73, 35321), (82, 35408), (87, 35459), (92, 35504), (97, 35531), (110, 35606), (115, 35624), (122, 35657), (143, 35702), (147, 35720), (160, 35786), (161, 35789), (171, 35828), (174, 35861), (179, 35882), (182, 35897), (187, 35939), (191, 35969), (197, 35993), (203, 36017), (204, 36023), (207, 36038), (209, 36047), (233, 36140), (237, 36161), (246, 36197), (254, 36230), (267, 36281), (278, 36311), (295, 36374), (306, 36422), (311, 36443), (316, 36461), (320, 36473), (322, 36482), (327, 36497), (332, 36518), (342, 36563), (344, 36572), (349, 36590), (361, 36641), (376, 36671), (378, 36680), (387, 36749), (396, 36806), (430, 36938), (433, 36956), (443, 37010), (445, 37013), (455, 37064), (456, 37067), (469, 37133), (473, 37145), (490, 37244), (493, 37265), (498, 37307), (501, 37397), (502, 37418), (503, 37442), (504, 37451), (505, 37472), (506, 37505), (507, 37514), (511, 37607), (513, 37652), (516, 37718), (518, 37775), (519, 37841),

Gene: Warda_16 Start: 10726, Stop: 13041, Start Num: 13

Candidate Starts for Warda_16:

(Start: 13 @10726 has 71 MA's), (29, 10882), (30, 10891), (45, 10972), (48, 10984), (51, 11032), (52, 11035), (57, 11077), (65, 11149), (74, 11230), (75, 11233), (79, 11263), (84, 11317), (86, 11347), (94, 11404), (99, 11428), (108, 11488), (166, 11713), (211, 11809), (227, 11872), (229, 11881), (240, 11929), (246, 11950), (254, 11983), (267, 12025), (279, 12064), (299, 12124), (335, 12265), (373, 12394), (375, 12403), (381, 12427), (385, 12460), (391, 12496), (393, 12514), (421, 12625), (424, 12646), (425, 12649), (432, 12682), (446, 12760), (454, 12799), (468, 12859), (474, 12889), (485, 12940), (492, 12985), (497, 13030),

Gene: Wayne_18 Start: 12693, Stop: 15248, Start Num: 11

Candidate Starts for Wayne_18:

(8, 12672), (Start: 11 @12693 has 29 MA's), (16, 12741), (24, 12822), (26, 12846), (41, 12918), (44, 12966), (45, 12981), (46, 12987), (62, 13149), (66, 13194), (72, 13245), (73, 13248), (77, 13278), (89, 13416), (111, 13539), (124, 13599), (129, 13617), (132, 13632), (142, 13683), (186, 13914), (205, 13983), (210, 14007), (214, 14025), (215, 14031), (230, 14085), (233, 14097), (237, 14118), (243, 14142), (265, 14229), (272, 14253), (273, 14259), (274, 14262), (278, 14274), (283, 14295), (284, 14298), (286, 14304), (288, 14310), (292, 14328), (293, 14331), (294, 14337), (304, 14382), (307, 14391), (311, 14409), (317, 14430), (320, 14439), (322, 14448), (331, 14481), (332, 14484), (333, 14493), (335, 14496), (347, 14547), (376, 14637), (393, 14745), (395, 14757), (403, 14778), (404, 14781), (424, 14877), (425, 14880), (436, 14934), (442, 14973), (454, 15030), (465, 15072), (477,

15120), (483, 15162), (489, 15192),

Gene: Wheelbite_63 Start: 36504, Stop: 39521, Start Num: 3

Candidate Starts for Wheelbite_63:

(Start: 3 @36504 has 7 MA's), (7, 36525), (Start: 11 @36555 has 29 MA's), (12, 36558), (23, 36663), (38, 36756), (49, 36816), (69, 37026), (71, 37032), (72, 37035), (73, 37038), (82, 37125), (87, 37176), (91, 37218), (92, 37221), (106, 37305), (110, 37323), (156, 37473), (185, 37566), (207, 37665), (231, 37761), (242, 37809), (243, 37812), (246, 37824), (251, 37845), (254, 37857), (267, 37908), (295, 38001), (298, 38016), (327, 38124), (330, 38136), (332, 38145), (339, 38175), (344, 38199), (348, 38214), (361, 38268), (378, 38307), (396, 38433), (424, 38538), (438, 38604), (445, 38640), (447, 38658), (453, 38682), (456, 38694), (458, 38703), (459, 38715), (472, 38769), (486, 38850), (490, 38871), (493, 38892), (498, 38934), (499, 38937), (502, 39045), (504, 39078), (505, 39099), (507, 39141), (508, 39147), (509, 39204), (511, 39234), (512, 39243), (514, 39342), (515, 39348), (518, 39417), (520, 39504),

Gene: Wildwest_17 Start: 11664, Stop: 13910, Start Num: 13

Candidate Starts for Wildwest_17:

(Start: 13 @11664 has 71 MA's), (29, 11820), (30, 11829), (37, 11856), (45, 11910), (51, 11970), (65, 12087), (74, 12168), (75, 12171), (79, 12201), (84, 12255), (86, 12285), (94, 12342), (99, 12366), (105, 12408), (108, 12426), (166, 12651), (216, 12771), (229, 12819), (240, 12867), (243, 12876), (267, 12963), (279, 13002), (283, 13020), (299, 13062), (326, 13164), (336, 13209), (340, 13224), (351, 13269), (370, 13323), (373, 13332), (379, 13356), (391, 13380), (403, 13419), (421, 13497), (424, 13518), (425, 13521), (435, 13569), (446, 13632), (450, 13650), (454, 13671), (489, 13845),

Gene: Yang_16 Start: 10824, Stop: 13148, Start Num: 13

Candidate Starts for Yang_16:

(Start: 13 @10824 has 71 MA's), (32, 10998), (38, 11022), (45, 11070), (51, 11130), (65, 11247), (74, 11328), (75, 11331), (79, 11361), (86, 11445), (94, 11502), (99, 11526), (108, 11586), (109, 11592), (165, 11808), (166, 11811), (229, 11979), (240, 12027), (246, 12048), (254, 12081), (267, 12123), (279, 12162), (281, 12174), (299, 12222), (323, 12315), (340, 12384), (369, 12480), (375, 12501), (391, 12594), (393, 12612), (424, 12744), (425, 12747), (446, 12858), (454, 12897),

Gene: YesChef_16 Start: 10781, Stop: 13096, Start Num: 13

Candidate Starts for YesChef_16:

(Start: 13 @10781 has 71 MA's), (29, 10937), (30, 10946), (45, 11027), (48, 11039), (51, 11087), (52, 11090), (57, 11132), (65, 11204), (74, 11285), (75, 11288), (79, 11318), (84, 11372), (86, 11402), (94, 11459), (99, 11483), (108, 11543), (166, 11768), (211, 11864), (227, 11927), (229, 11936), (240, 11984), (243, 11993), (246, 12005), (254, 12038), (267, 12080), (279, 12119), (299, 12179), (335, 12320), (353, 12395), (355, 12407), (373, 12449), (375, 12458), (381, 12482), (391, 12551), (393, 12569), (421, 12680), (424, 12701), (425, 12704), (432, 12737), (446, 12815), (454, 12854), (468, 12914), (474, 12944), (485, 12995), (492, 13040), (497, 13085),

Gene: Zanella_19 Start: 13343, Stop: 15331, Start Num: 14

Candidate Starts for Zanella_19:

(Start: 14 @13343 has 18 MA's), (17, 13382), (35, 13493), (40, 13508), (42, 13520), (65, 13712), (67, 13736), (87, 13919), (96, 13985), (114, 14081), (122, 14105), (155, 14192), (186, 14294), (193, 14318), (208, 14387), (216, 14420), (276, 14585), (327, 14633), (330, 14645), (333, 14663), (374, 14765), (377, 14777), (378, 14783), (437, 15038), (449, 15104), (461, 15164), (491, 15305),