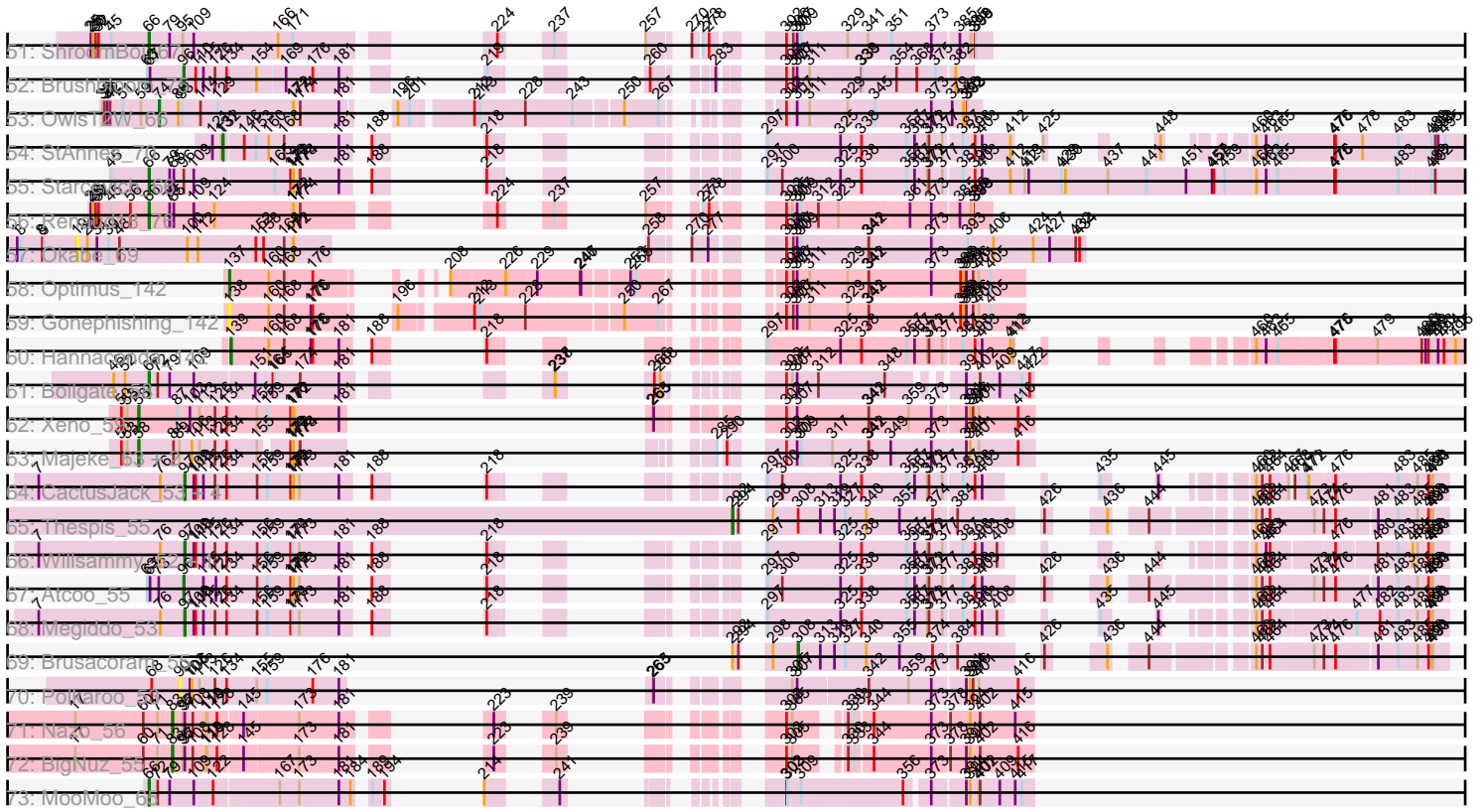


Pham 294582



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 294582 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294582 has 107 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Inyanga_54, Iqorha_54
- Track 2 : Violet_57
- Track 3 : Molly_60, Briton15_63
- Track 4 : Applejack_54
- Track 5 : HanShotFirst_60
- Track 6 : Tasp14_62
- Track 7 : Lamina13_61
- Track 8 : Scavito_83, Kabreeze_82, Chipper1996_830, HumptyDumpty_82, JaNo_81, Chocolat_82, Tophat_83, Mordred_82, EdgarPoe_81
- Track 9 : ArV1_069
- Track 10 : Lymara_79
- Track 11 : DrYang_79
- Track 12 : Linus_82, RosiePosie_82, Conboy_80, MoyaNatalis_81, JayCookie_82
- Track 13 : Colucci_85
- Track 14 : KBurrousTX_81
- Track 15 : Chubster_83
- Track 16 : PrincessTrina_83
- Track 17 : Wocket_66
- Track 18 : Belphegor_66
- Track 19 : Murica_102, MISSy_100
- Track 20 : StellaBean_97
- Track 21 : Lilac_101
- Track 22 : Bogg_99
- Track 23 : Tarkin_98
- Track 24 : Wee_78, Taj_79
- Track 25 : Mova_70
- Track 26 : DRBy19_70, Philus_70
- Track 27 : Daenerys_61, JoeyJr_62, PHappiness_62, Polka14_65, Leperchaun_59, RitaG_62
- Track 28 : KingJulian_72, Corium_67
- Track 29 : Harley_68
- Track 30 : Kersh_68
- Track 31 : BlueCrab_67, FreddyB_67
- Track 32 : Totinger_66
- Track 33 : PatoPoderoso_67
- Track 34 : EleanorGeorge_68
- Track 35 : Mantra_64

- Track 36 : SG4_70
- Track 37 : Phalconet_70
- Track 38 : Martik_66
- Track 39 : Hegedechwinu_73
- Track 40 : ShiLan_65
- Track 41 : Pollywog_67
- Track 42 : PhesterPhotato_66
- Track 43 : Akhila_67, MilanaBonita_66
- Track 44 : Bobi_73
- Track 45 : RedBird_75, Dorothy_75
- Track 46 : Royals2015_69
- Track 47 : TootsiePop_75, Misha28_75
- Track 48 : Bipolar_76
- Track 49 : Filuzino_74
- Track 50 : Awesomesauce_76
- Track 51 : ShroomBoi_67
- Track 52 : Brushbloom_75
- Track 53 : OwlsT2W_66
- Track 54 : StAnnes_70
- Track 55 : Starcevich_66
- Track 56 : Renaud18_76
- Track 57 : Okabe_69
- Track 58 : Optimus_142
- Track 59 : Gonephishing_142
- Track 60 : Hannaconda_142
- Track 61 : Boilgate_58
- Track 62 : Xeno_59
- Track 63 : Majeke_63, Mangethe_63, Phegasus_63
- Track 64 : CactusJack_53, Gavriela_53, Glaske_53, Phalm_53, StressBall_53
- Track 65 : Thespis_55
- Track 66 : Willsammy_52, KilKor_53
- Track 67 : Atcoo_55
- Track 68 : Megiddo_53
- Track 69 : Brusacoram_55
- Track 70 : Polkaroo_53
- Track 71 : Nazo_56
- Track 72 : BigNuz_55
- Track 73 : MooMoo_65

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

The start number called the most often in the published annotations is 66, it was called in 19 of the 97 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BlueCrab_67, Boilgate_58, DRBy19_70, Daenerys_61, FreddyB_67, Harley_68, JoeyJr_62, Leperchaun_59, Martik_66, MooMoo_65, PHappiness_62, PhesterPhotato_66, Philus_70, Polka14_65, Renaud18_76, RitaG_62, Royals2015_69, ShroomBoi_67, Starcevich_66,

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

-

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

- Akhila_67, Applejack_54, ArV1_069, Atcoo_55, Awesomesauce_76, Belphegor_66, BigNuz_55, Bipolar_76, Bobi_73, Bogg_99, Briton15_63, Brusacoram_55, Brushbloom_75, CactusJack_53, Chipper1996_830, Chocolat_82, Chubster_83, Colucci_85, Conboy_80, Corium_67, Dorothy_75, DrYang_79, EdgarPoe_81, EleanorGeorge_68, Filuzino_74, Gavriela_53, Glaske_53, Gonephishing_142, HanShotFirst_60, Hannaconda_142, Hegedechwinu_73, HumptyDumpty_82, Inyanga_54, Iqorha_54, JaNo_81, JayCookie_82, KBurrousTX_81, Kabreeze_82, Kersh_68, KilKor_53, KingJulian_72, Lamina13_61, Lilac_101, Linus_82, Lymara_79, MISSy_100, Majeke_63, Mangethe_63, Mantra_64, Megiddo_53, MilanaBonita_66, Misha28_75, Molly_60, Mordred_82, Mova_70, MoyaNatalis_81, Murica_102, Nazo_56, Okabe_69, Optimus_142, OwlsT2W_66, PatoPoderoso_67, Phalconet_70, Phalm_53, Phegasus_63, Polkaroo_53, Pollywog_67, PrincessTrina_83, RedBird_75, RosiePosie_82, SG4_70, Scavito_83, ShiLan_65, StAnnes_70, StellaBean_97, StressBall_53, Taj_79, Tarkin_98, Tasp14_62, Thespis_55, TootsiePop_75, Tophat_83, Totinger_66, Violet_57, Wee_78, Willsammy_52, Wocket_66, Xeno_59,

Summary by start number:

Start 15:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kersh_68 (F1),

Start 16:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hegedechwinu_73 (F1),

Start 18:

- Found in 18 of 107 (16.8%) of genes in pham
- Manual Annotations of this start: 17 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chipper1996_830 (AR), Chocolat_82 (AR), Chubster_83 (AR), Conboy_80 (AR), DrYang_79 (AR), EdgarPoe_81 (AR), HumptyDumpty_82 (AR), JaNo_81 (AR), JayCookie_82 (AR), Kabreeze_82 (AR), Linus_82 (AR), Lymara_79 (AR), Mordred_82 (AR), MoyaNatalis_81 (AR), PrincessTrina_83 (AR), RosiePosie_82 (AR), Scavito_83 (AR), Tophat_83 (AR),

Start 19:

- Found in 6 of 107 (5.6%) of genes in pham
- Manual Annotations of this start: 5 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akhila_67 (F1), MilanaBonita_66 (F1), Okabe_69 (F8), Phalconet_70 (F1), Taj_79 (F1), Wee_78 (F1),

Start 20:

- Found in 3 of 107 (2.8%) of genes in pham

- Manual Annotations of this start: 3 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mantra_64 (F1), Mova_70 (F1), Totinger_66 (F1),

Start 42:

- Found in 2 of 107 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Belphegor_66 (DE2),

Start 58:

- Found in 4 of 107 (3.7%) of genes in pham
- Manual Annotations of this start: 4 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Majeke_63 (P1), Mangethe_63 (P1), Phegasus_63 (P1), Xeno_59 (N),

Start 61:

- Found in 21 of 107 (19.6%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 14.3% of time when present
- Phage (with cluster) where this start called: ArV1_069 (AR), Colucci_85 (AR), KBurrousTX_81 (AR),

Start 62:

- Found in 3 of 107 (2.8%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Corium_67 (F1), KingJulian_72 (F1),

Start 64:

- Found in 3 of 107 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Dorothy_75 (F1), RedBird_75 (F1),

Start 65:

- Found in 3 of 107 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Awesomesauce_76 (F1), Misha28_75 (F1), TootsiePop_75 (F1),

Start 66:

- Found in 19 of 107 (17.8%) of genes in pham
- Manual Annotations of this start: 19 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueCrab_67 (F1), Boilgate_58 (K8), DRBy19_70 (F1), Daenerys_61 (F1), FreddyB_67 (F1), Harley_68 (F1), JoeyJr_62 (F1), Leperchaun_59 (F1), Martik_66 (F1), MooMoo_65 (singleton), PHappiness_62 (F1), PhesterPotato_66 (F1), Philus_70 (F1), Polka14_65 (F1), Renaud18_76 (F4), RitaG_62 (F1), Royals2015_69 (F1), ShroomBoi_67 (F1), Starceovich_66 (F1),

Start 68:

- Found in 2 of 107 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 50.0% of time when present
- Phage (with cluster) where this start called: ShiLan_65 (F1),

Start 74:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OwlsT2W_66 (F1),

Start 83:

- Found in 3 of 107 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigNuz_55 (P4), Nazo_56 (P4), Wocket_66 (CV),

Start 90:

- Found in 1 of 107 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Polkaroo_53 (P1),

Start 94:

- Found in 3 of 107 (2.8%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: PatoPoderoso_67 (F1),

Start 96:

- Found in 4 of 107 (3.7%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Atcoo_55 (P1), Brushbloom_75 (F1),

Start 97:

- Found in 13 of 107 (12.1%) of genes in pham
- Manual Annotations of this start: 8 of 97
- Called 61.5% of time when present
- Phage (with cluster) where this start called: CactusJack_53 (P1), Gavriela_53 (P1), Glaske_53 (P1), KilKor_53 (P1), Megiddo_53 (P1), Phalm_53 (P1), StressBall_53 (P1), Willsammy_52 (P1),

Start 98:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EleanorGeorge_68 (F1),

Start 106:

- Found in 5 of 107 (4.7%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Bipolar_76 (F1),

Start 125:

- Found in 7 of 107 (6.5%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Bobi_73 (F1),

Start 130:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SG4_70 (F1),

Start 132:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: StAnnes_70 (F1),

Start 133:

- Found in 3 of 107 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Filuzino_74 (F1), Pollywog_67 (F1),

Start 135:

- Found in 2 of 107 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: StellaBean_97 (E), Tarkin_98 (E),

Start 136:

- Found in 5 of 107 (4.7%) of genes in pham
- Manual Annotations of this start: 3 of 97
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Bogg_99 (E), Lilac_101 (E), MISSy_100 (E), Murica_102 (E),

Start 137:

- Found in 8 of 107 (7.5%) of genes in pham
- Manual Annotations of this start: 8 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejack_54 (A1), Briton15_63 (A1), HanShotFirst_60 (A1), Lamina13_61 (A1), Molly_60 (A1), Optimus_142 (J), Tasp14_62 (A1), Violet_57 (A1),

Start 138:

- Found in 3 of 107 (2.8%) of genes in pham
- No Manual Annotations of this start.

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gonephishing_142 (J), Inyanga_54 (A1), Iqorha_54 (A1),

Start 139:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hannaconda_142 (J),

Start 292:

- Found in 2 of 107 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Thespis_55 (P1),

Start 308:

- Found in 2 of 107 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Brusacoram_55 (P1),

Summary by clusters:

There are 14 clusters represented in this pham: F1, singleton, P1, E, P4, F8, DE2, J, N, A1, AR, F4, K8, CV,

Info for manual annotations of cluster A1:

- Start number 137 was manually annotated 7 times for cluster A1.

Info for manual annotations of cluster AR:

- Start number 18 was manually annotated 17 times for cluster AR.
- Start number 61 was manually annotated 2 times for cluster AR.

Info for manual annotations of cluster CV:

- Start number 83 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster DE2:

- Start number 42 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster E:

- Start number 135 was manually annotated 2 times for cluster E.
- Start number 136 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 15 was manually annotated 1 time for cluster F1.
- Start number 16 was manually annotated 1 time for cluster F1.
- Start number 19 was manually annotated 5 times for cluster F1.
- Start number 20 was manually annotated 3 times for cluster F1.
- Start number 62 was manually annotated 1 time for cluster F1.
- Start number 64 was manually annotated 2 times for cluster F1.
- Start number 65 was manually annotated 3 times for cluster F1.
- Start number 66 was manually annotated 16 times for cluster F1.

- Start number 68 was manually annotated 1 time for cluster F1.
- Start number 74 was manually annotated 1 time for cluster F1.
- Start number 96 was manually annotated 1 time for cluster F1.
- Start number 98 was manually annotated 1 time for cluster F1.
- Start number 106 was manually annotated 1 time for cluster F1.
- Start number 125 was manually annotated 1 time for cluster F1.
- Start number 130 was manually annotated 1 time for cluster F1.
- Start number 132 was manually annotated 1 time for cluster F1.
- Start number 133 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F4:

- Start number 66 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster J:

- Start number 137 was manually annotated 1 time for cluster J.
- Start number 139 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K8:

- Start number 66 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster N:

- Start number 58 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:

- Start number 58 was manually annotated 3 times for cluster P1.
- Start number 96 was manually annotated 1 time for cluster P1.
- Start number 97 was manually annotated 8 times for cluster P1.
- Start number 292 was manually annotated 1 time for cluster P1.
- Start number 308 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P4:

- Start number 83 was manually annotated 2 times for cluster P4.

Gene Information:

Gene: Akhila_67 Start: 42333, Stop: 45014, Start Num: 19

Candidate Starts for Akhila_67:

(10, 42243), (11, 42252), (Start: 19 @42333 has 5 MA's), (31, 42393), (39, 42429), (48, 42462), (100, 42663), (112, 42696), (152, 42873), (158, 42897), (168, 42960), (171, 42984), (172, 42987), (173, 43005), (174, 43008), (178, 43107), (181, 43128), (193, 43260), (199, 43341), (204, 43422), (211, 43536), (220, 43593), (227, 43665), (230, 43749), (232, 43767), (235, 43788), (244, 43857), (245, 43875), (248, 43908), (251, 44022), (252, 44028), (254, 44046), (256, 44067), (266, 44109), (270, 44151), (280, 44196), (284, 44208), (302, 44313), (306, 44334), (307, 44343), (309, 44355), (311, 44379), (314, 44421), (342, 44520), (373, 44706), (391, 44808), (394, 44820), (401, 44847),

Gene: Applejack_54 Start: 38217, Stop: 36658, Start Num: 137

Candidate Starts for Applejack_54:

(Start: 137 @38217 has 8 MA's), (160, 38109), (168, 38064), (176, 37980), (208, 37839), (226, 37689), (229, 37611), (246, 37506), (247, 37503), (253, 37401), (255, 37392), (302, 37185), (311, 37119), (362, 36978), (364, 36975), (373, 36921), (381, 36867), (391, 36834), (402, 36792), (405, 36759),

Gene: ArV1_069 Start: 53043, Stop: 54641, Start Num: 61

Candidate Starts for ArV1_069:

(Start: 61 @53043 has 2 MA's), (79, 53115), (95, 53151), (Start: 97 @53157 has 8 MA's), (105, 53175), (111, 53193), (128, 53250), (141, 53286), (145, 53316), (148, 53328), (163, 53391), (177, 53520), (180, 53589), (182, 53616), (195, 53697), (217, 53712), (222, 53727), (231, 53769), (233, 53778), (236, 53796), (240, 53814), (242, 53829), (271, 53913), (290, 53979), (291, 53985), (299, 54039), (303, 54066), (305, 54081), (309, 54105), (311, 54129), (312, 54150), (326, 54213), (337, 54267), (341, 54291), (358, 54405), (386, 54429), (391, 54447), (396, 54468), (408, 54537), (409, 54546), (413, 54588), (418, 54621),

Gene: Atcoo_55 Start: 37344, Stop: 39803, Start Num: 96

Candidate Starts for Atcoo_55:

(63, 37242), (67, 37251), (73, 37278), (Start: 96 @37344 has 2 MA's), (115, 37404), (127, 37443), (134, 37473), (156, 37563), (159, 37590), (170, 37653), (171, 37659), (172, 37662), (173, 37680), (181, 37800), (188, 37842), (218, 37899), (297, 38169), (300, 38208), (325, 38373), (338, 38436), (357, 38568), (367, 38589), (371, 38625), (372, 38631), (377, 38670), (387, 38706), (398, 38739), (403, 38760), (426, 38865), (436, 38940), (444, 39012), (460, 39258), (462, 39276), (464, 39300), (473, 39435), (474, 39465), (476, 39501), (481, 39603), (483, 39660), (485, 39720), (488, 39753), (490, 39762), (491, 39765),

Gene: Awesomesauce_76 Start: 46078, Stop: 48528, Start Num: 65

Candidate Starts for Awesomesauce_76:

(Start: 65 @46078 has 3 MA's), (72, 46108), (79, 46138), (95, 46174), (109, 46207), (165, 46438), (171, 46489), (172, 46492), (181, 46630), (188, 46672), (218, 46729), (297, 46999), (300, 47038), (325, 47203), (338, 47266), (357, 47398), (367, 47419), (371, 47455), (372, 47461), (377, 47500), (387, 47536), (398, 47569), (403, 47590), (452, 47725), (460, 47827), (461, 47830), (464, 47869), (469, 47950), (475, 48061), (476, 48064), (481, 48166), (483, 48223), (489, 48325), (492, 48337), (493, 48346), (495, 48367),

Gene: Belphegor_66 Start: 51910, Stop: 53616, Start Num: 42

Candidate Starts for Belphegor_66:

(40, 51907), (Start: 42 @51910 has 1 MA's), (49, 51937), (57, 51979), (Start: 64 @52006 has 2 MA's), (69, 52027), (73, 52036), (108, 52114), (123, 52165), (144, 52216), (162, 52267), (170, 52312), (180, 52456), (185, 52504), (223, 52600), (234, 52645), (257, 52702), (259, 52714), (302, 52918), (309, 52960), (328, 53080), (341, 53146), (380, 53383), (386, 53398), (391, 53416), (407, 53503), (409, 53515), (417, 53584),

Gene: BigNuz_55 Start: 38221, Stop: 39756, Start Num: 83

Candidate Starts for BigNuz_55:

(17, 37939), (60, 38140), (71, 38182), (Start: 83 @38221 has 3 MA's), (95, 38248), (Start: 97 @38254 has 8 MA's), (108, 38278), (118, 38314), (119, 38317), (128, 38347), (145, 38413), (173, 38563), (181, 38686), (223, 38824), (239, 38896), (302, 39142), (305, 39160), (330, 39250), (333, 39259), (344, 39301), (373, 39466), (378, 39511), (391, 39553), (394, 39565), (402, 39595), (416, 39709),

Gene: Bipolar_76 Start: 46390, Stop: 48396, Start Num: 106

Candidate Starts for Bipolar_76:

(Start: 106 @46390 has 1 MA's), (Start: 133 @46483 has 2 MA's), (140, 46513), (146, 46543), (153, 46579), (160, 46612), (168, 46657), (173, 46699), (174, 46702), (175, 46735), (176, 46741), (181, 46822), (189, 46864), (192, 46879), (203, 46972), (212, 47062), (213, 47074), (228, 47206), (243, 47326), (250, 47449), (267, 47536), (302, 47671), (306, 47692), (307, 47701), (309, 47713), (311, 47737), (341, 47905), (342, 47908), (373, 48088), (376, 48118), (391, 48190), (394, 48202), (396, 48211), (401, 48229), (416, 48346),

Gene: BlueCrab_67 Start: 43881, Stop: 46157, Start Num: 66

Candidate Starts for BlueCrab_67:

(25, 43704), (28, 43710), (30, 43719), (32, 43728), (45, 43767), (56, 43824), (Start: 66 @43881 has 19 MA's), (79, 43938), (109, 44007), (165, 44238), (173, 44310), (181, 44430), (188, 44472), (218, 44529), (297, 44799), (300, 44838), (325, 45003), (338, 45066), (357, 45198), (367, 45219), (371, 45255), (372, 45261), (377, 45300), (387, 45336), (398, 45369), (403, 45390), (455, 45555), (456, 45558), (460, 45642), (464, 45684), (481, 45957), (483, 46014), (485, 46074), (488, 46107), (490, 46116), (491, 46119),

Gene: Bobi_73 Start: 44682, Stop: 46739, Start Num: 125

Candidate Starts for Bobi_73:

(Start: 125 @44682 has 1 MA's), (Start: 136 @44721 has 3 MA's), (144, 44751), (153, 44787), (160, 44820), (168, 44865), (178, 45009), (181, 45030), (193, 45162), (199, 45243), (204, 45324), (211, 45438), (220, 45495), (227, 45567), (230, 45651), (235, 45690), (244, 45759), (248, 45810), (249, 45843), (251, 45924), (252, 45930), (254, 45948), (256, 45969), (270, 46053), (281, 46095), (302, 46218), (306, 46239), (307, 46248), (309, 46260), (311, 46284), (312, 46305), (315, 46338), (332, 46383), (334, 46395), (341, 46434), (342, 46437), (357, 46539), (373, 46596), (379, 46656), (389, 46689), (392, 46698), (393, 46701),

Gene: Bogg_99 Start: 57890, Stop: 59740, Start Num: 136

Candidate Starts for Bogg_99:

(91, 57743), (104, 57773), (117, 57821), (120, 57836), (Start: 125 @57848 has 1 MA's), (Start: 136 @57890 has 3 MA's), (142, 57908), (160, 58004), (168, 58049), (176, 58133), (196, 58256), (206, 58343), (207, 58349), (212, 58436), (213, 58448), (228, 58580), (243, 58700), (250, 58823), (267, 58910), (302, 59045), (307, 59075), (309, 59087), (341, 59270), (342, 59273), (391, 59561), (402, 59603), (405, 59636), (408, 59651),

Gene: Boilgate_58 Start: 41641, Stop: 43257, Start Num: 66

Candidate Starts for Boilgate_58:

(46, 41533), (52, 41566), (Start: 66 @41641 has 19 MA's), (72, 41668), (79, 41698), (109, 41767), (151, 41941), (164, 41992), (165, 41998), (174, 42073), (181, 42193), (237, 42400), (238, 42403), (266, 42451), (268, 42469), (302, 42622), (305, 42640), (307, 42655), (312, 42712), (348, 42904), (391, 43054), (402, 43096), (409, 43153), (417, 43222), (422, 43246),

Gene: Briton15_63 Start: 42021, Stop: 40291, Start Num: 137

Candidate Starts for Briton15_63:

(Start: 137 @42021 has 8 MA's), (160, 41913), (168, 41868), (176, 41784), (208, 41643), (226, 41493), (229, 41415), (246, 41310), (247, 41307), (253, 41205), (255, 41196), (307, 40959), (311, 40923), (319, 40860), (341, 40758), (342, 40755), (353, 40677), (373, 40569), (383, 40497), (386, 40485), (388, 40476), (391, 40467), (396, 40446), (401, 40428),

Gene: Brusacoram_55 Start: 36850, Stop: 38346, Start Num: 308

Candidate Starts for Brusacoram_55:

(Start: 292 @36748 has 1 MA's), (294, 36757), (298, 36784), (Start: 308 @36850 has 1 MA's), (313, 36910), (319, 36949), (327, 36979), (340, 37036), (355, 37123), (374, 37201), (384, 37246), (426, 37408), (436, 37483), (444, 37555), (460, 37801), (462, 37819), (464, 37843), (473, 37978), (474, 38008), (476, 38044), (481, 38146), (483, 38203), (485, 38263), (488, 38296), (490, 38305), (491, 38308),

Gene: Brushbloom_75 Start: 46445, Stop: 47815, Start Num: 96

Candidate Starts for Brushbloom_75:

(63, 46343), (67, 46352), (Start: 96 @46445 has 2 MA's), (110, 46481), (115, 46505), (126, 46541), (134, 46574), (154, 46658), (169, 46733), (176, 46814), (181, 46895), (219, 46994), (260, 47111), (283, 47213), (302, 47300), (306, 47321), (307, 47330), (311, 47366), (338, 47510), (339, 47513), (354, 47615), (368, 47672), (375, 47729), (382, 47765),

Gene: CactusJack_53 Start: 36390, Stop: 38582, Start Num: 97

Candidate Starts for CactusJack_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (172, 36705), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (300, 37251), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (467, 38145), (468, 38151), (471, 38181), (472, 38187), (476, 38253), (483, 38439), (485, 38499), (488, 38532), (490, 38541), (491, 38544),

Gene: Chipper1996_830 Start: 54205, Stop: 56127, Start Num: 18

Candidate Starts for Chipper1996_830:

(Start: 18 @54205 has 17 MA's), (33, 54277), (Start: 61 @54409 has 2 MA's), (79, 54481), (95, 54517), (105, 54541), (111, 54559), (128, 54616), (141, 54652), (145, 54682), (148, 54694), (177, 54886), (180, 54955), (182, 54982), (195, 55063), (217, 55078), (222, 55093), (233, 55144), (236, 55162), (242, 55195), (271, 55279), (275, 55306), (290, 55345), (291, 55351), (299, 55405), (301, 55426), (302, 55429), (303, 55432), (305, 55447), (311, 55495), (312, 55516), (326, 55579), (331, 55603), (335, 55621), (336, 55630), (341, 55657), (365, 55792), (369, 55810), (377, 55879), (383, 55903), (386, 55915), (388, 55924), (391, 55933), (408, 56023), (409, 56032), (418, 56107), (420, 56113),

Gene: Chocolat_82 Start: 53912, Stop: 55834, Start Num: 18

Candidate Starts for Chocolat_82:

(Start: 18 @53912 has 17 MA's), (33, 53984), (Start: 61 @54116 has 2 MA's), (79, 54188), (95, 54224), (105, 54248), (111, 54266), (128, 54323), (141, 54359), (145, 54389), (148, 54401), (177, 54593), (180, 54662), (182, 54689), (195, 54770), (217, 54785), (222, 54800), (233, 54851), (236, 54869), (242, 54902), (271, 54986), (275, 55013), (290, 55052), (291, 55058), (299, 55112), (301, 55133), (302, 55136), (303, 55139), (305, 55154), (311, 55202), (312, 55223), (326, 55286), (331, 55310), (335, 55328), (336, 55337), (341, 55364), (365, 55499), (369, 55517), (377, 55586), (383, 55610), (386, 55622), (388, 55631), (391, 55640), (408, 55730), (409, 55739), (418, 55814), (420, 55820),

Gene: Chubster_83 Start: 54594, Stop: 56483, Start Num: 18

Candidate Starts for Chubster_83:

(Start: 18 @54594 has 17 MA's), (33, 54666), (Start: 61 @54798 has 2 MA's), (79, 54837), (95, 54873), (105, 54897), (111, 54915), (128, 54972), (141, 55008), (145, 55038), (148, 55050), (177, 55242), (182, 55338), (195, 55419), (217, 55434), (222, 55449), (233, 55500), (236, 55518), (242, 55551), (271, 55635), (290, 55701), (291, 55707), (299, 55761), (301, 55782), (302, 55785), (303, 55788), (305, 55803), (311, 55851), (312, 55872), (326, 55935), (331, 55959), (335, 55977), (336, 55986), (341, 56013), (365, 56148), (369, 56166), (377, 56235), (383, 56259), (386, 56271), (388, 56280), (391, 56289), (407, 56376), (408, 56379), (409, 56388), (418, 56463), (420, 56469),

Gene: Colucci_85 Start: 54914, Stop: 56491, Start Num: 61

Candidate Starts for Colucci_85:

(Start: 61 @54914 has 2 MA's), (95, 55001), (Start: 97 @55007 has 8 MA's), (105, 55025), (128, 55100), (141, 55136), (145, 55166), (180, 55439), (182, 55466), (195, 55547), (217, 55562), (222, 55577), (231, 55619), (233, 55628), (236, 55646), (242, 55679), (290, 55829), (291, 55835), (299, 55889), (303, 55916), (305, 55931), (311, 55979), (312, 56000), (318, 56036), (326, 56063), (337, 56117), (341, 56141), (358, 56255), (383, 56267), (391, 56297), (408, 56387), (409, 56396), (418, 56471),

Gene: Conboy_80 Start: 53694, Stop: 55583, Start Num: 18

Candidate Starts for Conboy_80:

(Start: 18 @53694 has 17 MA's), (33, 53766), (Start: 61 @53898 has 2 MA's), (79, 53937), (95, 53973), (105, 53997), (111, 54015), (128, 54072), (141, 54108), (145, 54138), (148, 54150), (177, 54342), (180, 54411), (182, 54438), (195, 54519), (217, 54534), (222, 54549), (233, 54600), (236, 54618), (242, 54651), (271, 54735), (290, 54801), (291, 54807), (299, 54861), (301, 54882), (302, 54885), (303, 54888), (305, 54903), (311, 54951), (312, 54972), (326, 55035), (331, 55059), (335, 55077), (336, 55086), (341, 55113), (365, 55248), (369, 55266), (377, 55335), (383, 55359), (386, 55371), (388, 55380), (391, 55389), (408, 55479), (409, 55488), (418, 55563), (420, 55569),

Gene: Corium_67 Start: 44493, Stop: 46790, Start Num: 62

Candidate Starts for Corium_67:

(46, 44409), (47, 44421), (Start: 62 @44493 has 1 MA's), (94, 44592), (109, 44622), (115, 44652), (126, 44688), (134, 44721), (156, 44811), (159, 44838), (170, 44901), (171, 44907), (173, 44928), (181, 45048), (188, 45090), (218, 45147), (297, 45417), (325, 45621), (338, 45684), (357, 45816), (367, 45837), (371, 45873), (372, 45879), (377, 45918), (387, 45954), (398, 45987), (403, 46008), (408, 46050), (435, 46092), (445, 46128), (460, 46251), (462, 46269), (464, 46293), (477, 46530), (482, 46593), (483, 46647), (485, 46707), (488, 46740), (490, 46749), (491, 46752),

Gene: DRBy19_70 Start: 44260, Stop: 46806, Start Num: 66

Candidate Starts for DRBy19_70:

(25, 44083), (28, 44089), (30, 44098), (32, 44107), (56, 44203), (Start: 66 @44260 has 19 MA's), (79, 44317), (95, 44353), (105, 44377), (109, 44386), (165, 44617), (171, 44668), (172, 44671), (181, 44809), (188, 44851), (218, 44908), (297, 45178), (300, 45217), (325, 45382), (338, 45445), (357, 45577), (367, 45598), (371, 45634), (372, 45640), (377, 45679), (387, 45715), (398, 45748), (403, 45769), (440, 45961), (442, 46009), (446, 46045), (453, 46135), (454, 46153), (460, 46276), (462, 46294), (463, 46306), (464, 46318), (466, 46363), (470, 46411), (481, 46606), (483, 46663), (485, 46723), (488, 46756), (490, 46765), (491, 46768),

Gene: Daenerys_61 Start: 41682, Stop: 43196, Start Num: 66

Candidate Starts for Daenerys_61:

(25, 41505), (Start: 66 @41682 has 19 MA's), (79, 41739), (95, 41775), (109, 41808), (166, 42030), (171, 42072), (179, 42198), (181, 42216), (190, 42276), (215, 42318), (221, 42330), (257, 42423), (264, 42447), (273, 42507), (302, 42630), (306, 42651), (307, 42660), (316, 42753), (351, 42933), (373, 43053), (385, 43113), (395, 43146), (398, 43155), (399, 43158),

Gene: Dorothy_75 Start: 45729, Stop: 48410, Start Num: 64

Candidate Starts for Dorothy_75:

(Start: 64 @45729 has 2 MA's), (76, 45768), (80, 45798), (92, 45834), (107, 45867), (165, 46098), (170, 46143), (171, 46149), (172, 46152), (173, 46170), (174, 46173), (178, 46272), (181, 46293), (193, 46425), (199, 46506), (204, 46587), (211, 46701), (220, 46758), (227, 46830), (230, 46914), (235, 46953), (244, 47022), (248, 47073), (251, 47187), (252, 47193), (254, 47211), (256, 47232), (269, 47379), (272, 47415), (286, 47484), (293, 47532), (295, 47565), (296, 47592), (302, 47685), (306, 47706), (307, 47715), (311, 47751), (329, 47853), (341, 47916), (342, 47919), (353, 47997), (373, 48105), (391, 48207), (394, 48219), (396, 48228), (401, 48246), (416, 48363),

Gene: DrYang_79 Start: 54332, Stop: 56248, Start Num: 18

Candidate Starts for DrYang_79:

(Start: 18 @54332 has 17 MA's), (33, 54404), (54, 54491), (Start: 61 @54536 has 2 MA's), (79, 54602), (95, 54638), (105, 54662), (108, 54668), (118, 54704), (128, 54737), (141, 54773), (145, 54803), (177, 55007), (180, 55076), (182, 55103), (195, 55184), (217, 55199), (222, 55214), (231, 55256), (233, 55265), (240, 55301), (242, 55316), (290, 55466), (291, 55472), (299, 55526), (301, 55547), (302,

55550), (303, 55553), (305, 55568), (310, 55595), (311, 55616), (312, 55637), (326, 55700), (331, 55724), (341, 55778), (350, 55847), (369, 55931), (377, 56000), (380, 56021), (386, 56036), (388, 56045), (391, 56054), (396, 56075), (402, 56096), (408, 56144), (409, 56153), (418, 56228),

Gene: EdgarPoe_81 Start: 54069, Stop: 55991, Start Num: 18

Candidate Starts for EdgarPoe_81:

(Start: 18 @54069 has 17 MA's), (33, 54141), (Start: 61 @54273 has 2 MA's), (79, 54345), (95, 54381), (105, 54405), (111, 54423), (128, 54480), (141, 54516), (145, 54546), (148, 54558), (177, 54750), (180, 54819), (182, 54846), (195, 54927), (217, 54942), (222, 54957), (233, 55008), (236, 55026), (242, 55059), (271, 55143), (275, 55170), (290, 55209), (291, 55215), (299, 55269), (301, 55290), (302, 55293), (303, 55296), (305, 55311), (311, 55359), (312, 55380), (326, 55443), (331, 55467), (335, 55485), (336, 55494), (341, 55521), (365, 55656), (369, 55674), (377, 55743), (383, 55767), (386, 55779), (388, 55788), (391, 55797), (408, 55887), (409, 55896), (418, 55971), (420, 55977),

Gene: EleanorGeorge_68 Start: 43670, Stop: 44953, Start Num: 98

Candidate Starts for EleanorGeorge_68:

(Start: 98 @43670 has 1 MA's), (110, 43703), (115, 43727), (134, 43796), (171, 43979), (172, 43982), (173, 44000), (174, 44003), (219, 44222), (260, 44339), (283, 44441), (302, 44528), (307, 44558), (354, 44753), (368, 44810), (375, 44867), (382, 44903),

Gene: Filuzino_74 Start: 46234, Stop: 48309, Start Num: 133

Candidate Starts for Filuzino_74:

(82, 46084), (86, 46099), (102, 46135), (Start: 133 @46234 has 2 MA's), (140, 46264), (146, 46294), (153, 46330), (160, 46363), (168, 46408), (173, 46450), (174, 46453), (179, 46555), (183, 46603), (186, 46657), (191, 46696), (198, 46771), (200, 46783), (203, 46828), (205, 46873), (212, 46978), (213, 46990), (228, 47122), (250, 47365), (267, 47452), (302, 47587), (306, 47608), (307, 47617), (311, 47653), (329, 47755), (341, 47818), (342, 47821), (349, 47884), (373, 48001), (391, 48103), (394, 48115), (401, 48142), (416, 48259),

Gene: FreddyB_67 Start: 41676, Stop: 43952, Start Num: 66

Candidate Starts for FreddyB_67:

(25, 41499), (28, 41505), (30, 41514), (32, 41523), (45, 41562), (56, 41619), (Start: 66 @41676 has 19 MA's), (79, 41733), (109, 41802), (165, 42033), (173, 42105), (181, 42225), (188, 42267), (218, 42324), (297, 42594), (300, 42633), (325, 42798), (338, 42861), (357, 42993), (367, 43014), (371, 43050), (372, 43056), (377, 43095), (387, 43131), (398, 43164), (403, 43185), (455, 43350), (456, 43353), (460, 43437), (464, 43479), (481, 43752), (483, 43809), (485, 43869), (488, 43902), (490, 43911), (491, 43914),

Gene: Gavriela_53 Start: 36390, Stop: 38582, Start Num: 97

Candidate Starts for Gavriela_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (172, 36705), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (300, 37251), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (467, 38145), (468, 38151), (471, 38181), (472, 38187), (476, 38253), (483, 38439), (485, 38499), (488, 38532), (490, 38541), (491, 38544),

Gene: Glaske_53 Start: 36390, Stop: 38582, Start Num: 97

Candidate Starts for Glaske_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (172, 36705), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (300, 37251), (325, 37416),

(338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (467, 38145), (468, 38151), (471, 38181), (472, 38187), (476, 38253), (483, 38439), (485, 38499), (488, 38532), (490, 38541), (491, 38544),

Gene: Gonephishing_142 Start: 76140, Stop: 77969, Start Num: 138

Candidate Starts for Gonephishing_142:

(138, 76140), (160, 76248), (168, 76293), (175, 76371), (176, 76377), (196, 76500), (212, 76662), (213, 76674), (228, 76806), (250, 77049), (267, 77136), (302, 77271), (306, 77292), (307, 77301), (311, 77337), (329, 77439), (341, 77502), (342, 77505), (386, 77775), (388, 77784), (391, 77793), (396, 77814), (401, 77832), (405, 77868),

Gene: HanShotFirst_60 Start: 41970, Stop: 40321, Start Num: 137

Candidate Starts for HanShotFirst_60:

(Start: 137 @41970 has 8 MA's), (160, 41862), (168, 41817), (176, 41733), (208, 41592), (226, 41442), (229, 41364), (246, 41259), (247, 41256), (253, 41154), (255, 41145), (302, 40938), (307, 40908), (311, 40872), (342, 40785), (386, 40515), (388, 40506), (391, 40497), (396, 40476), (401, 40458), (405, 40422),

Gene: Hannaconda_142 Start: 76662, Stop: 78896, Start Num: 139

Candidate Starts for Hannaconda_142:

(Start: 139 @76662 has 1 MA's), (160, 76770), (168, 76815), (175, 76893), (176, 76899), (181, 76977), (188, 77019), (218, 77076), (297, 77346), (325, 77550), (338, 77613), (357, 77745), (367, 77766), (371, 77802), (372, 77808), (377, 77847), (387, 77883), (398, 77916), (403, 77937), (412, 78021), (413, 78030), (460, 78231), (463, 78261), (465, 78297), (475, 78438), (476, 78441), (479, 78558), (486, 78690), (487, 78702), (488, 78711), (489, 78720), (493, 78741), (494, 78759), (496, 78795),

Gene: Harley_68 Start: 43294, Stop: 44805, Start Num: 66

Candidate Starts for Harley_68:

(24, 43117), (27, 43123), (30, 43132), (Start: 66 @43294 has 19 MA's), (79, 43351), (95, 43387), (109, 43420), (166, 43642), (171, 43684), (179, 43810), (181, 43828), (190, 43888), (215, 43930), (221, 43942), (257, 44035), (264, 44059), (273, 44119), (302, 44242), (306, 44263), (307, 44272), (311, 44308), (329, 44410), (341, 44473), (342, 44476), (373, 44662), (385, 44722), (395, 44755), (398, 44764), (399, 44767),

Gene: Hegedechwinu_73 Start: 43329, Stop: 44918, Start Num: 16

Candidate Starts for Hegedechwinu_73:

(Start: 16 @43329 has 1 MA's), (22, 43368), (31, 43398), (39, 43434), (48, 43467), (100, 43668), (112, 43701), (152, 43878), (158, 43902), (168, 43965), (171, 43989), (172, 43992), (283, 44226), (302, 44328), (306, 44349), (307, 44358), (311, 44394), (363, 44553), (373, 44610), (391, 44712), (394, 44724), (396, 44733), (402, 44754), (416, 44868),

Gene: HumptyDumpty_82 Start: 53872, Stop: 55794, Start Num: 18

Candidate Starts for HumptyDumpty_82:

(Start: 18 @53872 has 17 MA's), (33, 53944), (Start: 61 @54076 has 2 MA's), (79, 54148), (95, 54184), (105, 54208), (111, 54226), (128, 54283), (141, 54319), (145, 54349), (148, 54361), (177, 54553), (180, 54622), (182, 54649), (195, 54730), (217, 54745), (222, 54760), (233, 54811), (236, 54829), (242, 54862), (271, 54946), (275, 54973), (290, 55012), (291, 55018), (299, 55072), (301, 55093), (302, 55096), (303, 55099), (305, 55114), (311, 55162), (312, 55183), (326, 55246), (331, 55270), (335, 55288), (336, 55297), (341, 55324), (365, 55459), (369, 55477), (377, 55546), (383, 55570), (386, 55582), (388, 55591), (391, 55600), (408, 55690), (409, 55699), (418, 55774), (420, 55780),

Gene: Inyanga_54 Start: 39801, Stop: 38044, Start Num: 138

Candidate Starts for Inyanga_54:

(138, 39801), (160, 39693), (168, 39648), (176, 39564), (196, 39441), (197, 39429), (202, 39384), (212, 39267), (213, 39255), (228, 39123), (250, 38880), (267, 38793), (302, 38658), (307, 38628), (311, 38592), (342, 38505), (373, 38322), (386, 38238), (388, 38229), (391, 38220), (396, 38199), (401, 38181), (405, 38145),

Gene: Iqorha_54 Start: 39800, Stop: 38043, Start Num: 138

Candidate Starts for Iqorha_54:

(138, 39800), (160, 39692), (168, 39647), (176, 39563), (196, 39440), (197, 39428), (202, 39383), (212, 39266), (213, 39254), (228, 39122), (250, 38879), (267, 38792), (302, 38657), (307, 38627), (311, 38591), (342, 38504), (373, 38321), (386, 38237), (388, 38228), (391, 38219), (396, 38198), (401, 38180), (405, 38144),

Gene: JaNo_81 Start: 53843, Stop: 55765, Start Num: 18

Candidate Starts for JaNo_81:

(Start: 18 @53843 has 17 MA's), (33, 53915), (Start: 61 @54047 has 2 MA's), (79, 54119), (95, 54155), (105, 54179), (111, 54197), (128, 54254), (141, 54290), (145, 54320), (148, 54332), (177, 54524), (180, 54593), (182, 54620), (195, 54701), (217, 54716), (222, 54731), (233, 54782), (236, 54800), (242, 54833), (271, 54917), (275, 54944), (290, 54983), (291, 54989), (299, 55043), (301, 55064), (302, 55067), (303, 55070), (305, 55085), (311, 55133), (312, 55154), (326, 55217), (331, 55241), (335, 55259), (336, 55268), (341, 55295), (365, 55430), (369, 55448), (377, 55517), (383, 55541), (386, 55553), (388, 55562), (391, 55571), (408, 55661), (409, 55670), (418, 55745), (420, 55751),

Gene: JayCookie_82 Start: 54405, Stop: 56327, Start Num: 18

Candidate Starts for JayCookie_82:

(Start: 18 @54405 has 17 MA's), (33, 54477), (Start: 61 @54609 has 2 MA's), (79, 54681), (95, 54717), (105, 54741), (111, 54759), (128, 54816), (141, 54852), (145, 54882), (148, 54894), (177, 55086), (180, 55155), (182, 55182), (195, 55263), (217, 55278), (222, 55293), (233, 55344), (236, 55362), (242, 55395), (271, 55479), (290, 55545), (291, 55551), (299, 55605), (301, 55626), (302, 55629), (303, 55632), (305, 55647), (311, 55695), (312, 55716), (326, 55779), (331, 55803), (335, 55821), (336, 55830), (341, 55857), (365, 55992), (369, 56010), (377, 56079), (383, 56103), (386, 56115), (388, 56124), (391, 56133), (408, 56223), (409, 56232), (418, 56307), (420, 56313),

Gene: JoeyJr_62 Start: 41850, Stop: 43364, Start Num: 66

Candidate Starts for JoeyJr_62:

(25, 41673), (Start: 66 @41850 has 19 MA's), (79, 41907), (95, 41943), (109, 41976), (166, 42198), (171, 42240), (179, 42366), (181, 42384), (190, 42444), (215, 42486), (221, 42498), (257, 42591), (264, 42615), (273, 42675), (302, 42798), (306, 42819), (307, 42828), (316, 42921), (351, 43101), (373, 43221), (385, 43281), (395, 43314), (398, 43323), (399, 43326),

Gene: KBurrousTX_81 Start: 56110, Stop: 57699, Start Num: 61

Candidate Starts for KBurrousTX_81:

(55, 56071), (Start: 61 @56110 has 2 MA's), (79, 56176), (95, 56212), (Start: 97 @56218 has 8 MA's), (105, 56236), (128, 56311), (141, 56347), (145, 56377), (177, 56581), (180, 56650), (182, 56677), (195, 56758), (217, 56773), (222, 56788), (231, 56830), (233, 56839), (236, 56857), (240, 56875), (242, 56890), (290, 57040), (291, 57046), (299, 57100), (302, 57124), (305, 57142), (310, 57169), (311, 57190), (312, 57211), (320, 57256), (326, 57274), (337, 57331), (341, 57355), (343, 57361), (346, 57382), (386, 57493), (391, 57511), (396, 57532), (408, 57601), (409, 57610), (411, 57625), (418, 57685), (420, 57691),

Gene: Kabreeze_82 Start: 53929, Stop: 55851, Start Num: 18

Candidate Starts for Kabreeze_82:

(Start: 18 @53929 has 17 MA's), (33, 54001), (Start: 61 @54133 has 2 MA's), (79, 54205), (95, 54241), (105, 54265), (111, 54283), (128, 54340), (141, 54376), (145, 54406), (148, 54418), (177, 54610), (180, 54679), (182, 54706), (195, 54787), (217, 54802), (222, 54817), (233, 54868), (236, 54886), (242, 54919), (271, 55003), (275, 55030), (290, 55069), (291, 55075), (299, 55129), (301, 55150), (302, 55153), (303, 55156), (305, 55171), (311, 55219), (312, 55240), (326, 55303), (331, 55327), (335, 55345), (336, 55354), (341, 55381), (365, 55516), (369, 55534), (377, 55603), (383, 55627), (386, 55639), (388, 55648), (391, 55657), (408, 55747), (409, 55756), (418, 55831), (420, 55837),

Gene: Kersh_68 Start: 45094, Stop: 47070, Start Num: 15

Candidate Starts for Kersh_68:

(6, 44980), (Start: 15 @45094 has 1 MA's), (21, 45151), (23, 45163), (41, 45220), (70, 45361), (77, 45391), (81, 45406), (101, 45454), (116, 45505), (134, 45568), (147, 45616), (149, 45631), (150, 45640), (157, 45655), (161, 45679), (170, 45736), (171, 45742), (172, 45745), (173, 45763), (174, 45766), (224, 46036), (237, 46084), (257, 46120), (273, 46210), (278, 46228), (302, 46351), (305, 46369), (307, 46381), (309, 46393), (329, 46519), (341, 46582), (342, 46585), (373, 46765), (376, 46795), (397, 46867), (400, 46879), (404, 46909),

Gene: KilKor_53 Start: 36390, Stop: 38570, Start Num: 97

Candidate Starts for KilKor_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (408, 37845), (460, 38052), (463, 38082), (464, 38094), (476, 38268), (480, 38370), (483, 38427), (484, 38472), (485, 38487), (488, 38520), (490, 38529), (491, 38532),

Gene: KingJulian_72 Start: 44493, Stop: 46790, Start Num: 62

Candidate Starts for KingJulian_72:

(46, 44409), (47, 44421), (Start: 62 @44493 has 1 MA's), (94, 44592), (109, 44622), (115, 44652), (126, 44688), (134, 44721), (156, 44811), (159, 44838), (170, 44901), (171, 44907), (173, 44928), (181, 45048), (188, 45090), (218, 45147), (297, 45417), (325, 45621), (338, 45684), (357, 45816), (367, 45837), (371, 45873), (372, 45879), (377, 45918), (387, 45954), (398, 45987), (403, 46008), (408, 46050), (435, 46092), (445, 46128), (460, 46251), (462, 46269), (464, 46293), (477, 46530), (482, 46593), (483, 46647), (485, 46707), (488, 46740), (490, 46749), (491, 46752),

Gene: Lamina13_61 Start: 41357, Stop: 39765, Start Num: 137

Candidate Starts for Lamina13_61:

(Start: 137 @41357 has 8 MA's), (160, 41249), (168, 41204), (176, 41120), (208, 40979), (226, 40829), (229, 40751), (246, 40646), (247, 40643), (253, 40541), (255, 40532), (302, 40325), (307, 40295), (312, 40238), (363, 40100), (366, 40097), (373, 40043), (386, 39959), (388, 39950), (391, 39941), (396, 39920), (401, 39902), (405, 39866),

Gene: Leperchaun_59 Start: 41080, Stop: 42594, Start Num: 66

Candidate Starts for Leperchaun_59:

(25, 40903), (Start: 66 @41080 has 19 MA's), (79, 41137), (95, 41173), (109, 41206), (166, 41428), (171, 41470), (179, 41596), (181, 41614), (190, 41674), (215, 41716), (221, 41728), (257, 41821), (264, 41845), (273, 41905), (302, 42028), (306, 42049), (307, 42058), (316, 42151), (351, 42331), (373, 42451), (385, 42511), (395, 42544), (398, 42553), (399, 42556),

Gene: Lilac_101 Start: 58401, Stop: 60605, Start Num: 136

Candidate Starts for Lilac_101:

(91, 58254), (104, 58284), (117, 58332), (120, 58347), (Start: 125 @58359 has 1 MA's), (Start: 136 @58401 has 3 MA's), (142, 58419), (160, 58515), (168, 58560), (176, 58644), (178, 58704), (181,

58725), (193, 58857), (199, 58938), (204, 59019), (211, 59133), (220, 59190), (227, 59262), (230, 59346), (235, 59385), (244, 59454), (248, 59505), (249, 59538), (251, 59619), (252, 59625), (254, 59643), (256, 59664), (270, 59748), (282, 59793), (290, 59805), (302, 59910), (303, 59913), (309, 59952), (317, 60039), (341, 60141), (342, 60144), (352, 60207), (391, 60426), (402, 60468), (405, 60501), (408, 60516),

Gene: Linus_82 Start: 54377, Stop: 56299, Start Num: 18

Candidate Starts for Linus_82:

(Start: 18 @54377 has 17 MA's), (33, 54449), (Start: 61 @54581 has 2 MA's), (79, 54653), (95, 54689), (105, 54713), (111, 54731), (128, 54788), (141, 54824), (145, 54854), (148, 54866), (177, 55058), (180, 55127), (182, 55154), (195, 55235), (217, 55250), (222, 55265), (233, 55316), (236, 55334), (242, 55367), (271, 55451), (290, 55517), (291, 55523), (299, 55577), (301, 55598), (302, 55601), (303, 55604), (305, 55619), (311, 55667), (312, 55688), (326, 55751), (331, 55775), (335, 55793), (336, 55802), (341, 55829), (365, 55964), (369, 55982), (377, 56051), (383, 56075), (386, 56087), (388, 56096), (391, 56105), (408, 56195), (409, 56204), (418, 56279), (420, 56285),

Gene: Lymara_79 Start: 53015, Stop: 54817, Start Num: 18

Candidate Starts for Lymara_79:

(Start: 18 @53015 has 17 MA's), (54, 53174), (Start: 61 @53219 has 2 MA's), (78, 53285), (79, 53291), (95, 53327), (105, 53351), (111, 53369), (128, 53426), (141, 53462), (145, 53492), (148, 53504), (163, 53567), (177, 53696), (180, 53765), (182, 53792), (195, 53873), (217, 53888), (222, 53903), (233, 53954), (236, 53972), (242, 54005), (271, 54089), (275, 54116), (290, 54155), (291, 54161), (299, 54215), (301, 54236), (303, 54242), (305, 54257), (309, 54281), (311, 54305), (312, 54326), (326, 54389), (331, 54413), (341, 54467), (386, 54605), (391, 54623), (408, 54713), (409, 54722), (413, 54764), (418, 54797),

Gene: MISSy_100 Start: 58583, Stop: 60391, Start Num: 136

Candidate Starts for MISSy_100:

(91, 58436), (104, 58466), (117, 58514), (120, 58529), (Start: 125 @58541 has 1 MA's), (Start: 136 @58583 has 3 MA's), (142, 58601), (160, 58697), (168, 58742), (176, 58826), (196, 58949), (206, 59036), (207, 59042), (212, 59129), (213, 59141), (228, 59273), (250, 59516), (267, 59603), (307, 59768), (309, 59780), (360, 60053), (391, 60212), (402, 60254), (405, 60287), (408, 60302),

Gene: Majeke_63 Start: 39197, Stop: 40675, Start Num: 58

Candidate Starts for Majeke_63:

(50, 39146), (53, 39161), (Start: 58 @39197 has 4 MA's), (84, 39290), (89, 39308), (Start: 106 @39344 has 1 MA's), (113, 39368), (126, 39404), (134, 39437), (155, 39527), (170, 39596), (171, 39602), (172, 39605), (173, 39623), (174, 39626), (285, 39869), (290, 39872), (302, 39956), (307, 39986), (309, 39998), (317, 40085), (341, 40187), (342, 40190), (349, 40253), (373, 40367), (391, 40469), (394, 40481), (401, 40508), (416, 40625),

Gene: Mangethe_63 Start: 39197, Stop: 40675, Start Num: 58

Candidate Starts for Mangethe_63:

(50, 39146), (53, 39161), (Start: 58 @39197 has 4 MA's), (84, 39290), (89, 39308), (Start: 106 @39344 has 1 MA's), (113, 39368), (126, 39404), (134, 39437), (155, 39527), (170, 39596), (171, 39602), (172, 39605), (173, 39623), (174, 39626), (285, 39869), (290, 39872), (302, 39956), (307, 39986), (309, 39998), (317, 40085), (341, 40187), (342, 40190), (349, 40253), (373, 40367), (391, 40469), (394, 40481), (401, 40508), (416, 40625),

Gene: Mantra_64 Start: 42536, Stop: 44860, Start Num: 20

Candidate Starts for Mantra_64:

(14, 42488), (Start: 20 @42536 has 3 MA's), (31, 42593), (48, 42662), (100, 42863), (112, 42896), (152, 43073), (158, 43097), (168, 43160), (170, 43178), (171, 43184), (173, 43205), (181, 43328),

(209, 43532), (234, 43826), (261, 43922), (274, 44003), (276, 44009), (289, 44042), (302, 44141), (306, 44162), (307, 44171), (311, 44207), (327, 44309), (341, 44372), (342, 44375), (373, 44555), (390, 44654), (391, 44657), (394, 44669), (396, 44678), (402, 44699), (423, 44852),

Gene: Martik_66 Start: 42749, Stop: 45055, Start Num: 66

Candidate Starts for Martik_66:

(Start: 66 @42749 has 19 MA's), (79, 42806), (85, 42818), (Start: 96 @42845 has 2 MA's), (109, 42875), (165, 43106), (171, 43157), (172, 43160), (176, 43220), (181, 43298), (188, 43340), (218, 43397), (297, 43667), (325, 43871), (338, 43934), (357, 44066), (367, 44087), (371, 44123), (372, 44129), (377, 44168), (387, 44204), (398, 44237), (403, 44258), (455, 44423), (456, 44426), (460, 44510), (464, 44552), (473, 44687), (474, 44717), (476, 44753), (481, 44855), (483, 44912), (485, 44972), (488, 45005), (490, 45014), (491, 45017),

Gene: Megiddo_53 Start: 36390, Stop: 38585, Start Num: 97

Candidate Starts for Megiddo_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (408, 37845), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (477, 38325), (482, 38388), (483, 38442), (485, 38502), (488, 38535), (490, 38544), (491, 38547),

Gene: MilanaBonita_66 Start: 42333, Stop: 45014, Start Num: 19

Candidate Starts for MilanaBonita_66:

(10, 42243), (11, 42252), (Start: 19 @42333 has 5 MA's), (31, 42393), (39, 42429), (48, 42462), (100, 42663), (112, 42696), (152, 42873), (158, 42897), (168, 42960), (171, 42984), (172, 42987), (173, 43005), (174, 43008), (178, 43107), (181, 43128), (193, 43260), (199, 43341), (204, 43422), (211, 43536), (220, 43593), (227, 43665), (230, 43749), (232, 43767), (235, 43788), (244, 43857), (245, 43875), (248, 43908), (251, 44022), (252, 44028), (254, 44046), (256, 44067), (266, 44109), (270, 44151), (280, 44196), (284, 44208), (302, 44313), (306, 44334), (307, 44343), (309, 44355), (311, 44379), (314, 44421), (342, 44520), (373, 44706), (391, 44808), (394, 44820), (401, 44847),

Gene: Misha28_75 Start: 46524, Stop: 48974, Start Num: 65

Candidate Starts for Misha28_75:

(38, 46422), (44, 46431), (48, 46458), (Start: 65 @46524 has 3 MA's), (75, 46560), (79, 46584), (95, 46620), (109, 46653), (165, 46884), (171, 46935), (172, 46938), (181, 47076), (188, 47118), (218, 47175), (297, 47445), (300, 47484), (325, 47649), (338, 47712), (357, 47844), (367, 47865), (371, 47901), (372, 47907), (377, 47946), (387, 47982), (398, 48015), (403, 48036), (452, 48171), (460, 48273), (461, 48276), (464, 48315), (469, 48396), (475, 48507), (476, 48510), (481, 48612), (483, 48669), (489, 48771), (492, 48783), (493, 48792), (495, 48813),

Gene: Molly_60 Start: 40691, Stop: 38961, Start Num: 137

Candidate Starts for Molly_60:

(Start: 137 @40691 has 8 MA's), (160, 40583), (168, 40538), (176, 40454), (208, 40313), (226, 40163), (229, 40085), (246, 39980), (247, 39977), (253, 39875), (255, 39866), (307, 39629), (311, 39593), (319, 39530), (341, 39428), (342, 39425), (353, 39347), (373, 39239), (383, 39167), (386, 39155), (388, 39146), (391, 39137), (396, 39116), (401, 39098),

Gene: MooMoo_65 Start: 41964, Stop: 43592, Start Num: 66

Candidate Starts for MooMoo_65:

(Start: 66 @41964 has 19 MA's), (72, 41991), (79, 42021), (109, 42090), (122, 42144), (167, 42321), (173, 42378), (181, 42501), (184, 42534), (189, 42555), (194, 42588), (214, 42603), (241, 42708), (302, 42912), (303, 42915), (309, 42954), (356, 43245), (373, 43302), (391, 43389), (394, 43401),

(401, 43428), (402, 43431), (409, 43488), (415, 43536), (417, 43557),

Gene: Mordred_82 Start: 53968, Stop: 55890, Start Num: 18

Candidate Starts for Mordred_82:

(Start: 18 @53968 has 17 MA's), (33, 54040), (Start: 61 @54172 has 2 MA's), (79, 54244), (95, 54280), (105, 54304), (111, 54322), (128, 54379), (141, 54415), (145, 54445), (148, 54457), (177, 54649), (180, 54718), (182, 54745), (195, 54826), (217, 54841), (222, 54856), (233, 54907), (236, 54925), (242, 54958), (271, 55042), (275, 55069), (290, 55108), (291, 55114), (299, 55168), (301, 55189), (302, 55192), (303, 55195), (305, 55210), (311, 55258), (312, 55279), (326, 55342), (331, 55366), (335, 55384), (336, 55393), (341, 55420), (365, 55555), (369, 55573), (377, 55642), (383, 55666), (386, 55678), (388, 55687), (391, 55696), (408, 55786), (409, 55795), (418, 55870), (420, 55876),

Gene: Mova_70 Start: 42582, Stop: 44489, Start Num: 20

Candidate Starts for Mova_70:

(2, 42405), (4, 42420), (5, 42429), (12, 42525), (Start: 20 @42582 has 3 MA's), (31, 42639), (48, 42708), (100, 42909), (112, 42942), (152, 43119), (158, 43143), (168, 43206), (173, 43251), (187, 43410), (210, 43464), (216, 43491), (261, 43611), (279, 43668), (302, 43776), (307, 43806), (311, 43842), (324, 43920), (326, 43926), (373, 44184), (390, 44283), (391, 44286), (394, 44298), (396, 44307), (402, 44328), (423, 44481),

Gene: MoyaNatalis_81 Start: 53851, Stop: 55773, Start Num: 18

Candidate Starts for MoyaNatalis_81:

(Start: 18 @53851 has 17 MA's), (33, 53923), (Start: 61 @54055 has 2 MA's), (79, 54127), (95, 54163), (105, 54187), (111, 54205), (128, 54262), (141, 54298), (145, 54328), (148, 54340), (177, 54532), (180, 54601), (182, 54628), (195, 54709), (217, 54724), (222, 54739), (233, 54790), (236, 54808), (242, 54841), (271, 54925), (290, 54991), (291, 54997), (299, 55051), (301, 55072), (302, 55075), (303, 55078), (305, 55093), (311, 55141), (312, 55162), (326, 55225), (331, 55249), (335, 55267), (336, 55276), (341, 55303), (365, 55438), (369, 55456), (377, 55525), (383, 55549), (386, 55561), (388, 55570), (391, 55579), (408, 55669), (409, 55678), (418, 55753), (420, 55759),

Gene: Murica_102 Start: 59799, Stop: 61607, Start Num: 136

Candidate Starts for Murica_102:

(91, 59652), (104, 59682), (117, 59730), (120, 59745), (Start: 125 @59757 has 1 MA's), (Start: 136 @59799 has 3 MA's), (142, 59817), (160, 59913), (168, 59958), (176, 60042), (196, 60165), (206, 60252), (207, 60258), (212, 60345), (213, 60357), (228, 60489), (250, 60732), (267, 60819), (307, 60984), (309, 60996), (360, 61269), (391, 61428), (402, 61470), (405, 61503), (408, 61518),

Gene: Nazo_56 Start: 38421, Stop: 39956, Start Num: 83

Candidate Starts for Nazo_56:

(17, 38139), (60, 38340), (71, 38382), (Start: 83 @38421 has 3 MA's), (95, 38448), (Start: 97 @38454 has 8 MA's), (108, 38478), (118, 38514), (119, 38517), (128, 38547), (145, 38613), (173, 38763), (181, 38886), (223, 39024), (239, 39096), (302, 39342), (305, 39360), (330, 39450), (333, 39459), (344, 39501), (373, 39666), (378, 39711), (394, 39765), (402, 39795), (415, 39900),

Gene: Okabe_69 Start: 41882, Stop: 43765, Start Num: 19

Candidate Starts for Okabe_69:

(1, 41699), (3, 41711), (8, 41777), (9, 41783), (Start: 19 @41882 has 5 MA's), (22, 41912), (31, 41942), (39, 41978), (48, 42011), (100, 42212), (112, 42245), (152, 42422), (158, 42446), (168, 42509), (171, 42533), (172, 42536), (258, 42659), (270, 42719), (277, 42761), (302, 42884), (306, 42905), (307, 42914), (309, 42926), (341, 43109), (342, 43112), (373, 43298), (393, 43406), (406, 43484), (424, 43604), (427, 43655), (432, 43736), (434, 43748),

Gene: Optimus_142 Start: 77338, Stop: 79065, Start Num: 137

Candidate Starts for Optimus_142:

(Start: 137 @77338 has 8 MA's), (160, 77446), (168, 77491), (176, 77575), (208, 77716), (226, 77866), (229, 77944), (246, 78049), (247, 78052), (253, 78154), (255, 78163), (302, 78370), (306, 78391), (307, 78400), (311, 78436), (329, 78538), (341, 78601), (342, 78604), (373, 78787), (386, 78871), (388, 78880), (391, 78889), (396, 78910), (401, 78928), (405, 78964),

Gene: OwlsT2W_66 Start: 42373, Stop: 44289, Start Num: 74

Candidate Starts for OwlsT2W_66:

(35, 42196), (36, 42202), (37, 42211), (Start: 42 @42220 has 1 MA's), (51, 42259), (59, 42316), (Start: 74 @42373 has 1 MA's), (88, 42430), (93, 42442), (114, 42499), (129, 42553), (171, 42766), (172, 42769), (174, 42790), (181, 42910), (196, 42952), (201, 42988), (212, 43132), (213, 43144), (228, 43276), (243, 43396), (250, 43519), (267, 43606), (302, 43741), (307, 43771), (311, 43807), (329, 43909), (345, 43990), (373, 44146), (379, 44206), (388, 44239), (392, 44248), (393, 44251),

Gene: PHappiness_62 Start: 41626, Stop: 43140, Start Num: 66

Candidate Starts for PHappiness_62:

(25, 41449), (Start: 66 @41626 has 19 MA's), (79, 41683), (95, 41719), (109, 41752), (166, 41974), (171, 42016), (179, 42142), (181, 42160), (190, 42220), (215, 42262), (221, 42274), (257, 42367), (264, 42391), (273, 42451), (302, 42574), (306, 42595), (307, 42604), (316, 42697), (351, 42877), (373, 42997), (385, 43057), (395, 43090), (398, 43099), (399, 43102),

Gene: PatoPoderoso_67 Start: 44592, Stop: 46790, Start Num: 94

Candidate Starts for PatoPoderoso_67:

(46, 44409), (47, 44421), (Start: 62 @44493 has 1 MA's), (94, 44592), (109, 44622), (115, 44652), (126, 44688), (134, 44721), (156, 44811), (159, 44838), (170, 44901), (171, 44907), (173, 44928), (181, 45048), (188, 45090), (218, 45147), (297, 45417), (325, 45621), (338, 45684), (357, 45816), (367, 45837), (371, 45873), (372, 45879), (377, 45918), (387, 45954), (398, 45987), (403, 46008), (408, 46050), (435, 46092), (445, 46128), (460, 46251), (462, 46269), (464, 46293), (477, 46530), (482, 46593), (483, 46647), (485, 46707), (488, 46740), (490, 46749), (491, 46752),

Gene: Phalconet_70 Start: 43833, Stop: 45551, Start Num: 19

Candidate Starts for Phalconet_70:

(10, 43743), (11, 43752), (13, 43779), (Start: 19 @43833 has 5 MA's), (22, 43863), (31, 43893), (39, 43929), (48, 43962), (100, 44163), (112, 44196), (152, 44373), (158, 44397), (168, 44460), (171, 44484), (172, 44487), (283, 44721), (302, 44823), (306, 44844), (307, 44853), (311, 44889), (327, 44991), (373, 45243), (391, 45345), (394, 45357), (402, 45387), (416, 45501),

Gene: Phalm_53 Start: 36390, Stop: 38582, Start Num: 97

Candidate Starts for Phalm_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (172, 36705), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (300, 37251), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (467, 38145), (468, 38151), (471, 38181), (472, 38187), (476, 38253), (483, 38439), (485, 38499), (488, 38532), (490, 38541), (491, 38544),

Gene: Phegasus_63 Start: 39164, Stop: 40642, Start Num: 58

Candidate Starts for Phegasus_63:

(50, 39113), (53, 39128), (Start: 58 @39164 has 4 MA's), (84, 39257), (89, 39275), (Start: 106 @39311 has 1 MA's), (113, 39335), (126, 39371), (134, 39404), (155, 39494), (170, 39563), (171, 39569), (172, 39572), (173, 39590), (174, 39593), (285, 39836), (290, 39839), (302, 39923), (307, 39953), (309, 39965), (317, 40052), (341, 40154), (342, 40157), (349, 40220), (373, 40334), (391, 40436), (394,

40448), (401, 40475), (416, 40592),

Gene: PhesterPhotato_66 Start: 41796, Stop: 43328, Start Num: 66

Candidate Starts for PhesterPhotato_66:

(Start: 66 @41796 has 19 MA's), (79, 41853), (85, 41865), (109, 41922), (124, 41976), (171, 42189), (172, 42192), (174, 42213), (224, 42483), (237, 42531), (257, 42567), (273, 42657), (278, 42675), (302, 42798), (305, 42816), (307, 42828), (309, 42840), (312, 42885), (323, 42933), (361, 43128), (373, 43185), (385, 43245), (395, 43278), (398, 43287), (399, 43290),

Gene: Philus_70 Start: 44236, Stop: 46782, Start Num: 66

Candidate Starts for Philus_70:

(25, 44059), (28, 44065), (30, 44074), (32, 44083), (56, 44179), (Start: 66 @44236 has 19 MA's), (79, 44293), (95, 44329), (105, 44353), (109, 44362), (165, 44593), (171, 44644), (172, 44647), (181, 44785), (188, 44827), (218, 44884), (297, 45154), (300, 45193), (325, 45358), (338, 45421), (357, 45553), (367, 45574), (371, 45610), (372, 45616), (377, 45655), (387, 45691), (398, 45724), (403, 45745), (440, 45937), (442, 45985), (446, 46021), (453, 46111), (454, 46129), (460, 46252), (462, 46270), (463, 46282), (464, 46294), (466, 46339), (470, 46387), (481, 46582), (483, 46639), (485, 46699), (488, 46732), (490, 46741), (491, 46744),

Gene: Polka14_65 Start: 42690, Stop: 44204, Start Num: 66

Candidate Starts for Polka14_65:

(25, 42513), (Start: 66 @42690 has 19 MA's), (79, 42747), (95, 42783), (109, 42816), (166, 43038), (171, 43080), (179, 43206), (181, 43224), (190, 43284), (215, 43326), (221, 43338), (257, 43431), (264, 43455), (273, 43515), (302, 43638), (306, 43659), (307, 43668), (316, 43761), (351, 43941), (373, 44061), (385, 44121), (395, 44154), (398, 44163), (399, 44166),

Gene: Polkaroo_53 Start: 35895, Stop: 37256, Start Num: 90

Candidate Starts for Polkaroo_53:

(Start: 68 @35826 has 1 MA's), (90, 35895), (103, 35922), (Start: 106 @35928 has 1 MA's), (113, 35952), (126, 35988), (134, 36021), (155, 36111), (159, 36138), (176, 36270), (181, 36351), (263, 36393), (265, 36396), (305, 36615), (307, 36627), (342, 36807), (359, 36909), (373, 36966), (391, 37053), (394, 37065), (396, 37074), (401, 37092), (416, 37209),

Gene: Pollywog_67 Start: 43356, Stop: 45239, Start Num: 133

Candidate Starts for Pollywog_67:

(99, 43242), (Start: 133 @43356 has 2 MA's), (146, 43413), (153, 43449), (160, 43482), (168, 43527), (173, 43569), (174, 43572), (176, 43611), (196, 43734), (212, 43899), (213, 43911), (228, 44043), (243, 44163), (250, 44286), (267, 44373), (302, 44508), (307, 44538), (311, 44574), (321, 44652), (328, 44679), (330, 44685), (341, 44745), (342, 44748), (353, 44826), (373, 44934), (386, 45018), (391, 45036), (394, 45048), (401, 45075),

Gene: PrincessTrina_83 Start: 54273, Stop: 56075, Start Num: 18

Candidate Starts for PrincessTrina_83:

(Start: 18 @54273 has 17 MA's), (33, 54345), (Start: 61 @54477 has 2 MA's), (79, 54549), (95, 54585), (105, 54609), (111, 54627), (128, 54684), (141, 54720), (145, 54750), (148, 54762), (177, 54954), (180, 55023), (182, 55050), (195, 55131), (217, 55146), (222, 55161), (233, 55212), (236, 55230), (242, 55263), (271, 55347), (275, 55374), (290, 55413), (291, 55419), (299, 55473), (301, 55494), (302, 55497), (303, 55500), (305, 55515), (311, 55563), (312, 55584), (326, 55647), (331, 55671), (335, 55689), (336, 55698), (341, 55725), (386, 55863), (391, 55881), (408, 55971), (409, 55980), (418, 56055), (420, 56061),

Gene: RedBird_75 Start: 45596, Stop: 48277, Start Num: 64

Candidate Starts for RedBird_75:

(Start: 64 @45596 has 2 MA's), (76, 45635), (80, 45665), (92, 45701), (107, 45734), (165, 45965), (170, 46010), (171, 46016), (172, 46019), (173, 46037), (174, 46040), (178, 46139), (181, 46160), (193, 46292), (199, 46373), (204, 46454), (211, 46568), (220, 46625), (227, 46697), (230, 46781), (235, 46820), (244, 46889), (248, 46940), (251, 47054), (252, 47060), (254, 47078), (256, 47099), (269, 47246), (272, 47282), (286, 47351), (293, 47399), (295, 47432), (296, 47459), (302, 47552), (306, 47573), (307, 47582), (311, 47618), (329, 47720), (341, 47783), (342, 47786), (353, 47864), (373, 47972), (391, 48074), (394, 48086), (396, 48095), (401, 48113), (416, 48230),

Gene: Renaud18_76 Start: 44560, Stop: 46092, Start Num: 66

Candidate Starts for Renaud18_76:

(25, 44383), (28, 44389), (30, 44398), (32, 44407), (45, 44446), (56, 44503), (Start: 66 @44560 has 19 MA's), (79, 44617), (85, 44629), (109, 44686), (124, 44740), (171, 44953), (172, 44956), (174, 44977), (224, 45247), (237, 45295), (257, 45331), (273, 45421), (278, 45439), (302, 45562), (305, 45580), (307, 45592), (309, 45604), (312, 45649), (323, 45697), (361, 45892), (373, 45949), (385, 46009), (395, 46042), (398, 46051), (399, 46054),

Gene: RitaG_62 Start: 41971, Stop: 43485, Start Num: 66

Candidate Starts for RitaG_62:

(25, 41794), (Start: 66 @41971 has 19 MA's), (79, 42028), (95, 42064), (109, 42097), (166, 42319), (171, 42361), (179, 42487), (181, 42505), (190, 42565), (215, 42607), (221, 42619), (257, 42712), (264, 42736), (273, 42796), (302, 42919), (306, 42940), (307, 42949), (316, 43042), (351, 43222), (373, 43342), (385, 43402), (395, 43435), (398, 43444), (399, 43447),

Gene: RosiePosie_82 Start: 54057, Stop: 55946, Start Num: 18

Candidate Starts for RosiePosie_82:

(Start: 18 @54057 has 17 MA's), (33, 54129), (Start: 61 @54261 has 2 MA's), (79, 54300), (95, 54336), (105, 54360), (111, 54378), (128, 54435), (141, 54471), (145, 54501), (148, 54513), (177, 54705), (180, 54774), (182, 54801), (195, 54882), (217, 54897), (222, 54912), (233, 54963), (236, 54981), (242, 55014), (271, 55098), (290, 55164), (291, 55170), (299, 55224), (301, 55245), (302, 55248), (303, 55251), (305, 55266), (311, 55314), (312, 55335), (326, 55398), (331, 55422), (335, 55440), (336, 55449), (341, 55476), (365, 55611), (369, 55629), (377, 55698), (383, 55722), (386, 55734), (388, 55743), (391, 55752), (408, 55842), (409, 55851), (418, 55926), (420, 55932),

Gene: Royals2015_69 Start: 42774, Stop: 44306, Start Num: 66

Candidate Starts for Royals2015_69:

(25, 42597), (28, 42603), (30, 42612), (45, 42660), (56, 42717), (Start: 66 @42774 has 19 MA's), (79, 42831), (85, 42843), (109, 42900), (124, 42954), (171, 43167), (172, 43170), (174, 43191), (224, 43461), (237, 43509), (257, 43545), (273, 43635), (278, 43653), (302, 43776), (305, 43794), (307, 43806), (309, 43818), (312, 43863), (323, 43911), (361, 44106), (373, 44163), (385, 44223), (395, 44256), (398, 44265), (399, 44268),

Gene: SG4_70 Start: 43702, Stop: 45480, Start Num: 130

Candidate Starts for SG4_70:

(Start: 130 @43702 has 1 MA's), (140, 43741), (146, 43771), (153, 43807), (160, 43840), (168, 43885), (208, 44110), (226, 44260), (229, 44338), (246, 44443), (247, 44446), (253, 44548), (255, 44557), (302, 44764), (306, 44785), (307, 44794), (311, 44830), (329, 44932), (341, 44995), (342, 44998), (345, 45013), (373, 45172), (391, 45274), (394, 45286), (396, 45295), (401, 45313), (416, 45430),

Gene: Scavito_83 Start: 54017, Stop: 55939, Start Num: 18

Candidate Starts for Scavito_83:

(Start: 18 @54017 has 17 MA's), (33, 54089), (Start: 61 @54221 has 2 MA's), (79, 54293), (95, 54329), (105, 54353), (111, 54371), (128, 54428), (141, 54464), (145, 54494), (148, 54506), (177, 54698), (180, 54767), (182, 54794), (195, 54875), (217, 54890), (222, 54905), (233, 54956), (236, 54974),

(242, 55007), (271, 55091), (275, 55118), (290, 55157), (291, 55163), (299, 55217), (301, 55238), (302, 55241), (303, 55244), (305, 55259), (311, 55307), (312, 55328), (326, 55391), (331, 55415), (335, 55433), (336, 55442), (341, 55469), (365, 55604), (369, 55622), (377, 55691), (383, 55715), (386, 55727), (388, 55736), (391, 55745), (408, 55835), (409, 55844), (418, 55919), (420, 55925),

Gene: ShiLan_65 Start: 42785, Stop: 45667, Start Num: 68

Candidate Starts for ShiLan_65:

(Start: 68 @42785 has 1 MA's), (80, 42842), (85, 42854), (95, 42881), (107, 42911), (165, 43142), (170, 43187), (171, 43193), (172, 43196), (173, 43214), (174, 43217), (178, 43316), (181, 43337), (193, 43469), (199, 43550), (204, 43631), (211, 43745), (220, 43802), (227, 43874), (230, 43958), (235, 43997), (244, 44066), (248, 44117), (251, 44231), (252, 44237), (254, 44255), (256, 44276), (262, 44312), (270, 44360), (288, 44411), (301, 44513), (304, 44525), (322, 44657), (347, 44777), (370, 44900), (383, 44987), (410, 45122), (414, 45164), (428, 45299), (431, 45329), (433, 45365), (438, 45467), (439, 45524), (443, 45584), (447, 45617), (449, 45626), (450, 45629),

Gene: ShroomBoi_67 Start: 43105, Stop: 44667, Start Num: 66

Candidate Starts for ShroomBoi_67:

(25, 42928), (28, 42934), (30, 42943), (32, 42952), (45, 42991), (Start: 66 @43105 has 19 MA's), (79, 43162), (95, 43198), (109, 43231), (166, 43453), (171, 43495), (224, 43789), (237, 43837), (257, 43873), (270, 43942), (273, 43963), (278, 43981), (302, 44104), (306, 44125), (307, 44134), (309, 44146), (329, 44272), (341, 44335), (351, 44404), (373, 44524), (385, 44584), (395, 44617), (398, 44626), (399, 44629),

Gene: StAnnes_70 Start: 44611, Stop: 46869, Start Num: 132

Candidate Starts for StAnnes_70:

(121, 44581), (131, 44605), (Start: 132 @44611 has 1 MA's), (146, 44665), (153, 44701), (160, 44734), (168, 44779), (181, 44941), (188, 44983), (218, 45040), (297, 45310), (325, 45514), (338, 45577), (357, 45709), (367, 45730), (371, 45766), (372, 45772), (377, 45811), (387, 45847), (398, 45880), (403, 45901), (412, 45985), (425, 45997), (448, 46042), (460, 46162), (463, 46192), (465, 46228), (475, 46387), (476, 46390), (478, 46468), (483, 46576), (489, 46663), (492, 46675), (493, 46684), (495, 46705),

Gene: Starcevich_66 Start: 42297, Stop: 45341, Start Num: 66

Candidate Starts for Starcevich_66:

(45, 42183), (Start: 66 @42297 has 19 MA's), (79, 42354), (85, 42366), (Start: 96 @42393 has 2 MA's), (109, 42423), (165, 42654), (170, 42699), (171, 42705), (172, 42708), (173, 42726), (174, 42729), (181, 42846), (188, 42888), (218, 42945), (297, 43215), (300, 43254), (325, 43419), (338, 43482), (357, 43614), (367, 43635), (371, 43671), (372, 43677), (377, 43716), (387, 43752), (398, 43785), (403, 43806), (412, 43890), (419, 43935), (421, 43947), (429, 44049), (430, 44061), (437, 44193), (441, 44313), (451, 44436), (457, 44517), (458, 44523), (459, 44556), (460, 44655), (463, 44685), (465, 44721), (475, 44862), (476, 44865), (483, 45051), (489, 45138), (492, 45150),

Gene: StellaBean_97 Start: 58301, Stop: 60040, Start Num: 135

Candidate Starts for StellaBean_97:

(91, 58154), (104, 58184), (117, 58232), (120, 58247), (Start: 125 @58259 has 1 MA's), (Start: 135 @58301 has 2 MA's), (141, 58319), (160, 58415), (168, 58460), (176, 58544), (208, 58685), (226, 58835), (229, 58913), (246, 59018), (247, 59021), (253, 59123), (255, 59132), (302, 59339), (307, 59369), (319, 59468), (341, 59570), (342, 59573), (353, 59651), (373, 59759), (383, 59831), (391, 59861), (402, 59903), (405, 59936), (408, 59951),

Gene: StressBall_53 Start: 36390, Stop: 38582, Start Num: 97

Candidate Starts for StressBall_53:

(7, 35955), (76, 36327), (Start: 97 @36390 has 8 MA's), (109, 36417), (110, 36423), (115, 36447), (126, 36483), (134, 36516), (156, 36606), (159, 36633), (170, 36696), (171, 36702), (172, 36705), (173, 36723), (181, 36843), (188, 36885), (218, 36942), (297, 37212), (300, 37251), (325, 37416), (338, 37479), (357, 37611), (367, 37632), (371, 37668), (372, 37674), (377, 37713), (387, 37749), (398, 37782), (403, 37803), (435, 37887), (445, 37923), (460, 38046), (462, 38064), (464, 38088), (467, 38145), (468, 38151), (471, 38181), (472, 38187), (476, 38253), (483, 38439), (485, 38499), (488, 38532), (490, 38541), (491, 38544),

Gene: Taj_79 Start: 46662, Stop: 48335, Start Num: 19

Candidate Starts for Taj_79:

(10, 46572), (11, 46581), (Start: 19 @46662 has 5 MA's), (22, 46692), (31, 46722), (34, 46734), (48, 46791), (100, 46992), (112, 47025), (152, 47202), (158, 47226), (168, 47289), (171, 47313), (172, 47316), (266, 47457), (270, 47499), (280, 47544), (284, 47556), (302, 47661), (306, 47682), (307, 47691), (309, 47703), (314, 47769), (341, 47865), (342, 47868), (360, 47970), (373, 48027), (391, 48129), (394, 48141), (396, 48150), (402, 48171), (416, 48285),

Gene: Tarkin_98 Start: 58765, Stop: 60504, Start Num: 135

Candidate Starts for Tarkin_98:

(91, 58618), (104, 58648), (117, 58696), (120, 58711), (Start: 125 @58723 has 1 MA's), (Start: 135 @58765 has 2 MA's), (141, 58783), (160, 58879), (168, 58924), (176, 59008), (179, 59071), (208, 59149), (226, 59299), (229, 59377), (246, 59482), (247, 59485), (253, 59587), (255, 59596), (302, 59803), (306, 59824), (307, 59833), (309, 59845), (319, 59932), (341, 60034), (342, 60037), (353, 60115), (373, 60223), (391, 60325), (402, 60367), (405, 60400), (408, 60415),

Gene: Tasp14_62 Start: 41981, Stop: 40389, Start Num: 137

Candidate Starts for Tasp14_62:

(Start: 137 @41981 has 8 MA's), (160, 41873), (168, 41828), (176, 41744), (208, 41603), (226, 41453), (229, 41375), (246, 41270), (247, 41267), (253, 41165), (255, 41156), (302, 40949), (307, 40919), (312, 40862), (363, 40724), (366, 40721), (373, 40667), (386, 40583), (388, 40574), (391, 40565), (396, 40544), (401, 40526), (405, 40490),

Gene: Thespis_55 Start: 36748, Stop: 38346, Start Num: 292

Candidate Starts for Thespis_55:

(Start: 292 @36748 has 1 MA's), (294, 36757), (298, 36784), (Start: 308 @36850 has 1 MA's), (313, 36910), (319, 36949), (327, 36979), (340, 37036), (355, 37123), (374, 37201), (384, 37246), (426, 37408), (436, 37483), (444, 37555), (460, 37801), (462, 37819), (464, 37843), (473, 37978), (474, 38008), (476, 38044), (481, 38146), (483, 38203), (485, 38263), (488, 38296), (490, 38305), (491, 38308),

Gene: TootsiePop_75 Start: 46524, Stop: 48974, Start Num: 65

Candidate Starts for TootsiePop_75:

(38, 46422), (44, 46431), (48, 46458), (Start: 65 @46524 has 3 MA's), (75, 46560), (79, 46584), (95, 46620), (109, 46653), (165, 46884), (171, 46935), (172, 46938), (181, 47076), (188, 47118), (218, 47175), (297, 47445), (300, 47484), (325, 47649), (338, 47712), (357, 47844), (367, 47865), (371, 47901), (372, 47907), (377, 47946), (387, 47982), (398, 48015), (403, 48036), (452, 48171), (460, 48273), (461, 48276), (464, 48315), (469, 48396), (475, 48507), (476, 48510), (481, 48612), (483, 48669), (489, 48771), (492, 48783), (493, 48792), (495, 48813),

Gene: Tophat_83 Start: 54206, Stop: 56128, Start Num: 18

Candidate Starts for Tophat_83:

(Start: 18 @54206 has 17 MA's), (33, 54278), (Start: 61 @54410 has 2 MA's), (79, 54482), (95, 54518), (105, 54542), (111, 54560), (128, 54617), (141, 54653), (145, 54683), (148, 54695), (177, 54887), (180, 54956), (182, 54983), (195, 55064), (217, 55079), (222, 55094), (233, 55145), (236, 55163),

(242, 55196), (271, 55280), (275, 55307), (290, 55346), (291, 55352), (299, 55406), (301, 55427), (302, 55430), (303, 55433), (305, 55448), (311, 55496), (312, 55517), (326, 55580), (331, 55604), (335, 55622), (336, 55631), (341, 55658), (365, 55793), (369, 55811), (377, 55880), (383, 55904), (386, 55916), (388, 55925), (391, 55934), (408, 56024), (409, 56033), (418, 56108), (420, 56114),

Gene: Totinger_66 Start: 41872, Stop: 44196, Start Num: 20

Candidate Starts for Totinger_66:

(2, 41695), (4, 41710), (5, 41719), (12, 41815), (Start: 20 @41872 has 3 MA's), (31, 41929), (48, 41998), (100, 42199), (112, 42232), (152, 42409), (158, 42433), (168, 42496), (170, 42514), (171, 42520), (173, 42541), (181, 42664), (209, 42868), (234, 43162), (261, 43258), (274, 43339), (276, 43345), (289, 43378), (302, 43477), (305, 43495), (309, 43519), (327, 43645), (341, 43708), (342, 43711), (373, 43891), (390, 43990), (391, 43993), (394, 44005), (396, 44014), (402, 44035), (423, 44188),

Gene: Violet_57 Start: 42062, Stop: 40485, Start Num: 137

Candidate Starts for Violet_57:

(Start: 137 @42062 has 8 MA's), (160, 41954), (168, 41909), (176, 41825), (208, 41684), (226, 41534), (229, 41456), (246, 41351), (247, 41348), (253, 41246), (255, 41237), (302, 41030), (306, 41009), (307, 41000), (311, 40964), (365, 40805), (373, 40748), (391, 40661), (402, 40619), (405, 40586),

Gene: Wee_78 Start: 46738, Stop: 48411, Start Num: 19

Candidate Starts for Wee_78:

(10, 46648), (11, 46657), (Start: 19 @46738 has 5 MA's), (22, 46768), (31, 46798), (34, 46810), (48, 46867), (100, 47068), (112, 47101), (152, 47278), (158, 47302), (168, 47365), (171, 47389), (172, 47392), (266, 47533), (270, 47575), (280, 47620), (284, 47632), (302, 47737), (306, 47758), (307, 47767), (309, 47779), (314, 47845), (341, 47941), (342, 47944), (360, 48046), (373, 48103), (391, 48205), (394, 48217), (396, 48226), (402, 48247), (416, 48361),

Gene: Willsammy_52 Start: 35873, Stop: 38053, Start Num: 97

Candidate Starts for Willsammy_52:

(7, 35438), (76, 35810), (Start: 97 @35873 has 8 MA's), (109, 35900), (110, 35906), (115, 35930), (126, 35966), (134, 35999), (156, 36089), (159, 36116), (170, 36179), (171, 36185), (173, 36206), (181, 36326), (188, 36368), (218, 36425), (297, 36695), (325, 36899), (338, 36962), (357, 37094), (367, 37115), (371, 37151), (372, 37157), (377, 37196), (387, 37232), (398, 37265), (403, 37286), (408, 37328), (460, 37535), (463, 37565), (464, 37577), (476, 37751), (480, 37853), (483, 37910), (484, 37955), (485, 37970), (488, 38003), (490, 38012), (491, 38015),

Gene: Wocket_66 Start: 42075, Stop: 43580, Start Num: 83

Candidate Starts for Wocket_66:

(26, 41838), (29, 41850), (43, 41898), (53, 41946), (Start: 83 @42075 has 3 MA's), (95, 42102), (108, 42132), (111, 42144), (118, 42168), (128, 42201), (143, 42258), (148, 42282), (182, 42576), (223, 42687), (225, 42717), (239, 42759), (257, 42789), (259, 42801), (270, 42858), (287, 42903), (354, 43185), (368, 43248), (386, 43359), (391, 43377), (409, 43476), (415, 43524),

Gene: Xeno_59 Start: 36538, Stop: 38031, Start Num: 58

Candidate Starts for Xeno_59:

(50, 36487), (53, 36502), (Start: 58 @36538 has 4 MA's), (87, 36637), (103, 36667), (113, 36697), (126, 36733), (134, 36766), (155, 36856), (159, 36883), (170, 36946), (171, 36952), (172, 36955), (181, 37096), (263, 37138), (265, 37141), (302, 37342), (307, 37372), (341, 37567), (342, 37570), (359, 37678), (373, 37738), (391, 37825), (394, 37837), (396, 37846), (401, 37864), (416, 37981),