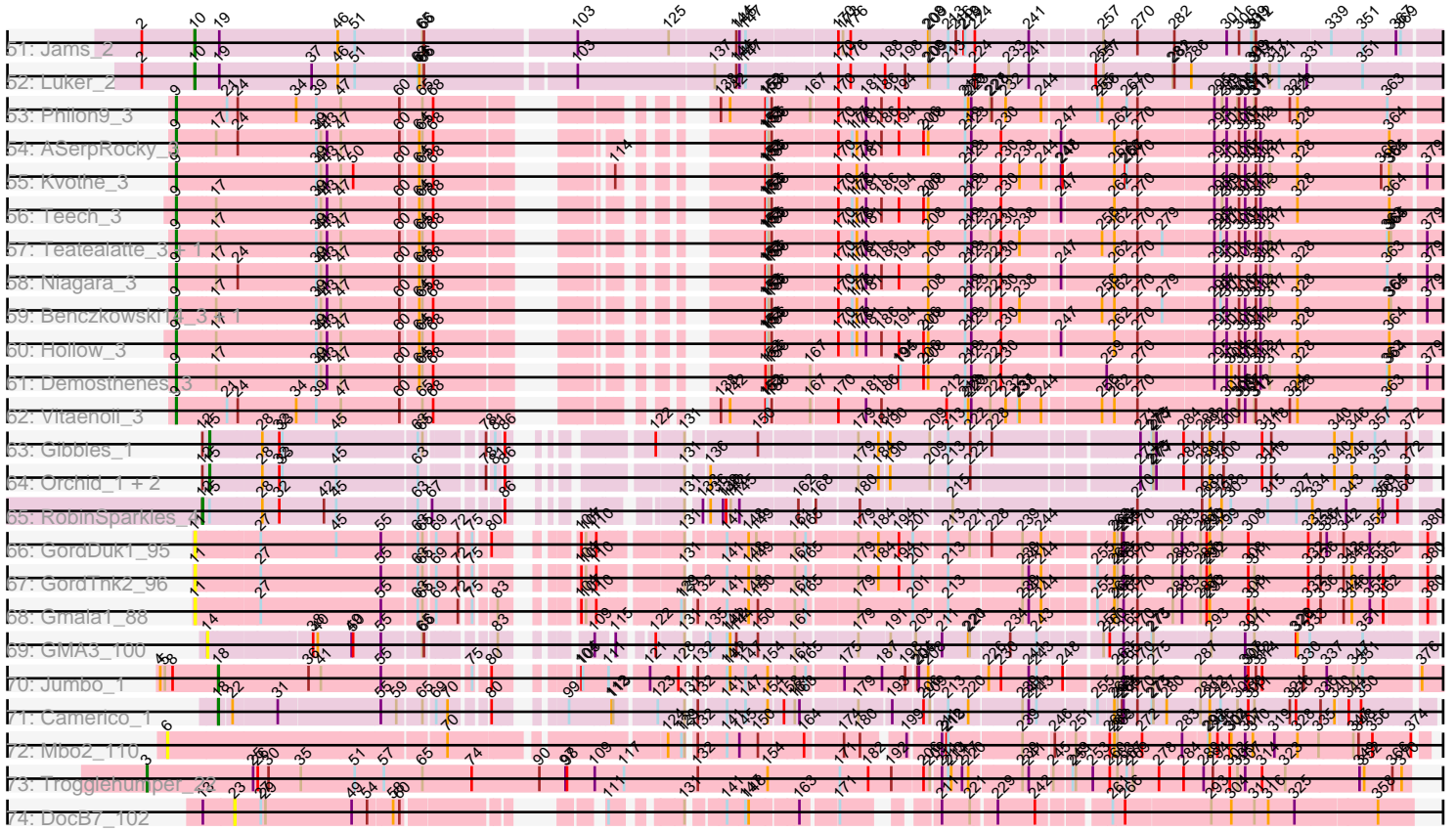


Pham 308386



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 308386 Report

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

Pham number 308386 has 99 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Reynauld_1
- Track 2 : Srilaccoli3_1
- Track 3 : HayZem_4
- Track 4 : GMA7_97
- Track 5 : Austin_4
- Track 6 : Amore2_4
- Track 7 : GTE7_97
- Track 8 : Diabla_4
- Track 9 : RemRem_4
- Track 10 : Eggsie_4
- Track 11 : Gorko_4
- Track 12 : FelixAlejandro_5
- Track 13 : Crete_5
- Track 14 : PierreThree_4, Dakiti_4
- Track 15 : Poland_5
- Track 16 : Barbochs_4
- Track 17 : Worcestershire_4
- Track 18 : Msay19_5
- Track 19 : CathyBurgh_4, Lizzo_4
- Track 20 : BillyBobJr_5, Beaver_4, Monty_4, CinnamonToast_5, Hotorobo_4, Kelzog_4, Breezic_4, Sombrero_4
- Track 21 : Linetti_5
- Track 22 : Butterball_4
- Track 23 : John316_4
- Track 24 : GourdThymes_4
- Track 25 : Jellybones_4
- Track 26 : Flakey_4
- Track 27 : Exiguo_4, Sam12_4
- Track 28 : BenoitCattle_4
- Track 29 : Squibbles_4
- Track 30 : BigShaq_4
- Track 31 : RoyalG_5
- Track 32 : Boneham_4, BirksAndSocks_4
- Track 33 : Chelms_4
- Track 34 : PokyPuppy_4
- Track 35 : SteveFrench_4
- Track 36 : Ekhein_4

- Track 37 : Adgers_5
- Track 38 : Nimi13_2, Newt_2, Teal_2, Charianelly_2
- Track 39 : Bianmat_2
- Track 40 : Lahirium_2, Neoevie_2, Anamika_2, Hail2Pitt_2, Harambe_2
- Track 41 : Hello_2
- Track 42 : Guillaume_2
- Track 43 : Sticker17_2
- Track 44 : GalacticEye_2, Berries_2, Lidong_2
- Track 45 : Kaseim_2, Shelley_2
- Track 46 : Woes_2
- Track 47 : Minos_2
- Track 48 : MrWormie_2
- Track 49 : Jormungandr_2
- Track 50 : Damp_2
- Track 51 : Jams_2
- Track 52 : Luker_2
- Track 53 : Philon9_3
- Track 54 : ASerpRocky_3
- Track 55 : Kvothe_3
- Track 56 : Teech_3
- Track 57 : Teatealatte_3, Tredge_3
- Track 58 : Niagara_3
- Track 59 : Benczkowski14_3, Katyusha_3
- Track 60 : Hollow_3
- Track 61 : Demosthenes_3
- Track 62 : Vitaenoi_3
- Track 63 : Gibbles_1
- Track 64 : Orchid_1, Kampe_1, PatrickStar_1
- Track 65 : RobinSparkles_4
- Track 66 : GordDuk1_95
- Track 67 : GordTnk2_96
- Track 68 : Gmala1_88
- Track 69 : GMA3_100
- Track 70 : Jumbo_1
- Track 71 : Camerico_1
- Track 72 : Mbo2_110
- Track 73 : Trogglehumper_22
- Track 74 : DocB7_102

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

The start number called the most often in the published annotations is 10, it was called in 64 of the 85 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adgers_5, Amore2_4, Anamika_2, Austin_4, Barbochs_4, Beaver_4, BenoitCattle_4, Berries_2, Bianmat_2, BigShaq_4, BillyBobJr_5, BirksAndSocks_4, Boneham_4, Breezic_4, Butterball_4, CathyBurgh_4, Charianelly_2, Chelms_4, CinnamonToast_5, Crete_5, Dakiti_4, Damp_2, Diabla_4, Eggsie_4, Ekhein_4, Exiguo_4, FelixAlejandro_5, Flakey_4, GMA7_97, GTE7_97, GalacticEye_2,

Gorko_4, GourdThymes_4, Guillaume_2, Hail2Pitt_2, Harambe_2, HayZem_4, Hello_2, Hotorobo_4, Jams_2, Jellybones_4, John316_4, Jormungandr_2, Kaseim_2, Kelzog_4, Lahirium_2, Lidong_2, Linetti_5, Lizzo_4, Luker_2, Minos_2, Monty_4, MrWormie_2, Msay19_5, Neoevie_2, Newt_2, Nimi13_2, PierreThree_4, PokyPuppy_4, Poland_5, RemRem_4, RoyalG_5, Sam12_4, Shelley_2, Sombrero_4, Squibbles_4, SteveFrench_4, Sticker17_2, Teal_2, Woes_2, Worcestershire_4,

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

•

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

• ASerpRocky_3, Benczkowski14_3, Camerico_1, Demosthenes_3, DocB7_102, GMA3_100, Gibbles_1, Gmala1_88, GordDuk1_95, GordTnk2_96, Hollow_3, Jumbo_1, Kampe_1, Katyusha_3, Kvothe_3, Mbo2_110, Niagara_3, Orchid_1, PatrickStar_1, Philon9_3, Reynauld_1, RobinSparkles_4, Srilaccoli3_1, Teatealatte_3, Teech_3, Tredge_3, Trogglehumper_22, Vitaenoi_3,

Summary by start number:

Start 3:

- Found in 1 of 99 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trogglehumper_22 (singleton),

Start 6:

- Found in 1 of 99 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2_110 (singleton),

Start 7:

- Found in 2 of 99 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reynauld_1 (CH), Srilaccoli3_1 (CH),

Start 9:

- Found in 12 of 99 (12.1%) of genes in pham
- Manual Annotations of this start: 12 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASerpRocky_3 (CS4), Benczkowski14_3 (CS4), Demosthenes_3 (CS4), Hollow_3 (CS4), Katyusha_3 (CS4), Kvothe_3 (CS4), Niagara_3 (CS4), Philon9_3 (CS4), Teatealatte_3 (CS4), Teech_3 (CS4), Tredge_3 (CS4), Vitaenoi_3 (CS4),

Start 10:

- Found in 71 of 99 (71.7%) of genes in pham
- Manual Annotations of this start: 64 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adgers_5 (CS2), Amore2_4 (CS1), Anamika_2 (CS3), Austin_4 (CS1), Barbochs_4 (CS2), Beaver_4 (CS2), BenoitCattle_4 (CS2), Berries_2 (CS3), Bianmat_2 (CS3), BigShaq_4 (CS2),

BillyBobJr_5 (CS2), BirksAndSocks_4 (CS2), Boneham_4 (CS2), Breezic_4 (CS2), Butterball_4 (CS2), CathyBurgh_4 (CS2), Charianelly_2 (CS3), Chelms_4 (CS2), CinnamonToast_5 (CS2), Crete_5 (CS2), Dakiti_4 (CS2), Damp_2 (CS3), Diabla_4 (CS2), Eggsie_4 (CS2), Ekhein_4 (CS2), Exiguo_4 (CS2), FelixAlejandro_5 (CS2), Flakey_4 (CS2), GMA7_97 (CS1), GTE7_97 (CS1), GalacticEye_2 (CS3), Gorko_4 (CS2), GourdThymes_4 (CS2), Guillaume_2 (CS3), Hail2Pitt_2 (CS3), Harambe_2 (CS3), HayZem_4 (CS1), Hello_2 (CS3), Hotorobo_4 (CS2), Jams_2 (CS3), Jellybones_4 (CS2), John316_4 (CS2), Jormungandr_2 (CS3), Kaseim_2 (CS3), Kelzog_4 (CS2), Lahirium_2 (CS3), Lidong_2 (CS3), Linetti_5 (CS2), Lizzo_4 (CS2), Luker_2 (CS3), Minos_2 (CS3), Monty_4 (CS2), MrWormie_2 (CS3), Msay19_5 (CS2), Neoevie_2 (CS3), Newt_2 (CS3), Nimi13_2 (CS3), PierreThree_4 (CS2), PokyPuppy_4 (CS2), Poland_5 (CS2), RemRem_4 (CS2), RoyalG_5 (CS2), Sam12_4 (CS2), Shelley_2 (CS3), Sombrero_4 (CS2), Squibbles_4 (CS2), SteveFrench_4 (CS2), Sticker17_2 (CS3), Teal_2 (CS3), Woes_2 (CS3), Worcestershire_4 (CS2),

Start 11:

- Found in 3 of 99 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gmala1_88 (DF1), GordDuk1_95 (DF1), GordTnk2_96 (DF1),

Start 12:

- Found in 5 of 99 (5.1%) of genes in pham
- Manual Annotations of this start: 1 of 85
- Called 20.0% of time when present
- Phage (with cluster) where this start called: RobinSparkles_4 (CX),

Start 14:

- Found in 1 of 99 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA3_100 (DF2),

Start 15:

- Found in 5 of 99 (5.1%) of genes in pham
- Manual Annotations of this start: 4 of 85
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Gibbles_1 (CX), Kampe_1 (CX), Orchid_1 (CX), PatrickStar_1 (CX),

Start 18:

- Found in 2 of 99 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico_1 (DF4), Jumbo_1 (DF3),

Start 23:

- Found in 1 of 99 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DocB7_102 (singleton),

Summary by clusters:

There are 11 clusters represented in this pham: singleton, CH, DF4, DF1, DF3, DF2, CX, CS4, CS1, CS3, CS2,

Info for manual annotations of cluster CH:

- Start number 7 was manually annotated 1 time for cluster CH.

Info for manual annotations of cluster CS1:

- Start number 10 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 10 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 10 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 9 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 12 was manually annotated 1 time for cluster CX.
- Start number 15 was manually annotated 4 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 18 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 18 was manually annotated 1 time for cluster DF4.

Gene Information:

Gene: ASerpRocky_3 Start: 5318, Stop: 3177, Start Num: 9

Candidate Starts for ASerpRocky_3:

(Start: 9 @5318 has 12 MA's), (17, 5246), (24, 5204), (39, 5057), (41, 5048), (43, 5036), (47, 5009), (60, 4901), (64, 4871), (65, 4865), (68, 4844), (152, 4448), (153, 4445), (155, 4442), (156, 4436), (170, 4322), (177, 4295), (178, 4286), (181, 4268), (186, 4238), (194, 4205), (206, 4157), (208, 4148), (219, 4076), (223, 4064), (230, 4007), (247, 3899), (262, 3803), (270, 3758), (295, 3617), (301, 3593), (306, 3569), (307, 3557), (312, 3536), (313, 3527), (328, 3455), (364, 3278),

Gene: Adgers_5 Start: 4241, Stop: 1974, Start Num: 10

Candidate Starts for Adgers_5:

(Start: 10 @4241 has 64 MA's), (17, 4208), (20, 4193), (51, 3938), (65, 3821), (66, 3818), (73, 3734), (77, 3701), (91, 3608), (94, 3578), (103, 3545), (116, 3470), (134, 3329), (144, 3266), (153, 3206), (159, 3167), (165, 3140), (167, 3131), (173, 3074), (210, 2903), (213, 2870), (230, 2774), (231, 2768), (236, 2750), (242, 2708), (248, 2663), (264, 2567), (276, 2510), (284, 2456), (297, 2390), (306, 2354), (307, 2342), (312, 2321), (317, 2294), (321, 2276), (324, 2255), (345, 2138), (357, 2090), (369, 2042), (371, 2039), (378, 2015),

Gene: Amore2_4 Start: 4012, Stop: 1769, Start Num: 10

Candidate Starts for Amore2_4:

(Start: 10 @4012 has 64 MA's), (16, 3979), (44, 3745), (51, 3712), (54, 3688), (63, 3604), (65, 3595), (68, 3574), (79, 3463), (101, 3358), (144, 3070), (147, 3052), (158, 2983), (165, 2947), (170, 2890), (176, 2866), (208, 2716), (209, 2713), (213, 2677), (224, 2626), (233, 2566), (236, 2557), (241, 2527), (250, 2455), (257, 2407), (260, 2398), (268, 2362), (282, 2275), (285, 2254), (306, 2152), (309, 2128), (312, 2119), (324, 2053), (341, 1957), (351, 1918), (357, 1894), (379, 1807),

Gene: Anamika_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Anamika_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (37, 3194), (46, 3143), (51, 3110), (63, 3002), (64, 2999), (65, 2993), (66, 2990), (84, 2846), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (188, 2159), (198, 2120), (208, 2075), (209, 2072), (213, 2036), (224, 1985), (233, 1925), (241, 1886), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (317, 1451), (321, 1433), (331, 1379), (351, 1277),

Gene: Austin_4 Start: 4012, Stop: 1769, Start Num: 10

Candidate Starts for Austin_4:

(Start: 10 @4012 has 64 MA's), (16, 3979), (51, 3712), (54, 3688), (65, 3595), (66, 3592), (68, 3574), (79, 3463), (101, 3358), (144, 3070), (147, 3052), (158, 2983), (165, 2947), (170, 2890), (176, 2866), (208, 2716), (209, 2713), (213, 2677), (224, 2626), (233, 2566), (236, 2557), (241, 2527), (250, 2455), (257, 2407), (260, 2398), (268, 2362), (282, 2275), (285, 2254), (306, 2152), (309, 2128), (312, 2119), (324, 2053), (341, 1957), (351, 1918), (357, 1894), (379, 1807),

Gene: Barbochs_4 Start: 4076, Stop: 1809, Start Num: 10

Candidate Starts for Barbochs_4:

(Start: 10 @4076 has 64 MA's), (17, 4043), (20, 4028), (51, 3773), (65, 3656), (66, 3653), (73, 3569), (77, 3536), (91, 3443), (94, 3413), (103, 3380), (116, 3305), (119, 3263), (134, 3164), (144, 3101), (159, 3002), (165, 2975), (167, 2966), (173, 2909), (183, 2852), (185, 2837), (194, 2801), (196, 2792), (198, 2789), (210, 2738), (213, 2705), (230, 2609), (231, 2603), (236, 2585), (242, 2543), (248, 2498), (284, 2291), (306, 2189), (307, 2177), (312, 2156), (317, 2129), (321, 2111), (324, 2090), (339, 2009), (369, 1877), (371, 1874), (377, 1856), (378, 1850),

Gene: Beaver_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for Beaver_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Benczkowski14_3 Start: 5381, Stop: 3240, Start Num: 9

Candidate Starts for Benczkowski14_3:

(Start: 9 @5381 has 12 MA's), (17, 5309), (39, 5120), (41, 5111), (43, 5099), (47, 5072), (60, 4964), (64, 4934), (65, 4928), (68, 4907), (152, 4511), (153, 4508), (155, 4505), (156, 4499), (170, 4385), (177, 4358), (178, 4349), (181, 4331), (208, 4211), (219, 4139), (223, 4127), (227, 4091), (230, 4070), (238, 4034), (256, 3890), (262, 3866), (270, 3821), (279, 3773), (295, 3680), (297, 3668), (301, 3656), (306, 3632), (307, 3620), (312, 3599), (313, 3590), (317, 3572), (328, 3518), (364, 3341), (365, 3338), (379, 3281),

Gene: BenoitCattle_4 Start: 4065, Stop: 1801, Start Num: 10

Candidate Starts for BenoitCattle_4:

(2, 4167), (Start: 10 @4065 has 64 MA's), (17, 4032), (20, 4017), (51, 3762), (63, 3654), (64, 3651), (65, 3645), (66, 3642), (73, 3558), (87, 3462), (89, 3444), (94, 3402), (103, 3369), (116, 3294), (126, 3207), (130, 3192), (134, 3156), (144, 3093), (159, 2994), (165, 2967), (167, 2958), (173, 2901), (183, 2844), (194, 2793), (196, 2784), (198, 2781), (210, 2730), (213, 2697), (230, 2601), (231, 2595), (236, 2577), (242, 2535), (248, 2490), (284, 2283), (306, 2181), (312, 2148), (317, 2121), (324, 2082), (339, 2001), (369, 1869), (371, 1866), (377, 1848), (378, 1842),

Gene: Berries_2 Start: 3405, Stop: 1105, Start Num: 10

Candidate Starts for Berries_2:

(2, 3507), (Start: 10 @3405 has 64 MA's), (19, 3363), (41, 3165), (51, 3099), (65, 2982), (66, 2979), (103, 2697), (137, 2448), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (176, 2202), (208, 2052), (209, 2049), (213, 2013), (218, 1983), (224, 1962), (241, 1863), (247, 1809), (254, 1758), (257, 1743), (281, 1614), (282, 1611), (286, 1578), (309, 1464), (311, 1458), (312, 1455), (321, 1410), (351, 1254), (367, 1191), (369, 1182),

Gene: Bianmat_2 Start: 3428, Stop: 1128, Start Num: 10

Candidate Starts for Bianmat_2:

(2, 3530), (Start: 10 @3428 has 64 MA's), (19, 3386), (41, 3188), (51, 3122), (65, 3005), (66, 3002), (84, 2858), (103, 2720), (125, 2552), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (247, 1832), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: BigShaq_4 Start: 4067, Stop: 1800, Start Num: 10

Candidate Starts for BigShaq_4:

(2, 4169), (Start: 10 @4067 has 64 MA's), (17, 4034), (20, 4019), (51, 3764), (63, 3656), (64, 3653), (65, 3647), (66, 3644), (73, 3560), (108, 3350), (144, 3110), (147, 3092), (153, 3050), (160, 3011), (166, 2981), (170, 2930), (176, 2906), (188, 2840), (189, 2837), (207, 2762), (208, 2756), (209, 2753), (213, 2717), (224, 2666), (241, 2567), (250, 2495), (257, 2447), (269, 2393), (281, 2318), (282, 2315), (287, 2267), (296, 2234), (306, 2192), (309, 2168), (311, 2162), (312, 2159), (359, 1931), (375, 1871),

Gene: BillyBobJr_5 Start: 4111, Stop: 1844, Start Num: 10

Candidate Starts for BillyBobJr_5:

(Start: 10 @4111 has 64 MA's), (17, 4078), (20, 4063), (51, 3808), (65, 3691), (66, 3688), (73, 3604), (77, 3571), (103, 3415), (108, 3394), (144, 3154), (145, 3148), (147, 3136), (153, 3094), (170, 2974), (188, 2884), (194, 2857), (198, 2845), (207, 2806), (209, 2797), (211, 2773), (213, 2761), (224, 2710), (238, 2629), (241, 2611), (257, 2491), (269, 2437), (270, 2428), (279, 2383), (281, 2362), (282, 2359), (296, 2278), (306, 2236), (309, 2212), (312, 2203), (317, 2176), (359, 1975), (373, 1924), (375, 1915),

Gene: BirksAndSocks_4 Start: 4076, Stop: 1809, Start Num: 10

Candidate Starts for BirksAndSocks_4:

(Start: 10 @4076 has 64 MA's), (17, 4043), (20, 4028), (51, 3773), (65, 3656), (66, 3653), (73, 3569), (77, 3536), (91, 3443), (94, 3413), (103, 3380), (116, 3305), (119, 3263), (134, 3164), (144, 3101), (149, 3062), (159, 3002), (165, 2975), (167, 2966), (173, 2909), (183, 2852), (194, 2801), (196, 2792), (198, 2789), (210, 2738), (213, 2705), (225, 2636), (230, 2609), (231, 2603), (236, 2585), (242, 2543), (248, 2498), (284, 2291), (306, 2189), (312, 2156), (317, 2129), (321, 2111), (324, 2090), (339, 2009), (349, 1955), (369, 1877), (371, 1874), (377, 1856), (378, 1850),

Gene: Boneham_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for Boneham_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (149, 3061), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (194, 2800), (196, 2791),

(198, 2788), (210, 2737), (213, 2704), (225, 2635), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (284, 2290), (306, 2188), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (339, 2008), (349, 1954), (369, 1876), (371, 1873), (377, 1855), (378, 1849),

Gene: Breezic_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for Breezic_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Butterball_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for Butterball_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (87, 3472), (89, 3454), (94, 3412), (103, 3379), (116, 3304), (130, 3202), (134, 3163), (144, 3100), (153, 3040), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (194, 2800), (196, 2791), (210, 2737), (213, 2704), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (264, 2401), (276, 2344), (284, 2290), (306, 2188), (307, 2176), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (339, 2008), (349, 1954), (369, 1876), (371, 1873), (378, 1849),

Gene: Camerico_1 Start: 3035, Stop: 1032, Start Num: 18

Candidate Starts for Camerico_1:

(Start: 18 @3035 has 2 MA's), (22, 3014), (31, 2933), (55, 2741), (59, 2711), (65, 2672), (69, 2657), (70, 2636), (80, 2585), (99, 2507), (112, 2432), (113, 2429), (123, 2357), (131, 2309), (132, 2300), (141, 2255), (147, 2222), (154, 2180), (158, 2156), (161, 2138), (163, 2129), (179, 2030), (193, 1973), (206, 1919), (209, 1907), (213, 1880), (220, 1841), (239, 1751), (241, 1739), (243, 1724), (255, 1625), (262, 1598), (263, 1595), (264, 1586), (265, 1583), (270, 1556), (273, 1535), (275, 1532), (280, 1508), (287, 1448), (292, 1433), (297, 1412), (305, 1379), (308, 1358), (311, 1346), (324, 1283), (326, 1271), (336, 1223), (340, 1196), (344, 1175), (350, 1151),

Gene: CathyBurgh_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for CathyBurgh_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (149, 3061), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (225, 2635), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (284, 2290), (306, 2188), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (328, 2074), (338, 2014), (339, 2008), (369, 1876), (371, 1873), (378, 1849),

Gene: Charianelly_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Charianelly_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (41, 3176), (51, 3110), (65, 2993), (66, 2990), (84, 2846), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (247, 1832), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: Chelms_4 Start: 4067, Stop: 1800, Start Num: 10

Candidate Starts for Chelms_4:

(2, 4169), (Start: 10 @4067 has 64 MA's), (17, 4034), (20, 4019), (51, 3764), (63, 3656), (64, 3653), (65, 3647), (66, 3644), (73, 3560), (108, 3350), (144, 3110), (147, 3092), (148, 3086), (153, 3050), (160, 3011), (166, 2981), (170, 2930), (176, 2906), (207, 2762), (209, 2753), (213, 2717), (224, 2666),

(233, 2606), (241, 2567), (247, 2513), (250, 2495), (257, 2447), (269, 2393), (270, 2384), (276, 2354), (279, 2339), (281, 2318), (282, 2315), (284, 2297), (296, 2234), (306, 2192), (309, 2168), (311, 2162), (312, 2159), (322, 2105), (359, 1931), (375, 1871),

Gene: CinnamonToast_5 Start: 4111, Stop: 1844, Start Num: 10

Candidate Starts for CinnamonToast_5:

(Start: 10 @4111 has 64 MA's), (17, 4078), (20, 4063), (51, 3808), (65, 3691), (66, 3688), (73, 3604), (77, 3571), (103, 3415), (108, 3394), (144, 3154), (145, 3148), (147, 3136), (153, 3094), (170, 2974), (188, 2884), (194, 2857), (198, 2845), (207, 2806), (209, 2797), (211, 2773), (213, 2761), (224, 2710), (238, 2629), (241, 2611), (257, 2491), (269, 2437), (270, 2428), (279, 2383), (281, 2362), (282, 2359), (296, 2278), (306, 2236), (309, 2212), (312, 2203), (317, 2176), (359, 1975), (373, 1924), (375, 1915),

Gene: Crete_5 Start: 4318, Stop: 2051, Start Num: 10

Candidate Starts for Crete_5:

(2, 4420), (Start: 10 @4318 has 64 MA's), (17, 4285), (20, 4270), (51, 4015), (64, 3904), (65, 3898), (66, 3895), (73, 3811), (88, 3706), (108, 3601), (144, 3361), (147, 3343), (148, 3337), (153, 3301), (160, 3262), (166, 3232), (170, 3181), (176, 3157), (188, 3091), (207, 3013), (208, 3007), (209, 3004), (213, 2968), (224, 2917), (241, 2818), (247, 2764), (250, 2746), (257, 2698), (269, 2644), (281, 2569), (282, 2566), (287, 2518), (296, 2485), (305, 2446), (306, 2443), (309, 2419), (311, 2413), (312, 2410), (359, 2182), (375, 2122),

Gene: Dakiti_4 Start: 4067, Stop: 1800, Start Num: 10

Candidate Starts for Dakiti_4:

(2, 4169), (Start: 10 @4067 has 64 MA's), (17, 4034), (20, 4019), (51, 3764), (63, 3656), (64, 3653), (65, 3647), (66, 3644), (73, 3560), (108, 3350), (144, 3110), (147, 3092), (153, 3050), (160, 3011), (166, 2981), (170, 2930), (176, 2906), (188, 2840), (189, 2837), (207, 2762), (208, 2756), (209, 2753), (213, 2717), (224, 2666), (241, 2567), (250, 2495), (257, 2447), (269, 2393), (281, 2318), (282, 2315), (287, 2267), (296, 2234), (305, 2195), (306, 2192), (309, 2168), (311, 2162), (312, 2159), (322, 2105), (359, 1931), (375, 1871),

Gene: Damp_2 Start: 3408, Stop: 1105, Start Num: 10

Candidate Starts for Damp_2:

(Start: 10 @3408 has 64 MA's), (41, 3165), (51, 3099), (64, 2988), (65, 2982), (66, 2979), (103, 2697), (125, 2529), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (173, 2217), (176, 2202), (194, 2109), (208, 2052), (209, 2049), (213, 2013), (216, 1998), (218, 1983), (219, 1980), (224, 1962), (241, 1863), (257, 1743), (270, 1680), (282, 1611), (301, 1512), (306, 1488), (309, 1464), (311, 1458), (312, 1455), (339, 1314), (351, 1254), (369, 1182),

Gene: Demosthenes_3 Start: 5278, Stop: 3137, Start Num: 9

Candidate Starts for Demosthenes_3:

(Start: 9 @5278 has 12 MA's), (17, 5206), (39, 5017), (41, 5008), (43, 4996), (47, 4969), (60, 4861), (64, 4831), (65, 4825), (68, 4804), (152, 4408), (155, 4402), (156, 4396), (167, 4330), (194, 4165), (195, 4162), (206, 4117), (208, 4108), (219, 4036), (223, 4024), (227, 3988), (230, 3967), (259, 3778), (270, 3718), (295, 3577), (301, 3553), (304, 3544), (306, 3529), (307, 3517), (312, 3496), (313, 3487), (317, 3469), (328, 3415), (363, 3241), (364, 3238), (379, 3178),

Gene: Diabla_4 Start: 4098, Stop: 1813, Start Num: 10

Candidate Starts for Diabla_4:

(Start: 10 @4098 has 64 MA's), (17, 4065), (20, 4050), (51, 3795), (63, 3687), (65, 3678), (73, 3591), (91, 3465), (94, 3435), (103, 3402), (126, 3222), (144, 3105), (146, 3093), (159, 3006), (165, 2979), (167, 2970), (173, 2913), (175, 2910), (183, 2856), (194, 2805), (198, 2793), (200, 2784), (205, 2766), (210, 2742), (211, 2721), (213, 2709), (230, 2613), (231, 2607), (236, 2589), (242, 2547), (248, 2502), (274, 2352), (284, 2295), (306, 2193), (312, 2160), (317, 2133), (321, 2115), (324, 2094), (329, 2076),

(357, 1929), (369, 1881), (371, 1878), (377, 1860), (378, 1854),

Gene: DocB7_102 Start: 73654, Stop: 71792, Start Num: 23

Candidate Starts for DocB7_102:

(13, 73714), (23, 73654), (27, 73603), (29, 73594), (49, 73426), (54, 73399), (58, 73357), (60, 73345), (111, 73105), (131, 73003), (141, 72949), (147, 72916), (148, 72910), (163, 72823), (171, 72763), (211, 72634), (221, 72580), (229, 72541), (242, 72469), (261, 72355), (266, 72337), (293, 72175), (304, 72136), (311, 72091), (316, 72064), (325, 72013), (358, 71860),

Gene: Eggsie_4 Start: 4087, Stop: 1802, Start Num: 10

Candidate Starts for Eggsie_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (63, 3676), (65, 3667), (73, 3580), (77, 3547), (91, 3454), (94, 3424), (103, 3391), (126, 3211), (134, 3157), (144, 3094), (146, 3082), (149, 3055), (167, 2959), (173, 2902), (194, 2794), (195, 2791), (198, 2782), (200, 2773), (205, 2755), (210, 2731), (211, 2710), (213, 2698), (230, 2602), (231, 2596), (242, 2536), (248, 2491), (274, 2341), (284, 2284), (306, 2182), (312, 2149), (317, 2122), (321, 2104), (324, 2083), (339, 2002), (349, 1948), (353, 1936), (357, 1918), (369, 1870), (371, 1867), (378, 1843),

Gene: Ekhein_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for Ekhein_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (185, 2836), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (225, 2635), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (284, 2290), (306, 2188), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (328, 2074), (338, 2014), (339, 2008), (369, 1876), (371, 1873), (378, 1849),

Gene: Exiguo_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for Exiguo_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (53, 3769), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: FelixAlejandro_5 Start: 4273, Stop: 2006, Start Num: 10

Candidate Starts for FelixAlejandro_5:

(Start: 10 @4273 has 64 MA's), (17, 4240), (20, 4225), (51, 3970), (65, 3853), (66, 3850), (73, 3766), (77, 3733), (87, 3670), (89, 3652), (94, 3610), (103, 3577), (116, 3502), (130, 3400), (134, 3361), (144, 3298), (153, 3238), (159, 3199), (165, 3172), (167, 3163), (173, 3106), (194, 2998), (196, 2989), (210, 2935), (213, 2902), (230, 2806), (231, 2800), (236, 2782), (242, 2740), (248, 2695), (264, 2599), (276, 2542), (284, 2488), (297, 2422), (306, 2386), (307, 2374), (312, 2353), (317, 2326), (321, 2308), (324, 2287), (339, 2206), (349, 2152), (369, 2074), (371, 2071), (377, 2053), (378, 2047),

Gene: Flakey_4 Start: 4076, Stop: 1809, Start Num: 10

Candidate Starts for Flakey_4:

(Start: 10 @4076 has 64 MA's), (17, 4043), (20, 4028), (51, 3773), (65, 3656), (66, 3653), (73, 3569), (77, 3536), (91, 3443), (94, 3413), (103, 3380), (116, 3305), (119, 3263), (134, 3164), (144, 3101), (159, 3002), (165, 2975), (167, 2966), (173, 2909), (183, 2852), (194, 2801), (196, 2792), (198, 2789), (210, 2738), (213, 2705), (230, 2609), (231, 2603), (236, 2585), (242, 2543), (248, 2498), (284, 2291), (306, 2189), (307, 2177), (312, 2156), (317, 2129), (321, 2111), (324, 2090), (369, 1877), (371, 1874), (378, 1850),

Gene: GMA3_100 Start: 75102, Stop: 73141, Start Num: 14

Candidate Starts for GMA3_100:

(14, 75102), (38, 74913), (40, 74904), (49, 74838), (50, 74835), (55, 74784), (65, 74715), (66, 74712), (83, 74619), (109, 74529), (115, 74508), (122, 74463), (131, 74415), (135, 74391), (141, 74361), (142, 74355), (144, 74343), (150, 74304), (161, 74244), (179, 74136), (191, 74079), (203, 74037), (211, 73995), (220, 73944), (221, 73941), (234, 73878), (243, 73827), (257, 73722), (260, 73716), (265, 73692), (270, 73665), (273, 73647), (275, 73644), (293, 73542), (307, 73476), (311, 73458), (326, 73386), (328, 73383), (333, 73359), (351, 73257),

Gene: GMA7_97 Start: 71620, Stop: 69377, Start Num: 10

Candidate Starts for GMA7_97:

(Start: 10 @71620 has 64 MA's), (16, 71587), (44, 71353), (51, 71320), (54, 71296), (63, 71212), (65, 71203), (68, 71182), (79, 71071), (101, 70966), (144, 70678), (147, 70660), (151, 70624), (158, 70591), (165, 70555), (167, 70546), (170, 70498), (176, 70474), (208, 70324), (209, 70321), (213, 70285), (224, 70234), (233, 70174), (236, 70165), (250, 70063), (257, 70015), (260, 70006), (268, 69970), (282, 69883), (299, 69793), (306, 69760), (309, 69736), (312, 69727), (324, 69661), (341, 69565), (351, 69526), (357, 69502), (379, 69415),

Gene: GTE7_97 Start: 72617, Stop: 70374, Start Num: 10

Candidate Starts for GTE7_97:

(Start: 10 @72617 has 64 MA's), (16, 72584), (44, 72350), (51, 72317), (54, 72293), (63, 72209), (65, 72200), (68, 72179), (79, 72068), (101, 71963), (127, 71789), (144, 71675), (147, 71657), (151, 71621), (158, 71588), (165, 71552), (170, 71495), (176, 71471), (208, 71321), (209, 71318), (213, 71282), (224, 71231), (233, 71171), (236, 71162), (241, 71132), (250, 71060), (257, 71012), (260, 71003), (268, 70967), (282, 70880), (299, 70790), (306, 70757), (309, 70733), (312, 70724), (324, 70658), (341, 70562), (347, 70541), (351, 70523), (357, 70499), (379, 70412),

Gene: GalacticEye_2 Start: 3405, Stop: 1105, Start Num: 10

Candidate Starts for GalacticEye_2:

(2, 3507), (Start: 10 @3405 has 64 MA's), (19, 3363), (41, 3165), (51, 3099), (65, 2982), (66, 2979), (103, 2697), (137, 2448), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (176, 2202), (208, 2052), (209, 2049), (213, 2013), (218, 1983), (224, 1962), (241, 1863), (247, 1809), (254, 1758), (257, 1743), (281, 1614), (282, 1611), (286, 1578), (309, 1464), (311, 1458), (312, 1455), (321, 1410), (351, 1254), (367, 1191), (369, 1182),

Gene: Gibbles_1 Start: 2768, Stop: 786, Start Num: 15

Candidate Starts for Gibbles_1:

(Start: 12 @2780 has 1 MA's), (Start: 15 @2768 has 4 MA's), (28, 2672), (32, 2639), (33, 2633), (45, 2531), (63, 2390), (65, 2381), (78, 2297), (81, 2291), (86, 2279), (122, 2111), (131, 2063), (150, 1952), (179, 1787), (184, 1748), (190, 1733), (209, 1658), (213, 1631), (222, 1589), (228, 1556), (271, 1307), (273, 1292), (275, 1289), (277, 1283), (284, 1238), (288, 1205), (292, 1190), (300, 1163), (314, 1088), (318, 1070), (340, 947), (346, 914), (357, 869), (372, 815),

Gene: Gmala1_88 Start: 73511, Stop: 71493, Start Num: 11

Candidate Starts for Gmala1_88:

(11, 73511), (27, 73397), (55, 73172), (63, 73112), (65, 73103), (69, 73088), (72, 73046), (75, 73031), (83, 73004), (104, 72926), (107, 72917), (110, 72902), (129, 72770), (131, 72764), (132, 72755), (141, 72710), (148, 72671), (150, 72653), (161, 72593), (165, 72572), (179, 72485), (201, 72380), (213, 72320), (239, 72191), (241, 72179), (244, 72155), (255, 72071), (262, 72044), (263, 72041), (265, 72029), (270, 72002), (281, 71945), (283, 71927), (287, 71897), (290, 71888), (292, 71882), (308, 71807), (311, 71795), (332, 71699), (336, 71675), (342, 71636), (346, 71621), (355, 71588), (362, 71564), (380, 71507),

Gene: GordDuk1_95 Start: 74616, Stop: 72598, Start Num: 11

Candidate Starts for GordDuk1_95:

(11, 74616), (27, 74502), (45, 74358), (55, 74277), (63, 74217), (65, 74208), (69, 74193), (72, 74151), (75, 74136), (80, 74118), (104, 74031), (107, 74022), (110, 74007), (131, 73869), (141, 73815), (148, 73776), (149, 73761), (161, 73698), (165, 73677), (179, 73590), (184, 73551), (194, 73512), (201, 73485), (213, 73425), (221, 73383), (228, 73353), (239, 73296), (244, 73260), (262, 73149), (263, 73146), (264, 73137), (265, 73134), (270, 73107), (281, 73050), (283, 73032), (287, 73002), (290, 72993), (292, 72987), (299, 72963), (308, 72912), (332, 72804), (336, 72780), (337, 72768), (342, 72741), (355, 72693), (380, 72612),

Gene: GordTnk2_96 Start: 74328, Stop: 72310, Start Num: 11

Candidate Starts for GordTnk2_96:

(11, 74328), (27, 74214), (55, 73989), (63, 73929), (65, 73920), (69, 73905), (72, 73863), (75, 73848), (104, 73743), (107, 73734), (110, 73719), (131, 73581), (141, 73527), (148, 73488), (149, 73473), (161, 73410), (165, 73389), (179, 73302), (184, 73263), (194, 73224), (201, 73197), (213, 73137), (239, 73008), (241, 72996), (244, 72972), (255, 72888), (262, 72861), (263, 72858), (265, 72846), (270, 72819), (281, 72762), (283, 72744), (287, 72714), (290, 72705), (292, 72699), (308, 72624), (311, 72612), (332, 72516), (336, 72492), (342, 72453), (346, 72438), (355, 72405), (362, 72381), (380, 72324),

Gene: Gorko_4 Start: 4076, Stop: 1809, Start Num: 10

Candidate Starts for Gorko_4:

(Start: 10 @4076 has 64 MA's), (17, 4043), (20, 4028), (51, 3773), (65, 3656), (66, 3653), (73, 3569), (77, 3536), (91, 3443), (94, 3413), (103, 3380), (116, 3305), (119, 3263), (134, 3164), (144, 3101), (159, 3002), (165, 2975), (167, 2966), (173, 2909), (183, 2852), (194, 2801), (196, 2792), (198, 2789), (210, 2738), (213, 2705), (225, 2636), (230, 2609), (231, 2603), (236, 2585), (242, 2543), (248, 2498), (264, 2402), (284, 2291), (306, 2189), (307, 2177), (312, 2156), (317, 2129), (321, 2111), (324, 2090), (369, 1877), (371, 1874), (378, 1850),

Gene: GourdThymes_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for GourdThymes_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (225, 2635), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (260, 2425), (284, 2290), (306, 2188), (307, 2176), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (328, 2074), (338, 2014), (339, 2008), (351, 1948), (352, 1945), (369, 1876), (371, 1873), (378, 1849),

Gene: Guillaume_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Guillaume_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (41, 3176), (51, 3110), (65, 2993), (66, 2990), (84, 2846), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: Hail2Pitt_2 Start: 3394, Stop: 1106, Start Num: 10

Candidate Starts for Hail2Pitt_2:

(2, 3496), (Start: 10 @3394 has 64 MA's), (19, 3352), (37, 3172), (46, 3121), (51, 3088), (63, 2980), (64, 2977), (65, 2971), (66, 2968), (84, 2824), (103, 2698), (137, 2449), (144, 2407), (145, 2401), (147, 2389), (170, 2227), (176, 2203), (188, 2137), (198, 2098), (208, 2053), (209, 2050), (213, 2014), (224, 1963), (233, 1903), (241, 1864), (254, 1759), (257, 1744), (281, 1615), (282, 1612), (286, 1579), (309,

1465), (311, 1459), (312, 1456), (317, 1429), (321, 1411), (331, 1357), (351, 1255),

Gene: Harambe_2 Start: 3415, Stop: 1127, Start Num: 10

Candidate Starts for Harambe_2:

(2, 3517), (Start: 10 @3415 has 64 MA's), (19, 3373), (37, 3193), (46, 3142), (51, 3109), (63, 3001), (64, 2998), (65, 2992), (66, 2989), (84, 2845), (103, 2719), (137, 2470), (144, 2428), (145, 2422), (147, 2410), (170, 2248), (176, 2224), (188, 2158), (198, 2119), (208, 2074), (209, 2071), (213, 2035), (224, 1984), (233, 1924), (241, 1885), (254, 1780), (257, 1765), (281, 1636), (282, 1633), (286, 1600), (309, 1486), (311, 1480), (312, 1477), (317, 1450), (321, 1432), (331, 1378), (351, 1276),

Gene: HayZem_4 Start: 4012, Stop: 1769, Start Num: 10

Candidate Starts for HayZem_4:

(Start: 10 @4012 has 64 MA's), (16, 3979), (51, 3712), (54, 3688), (65, 3595), (66, 3592), (68, 3574), (79, 3463), (101, 3358), (127, 3184), (144, 3070), (147, 3052), (151, 3016), (158, 2983), (165, 2947), (167, 2938), (170, 2890), (176, 2866), (208, 2716), (209, 2713), (213, 2677), (224, 2626), (233, 2566), (236, 2557), (241, 2527), (250, 2455), (257, 2407), (260, 2398), (268, 2362), (282, 2275), (285, 2254), (306, 2152), (309, 2128), (312, 2119), (324, 2053), (341, 1957), (351, 1918), (357, 1894), (379, 1807),

Gene: Hello_2 Start: 3405, Stop: 1105, Start Num: 10

Candidate Starts for Hello_2:

(2, 3507), (Start: 10 @3405 has 64 MA's), (19, 3363), (51, 3099), (65, 2982), (66, 2979), (103, 2697), (125, 2529), (137, 2448), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (176, 2202), (188, 2136), (198, 2097), (208, 2052), (209, 2049), (213, 2013), (224, 1962), (233, 1902), (241, 1863), (247, 1809), (254, 1758), (257, 1743), (281, 1614), (282, 1611), (286, 1578), (309, 1464), (311, 1458), (312, 1455), (317, 1428), (321, 1410), (331, 1356), (351, 1254),

Gene: Hollow_3 Start: 5316, Stop: 3175, Start Num: 9

Candidate Starts for Hollow_3:

(Start: 9 @5316 has 12 MA's), (17, 5244), (39, 5055), (41, 5046), (43, 5034), (47, 5007), (60, 4899), (64, 4869), (65, 4863), (68, 4842), (152, 4446), (153, 4443), (155, 4440), (156, 4434), (170, 4320), (177, 4293), (178, 4284), (181, 4266), (186, 4236), (194, 4203), (206, 4155), (208, 4146), (219, 4074), (223, 4062), (230, 4005), (247, 3897), (262, 3801), (270, 3756), (295, 3615), (301, 3591), (306, 3567), (307, 3555), (312, 3534), (313, 3525), (328, 3453), (364, 3276),

Gene: Hotorobo_4 Start: 4086, Stop: 1819, Start Num: 10

Candidate Starts for Hotorobo_4:

(Start: 10 @4086 has 64 MA's), (17, 4053), (20, 4038), (51, 3783), (65, 3666), (66, 3663), (73, 3579), (77, 3546), (103, 3390), (108, 3369), (144, 3129), (145, 3123), (147, 3111), (153, 3069), (170, 2949), (188, 2859), (194, 2832), (198, 2820), (207, 2781), (209, 2772), (211, 2748), (213, 2736), (224, 2685), (238, 2604), (241, 2586), (257, 2466), (269, 2412), (270, 2403), (279, 2358), (281, 2337), (282, 2334), (296, 2253), (306, 2211), (309, 2187), (312, 2178), (317, 2151), (359, 1950), (373, 1899), (375, 1890),

Gene: Jams_2 Start: 3428, Stop: 1128, Start Num: 10

Candidate Starts for Jams_2:

(2, 3530), (Start: 10 @3428 has 64 MA's), (19, 3386), (46, 3155), (51, 3122), (65, 3005), (66, 3002), (103, 2720), (125, 2552), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (173, 2240), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (216, 2021), (218, 2006), (219, 2003), (224, 1985), (241, 1886), (257, 1766), (270, 1703), (282, 1634), (301, 1535), (306, 1511), (309, 1487), (311, 1481), (312, 1478), (339, 1337), (351, 1277), (367, 1214), (369, 1205),

Gene: Jellybones_4 Start: 4110, Stop: 1843, Start Num: 10

Candidate Starts for Jellybones_4:

(Start: 10 @4110 has 64 MA's), (17, 4077), (20, 4062), (51, 3807), (65, 3690), (66, 3687), (73, 3603), (77, 3570), (108, 3393), (144, 3153), (145, 3147), (147, 3135), (153, 3093), (170, 2973), (188, 2883), (194, 2856), (198, 2844), (207, 2805), (209, 2796), (211, 2772), (213, 2760), (224, 2709), (238, 2628), (241, 2610), (250, 2538), (257, 2490), (269, 2436), (270, 2427), (279, 2382), (281, 2361), (282, 2358), (296, 2277), (306, 2235), (309, 2211), (312, 2202), (317, 2175), (359, 1974), (373, 1923), (375, 1914),

Gene: John316_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for John316_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (149, 3061), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (260, 2425), (284, 2290), (306, 2188), (307, 2176), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (339, 2008), (369, 1876), (371, 1873), (377, 1855), (378, 1849),

Gene: Jormungandr_2 Start: 3414, Stop: 1126, Start Num: 10

Candidate Starts for Jormungandr_2:

(2, 3516), (Start: 10 @3414 has 64 MA's), (19, 3372), (51, 3108), (63, 3000), (64, 2997), (65, 2991), (66, 2988), (84, 2844), (103, 2718), (137, 2469), (144, 2427), (145, 2421), (147, 2409), (170, 2247), (176, 2223), (188, 2157), (198, 2118), (208, 2073), (209, 2070), (213, 2034), (224, 1983), (233, 1923), (241, 1884), (254, 1779), (257, 1764), (282, 1632), (286, 1599), (301, 1533), (309, 1485), (311, 1479), (312, 1476), (321, 1431), (331, 1377), (351, 1275),

Gene: Jumbo_1 Start: 3224, Stop: 1203, Start Num: 18

Candidate Starts for Jumbo_1:

(4, 3335), (5, 3326), (8, 3311), (Start: 18 @3224 has 2 MA's), (36, 3053), (41, 3029), (55, 2918), (75, 2780), (80, 2762), (104, 2672), (105, 2669), (111, 2630), (121, 2567), (128, 2516), (132, 2495), (141, 2450), (142, 2444), (147, 2417), (154, 2375), (161, 2333), (165, 2312), (175, 2252), (187, 2180), (198, 2141), (204, 2126), (205, 2123), (208, 2105), (226, 2009), (230, 1988), (241, 1934), (243, 1919), (248, 1874), (263, 1796), (265, 1784), (270, 1757), (275, 1733), (287, 1649), (307, 1565), (308, 1559), (312, 1544), (314, 1532), (330, 1460), (337, 1415), (347, 1370), (351, 1352), (376, 1259),

Gene: Kampe_1 Start: 2767, Stop: 785, Start Num: 15

Candidate Starts for Kampe_1:

(Start: 12 @2779 has 1 MA's), (Start: 15 @2767 has 4 MA's), (28, 2671), (32, 2638), (33, 2632), (45, 2530), (63, 2389), (78, 2296), (81, 2290), (86, 2278), (131, 2062), (136, 2038), (179, 1786), (184, 1747), (190, 1732), (209, 1657), (213, 1630), (222, 1588), (271, 1306), (273, 1291), (275, 1288), (277, 1282), (284, 1237), (288, 1204), (292, 1189), (300, 1162), (314, 1087), (318, 1069), (340, 946), (346, 913), (357, 868), (372, 814),

Gene: Kaseim_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Kaseim_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (46, 3143), (51, 3110), (65, 2993), (66, 2990), (84, 2846), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (247, 1832), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: Katyusha_3 Start: 5381, Stop: 3240, Start Num: 9

Candidate Starts for Katyusha_3:

(Start: 9 @5381 has 12 MA's), (17, 5309), (39, 5120), (41, 5111), (43, 5099), (47, 5072), (60, 4964), (64, 4934), (65, 4928), (68, 4907), (152, 4511), (153, 4508), (155, 4505), (156, 4499), (170, 4385), (177, 4358), (178, 4349), (181, 4331), (208, 4211), (219, 4139), (223, 4127), (227, 4091), (230, 4070),

(238, 4034), (256, 3890), (262, 3866), (270, 3821), (279, 3773), (295, 3680), (297, 3668), (301, 3656), (306, 3632), (307, 3620), (312, 3599), (313, 3590), (317, 3572), (328, 3518), (364, 3341), (365, 3338), (379, 3281),

Gene: Kelzog_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for Kelzog_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Kvothe_3 Start: 5336, Stop: 3195, Start Num: 9

Candidate Starts for Kvothe_3:

(Start: 9 @5336 has 12 MA's), (39, 5075), (41, 5066), (43, 5054), (47, 5027), (50, 5003), (60, 4919), (64, 4889), (65, 4883), (68, 4862), (114, 4637), (152, 4466), (153, 4463), (155, 4460), (156, 4454), (170, 4340), (178, 4304), (181, 4286), (219, 4094), (223, 4082), (230, 4025), (238, 3989), (244, 3947), (247, 3917), (248, 3914), (262, 3821), (266, 3800), (267, 3797), (270, 3776), (295, 3635), (301, 3611), (306, 3587), (307, 3575), (312, 3554), (313, 3545), (317, 3527), (328, 3473), (360, 3311), (364, 3296), (365, 3293), (379, 3236),

Gene: Lahirium_2 Start: 3415, Stop: 1127, Start Num: 10

Candidate Starts for Lahirium_2:

(2, 3517), (Start: 10 @3415 has 64 MA's), (19, 3373), (37, 3193), (46, 3142), (51, 3109), (63, 3001), (64, 2998), (65, 2992), (66, 2989), (84, 2845), (103, 2719), (137, 2470), (144, 2428), (145, 2422), (147, 2410), (170, 2248), (176, 2224), (188, 2158), (198, 2119), (208, 2074), (209, 2071), (213, 2035), (224, 1984), (233, 1924), (241, 1885), (254, 1780), (257, 1765), (281, 1636), (282, 1633), (286, 1600), (309, 1486), (311, 1480), (312, 1477), (317, 1450), (321, 1432), (331, 1378), (351, 1276),

Gene: Lidong_2 Start: 3405, Stop: 1105, Start Num: 10

Candidate Starts for Lidong_2:

(2, 3507), (Start: 10 @3405 has 64 MA's), (19, 3363), (41, 3165), (51, 3099), (65, 2982), (66, 2979), (103, 2697), (137, 2448), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (176, 2202), (208, 2052), (209, 2049), (213, 2013), (218, 1983), (224, 1962), (241, 1863), (247, 1809), (254, 1758), (257, 1743), (281, 1614), (282, 1611), (286, 1578), (309, 1464), (311, 1458), (312, 1455), (321, 1410), (351, 1254), (367, 1191), (369, 1182),

Gene: Linetti_5 Start: 4220, Stop: 1965, Start Num: 10

Candidate Starts for Linetti_5:

(2, 4322), (Start: 10 @4220 has 64 MA's), (17, 4187), (20, 4172), (51, 3917), (63, 3809), (64, 3806), (65, 3800), (66, 3797), (73, 3713), (94, 3569), (103, 3536), (116, 3461), (126, 3374), (130, 3359), (134, 3320), (144, 3257), (159, 3158), (165, 3131), (167, 3122), (173, 3065), (183, 3008), (194, 2957), (196, 2948), (198, 2945), (210, 2894), (213, 2861), (230, 2765), (231, 2759), (236, 2741), (248, 2654), (284, 2447), (306, 2345), (307, 2333), (312, 2312), (317, 2285), (321, 2267), (324, 2246), (339, 2165), (369, 2033), (371, 2030), (377, 2012), (378, 2006),

Gene: Lizzo_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for Lizzo_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (51, 3772), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (149, 3061), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (225, 2635), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (284, 2290), (306, 2188), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (328, 2074),

(338, 2014), (339, 2008), (369, 1876), (371, 1873), (378, 1849),

Gene: Luker_2 Start: 3394, Stop: 1106, Start Num: 10

Candidate Starts for Luker_2:

(2, 3496), (Start: 10 @3394 has 64 MA's), (19, 3352), (37, 3172), (46, 3121), (51, 3088), (63, 2980), (64, 2977), (65, 2971), (66, 2968), (103, 2698), (137, 2449), (144, 2407), (145, 2401), (147, 2389), (170, 2227), (176, 2203), (188, 2137), (198, 2098), (208, 2053), (209, 2050), (213, 2014), (224, 1963), (233, 1903), (241, 1864), (254, 1759), (257, 1744), (281, 1615), (282, 1612), (286, 1579), (309, 1465), (311, 1459), (312, 1456), (317, 1429), (321, 1411), (331, 1357), (351, 1255),

Gene: Mbo2_110 Start: 79722, Stop: 77578, Start Num: 6

Candidate Starts for Mbo2_110:

(6, 79722), (70, 79203), (124, 78840), (129, 78816), (131, 78810), (132, 78801), (141, 78756), (145, 78735), (150, 78699), (164, 78621), (174, 78561), (180, 78531), (199, 78468), (211, 78423), (212, 78414), (213, 78411), (239, 78282), (246, 78228), (251, 78195), (260, 78147), (262, 78138), (263, 78135), (272, 78087), (283, 78021), (291, 77976), (292, 77973), (296, 77958), (302, 77934), (304, 77931), (307, 77904), (310, 77889), (319, 77847), (328, 77802), (335, 77766), (347, 77703), (348, 77694), (356, 77667), (374, 77598),

Gene: Minos_2 Start: 3408, Stop: 1105, Start Num: 10

Candidate Starts for Minos_2:

(Start: 10 @3408 has 64 MA's), (41, 3165), (51, 3099), (65, 2982), (66, 2979), (103, 2697), (125, 2529), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (173, 2217), (176, 2202), (194, 2109), (208, 2052), (209, 2049), (213, 2013), (216, 1998), (218, 1983), (219, 1980), (224, 1962), (241, 1863), (257, 1743), (270, 1680), (282, 1611), (301, 1512), (306, 1488), (309, 1464), (311, 1458), (312, 1455), (339, 1314), (351, 1254), (369, 1182),

Gene: Monty_4 Start: 4088, Stop: 1821, Start Num: 10

Candidate Starts for Monty_4:

(Start: 10 @4088 has 64 MA's), (17, 4055), (20, 4040), (51, 3785), (65, 3668), (66, 3665), (73, 3581), (77, 3548), (103, 3392), (108, 3371), (144, 3131), (145, 3125), (147, 3113), (153, 3071), (170, 2951), (188, 2861), (194, 2834), (198, 2822), (207, 2783), (209, 2774), (211, 2750), (213, 2738), (224, 2687), (238, 2606), (241, 2588), (257, 2468), (269, 2414), (270, 2405), (279, 2360), (281, 2339), (282, 2336), (296, 2255), (306, 2213), (309, 2189), (312, 2180), (317, 2153), (359, 1952), (373, 1901), (375, 1892),

Gene: MrWormie_2 Start: 3394, Stop: 1106, Start Num: 10

Candidate Starts for MrWormie_2:

(2, 3496), (Start: 10 @3394 has 64 MA's), (19, 3352), (46, 3121), (51, 3088), (63, 2980), (64, 2977), (65, 2971), (66, 2968), (84, 2824), (103, 2698), (137, 2449), (144, 2407), (145, 2401), (147, 2389), (170, 2227), (176, 2203), (208, 2053), (209, 2050), (213, 2014), (218, 1984), (224, 1963), (241, 1864), (247, 1810), (254, 1759), (257, 1744), (281, 1615), (282, 1612), (286, 1579), (309, 1465), (311, 1459), (312, 1456), (321, 1411), (351, 1255), (367, 1192), (369, 1183),

Gene: Msay19_5 Start: 4265, Stop: 1998, Start Num: 10

Candidate Starts for Msay19_5:

(Start: 10 @4265 has 64 MA's), (17, 4232), (20, 4217), (51, 3962), (65, 3845), (66, 3842), (73, 3758), (77, 3725), (87, 3662), (89, 3644), (94, 3602), (103, 3569), (116, 3494), (134, 3353), (144, 3290), (159, 3191), (165, 3164), (167, 3155), (173, 3098), (194, 2990), (196, 2981), (210, 2927), (213, 2894), (230, 2798), (231, 2792), (236, 2774), (242, 2732), (248, 2687), (264, 2591), (276, 2534), (284, 2480), (297, 2414), (306, 2378), (307, 2366), (312, 2345), (317, 2318), (321, 2300), (324, 2279), (339, 2198), (352, 2135), (357, 2114), (369, 2066), (371, 2063), (378, 2039),

Gene: Neoevie_2 Start: 3392, Stop: 1104, Start Num: 10

Candidate Starts for Neeveie_2:

(2, 3494), (Start: 10 @3392 has 64 MA's), (19, 3350), (37, 3170), (46, 3119), (51, 3086), (63, 2978), (64, 2975), (65, 2969), (66, 2966), (84, 2822), (103, 2696), (137, 2447), (144, 2405), (145, 2399), (147, 2387), (170, 2225), (176, 2201), (188, 2135), (198, 2096), (208, 2051), (209, 2048), (213, 2012), (224, 1961), (233, 1901), (241, 1862), (254, 1757), (257, 1742), (281, 1613), (282, 1610), (286, 1577), (309, 1463), (311, 1457), (312, 1454), (317, 1427), (321, 1409), (331, 1355), (351, 1253),

Gene: Newt_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Newt_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (41, 3176), (51, 3110), (65, 2993), (66, 2990), (84, 2846), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (247, 1832), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: Niagara_3 Start: 5338, Stop: 3197, Start Num: 9

Candidate Starts for Niagara_3:

(Start: 9 @5338 has 12 MA's), (17, 5266), (24, 5224), (39, 5077), (41, 5068), (43, 5056), (47, 5029), (60, 4921), (64, 4891), (65, 4885), (68, 4864), (152, 4468), (153, 4465), (155, 4462), (156, 4456), (170, 4342), (177, 4315), (178, 4306), (181, 4288), (186, 4258), (194, 4225), (208, 4168), (219, 4096), (223, 4084), (227, 4048), (230, 4027), (247, 3919), (262, 3823), (270, 3778), (295, 3637), (301, 3613), (306, 3589), (312, 3556), (313, 3547), (317, 3529), (328, 3475), (363, 3301), (379, 3238),

Gene: Nimi13_2 Start: 3417, Stop: 1129, Start Num: 10

Candidate Starts for Nimi13_2:

(2, 3519), (Start: 10 @3417 has 64 MA's), (19, 3375), (41, 3177), (51, 3111), (65, 2994), (66, 2991), (84, 2847), (103, 2721), (137, 2472), (144, 2430), (145, 2424), (147, 2412), (170, 2250), (176, 2226), (208, 2076), (209, 2073), (213, 2037), (218, 2007), (224, 1986), (241, 1887), (247, 1833), (254, 1782), (257, 1767), (281, 1638), (282, 1635), (286, 1602), (309, 1488), (311, 1482), (312, 1479), (321, 1434), (351, 1278), (367, 1215), (369, 1206),

Gene: Orchid_1 Start: 2767, Stop: 785, Start Num: 15

Candidate Starts for Orchid_1:

(Start: 12 @2779 has 1 MA's), (Start: 15 @2767 has 4 MA's), (28, 2671), (32, 2638), (33, 2632), (45, 2530), (63, 2389), (78, 2296), (81, 2290), (86, 2278), (131, 2062), (136, 2038), (179, 1786), (184, 1747), (190, 1732), (209, 1657), (213, 1630), (222, 1588), (271, 1306), (273, 1291), (275, 1288), (277, 1282), (284, 1237), (288, 1204), (292, 1189), (300, 1162), (314, 1087), (318, 1069), (340, 946), (346, 913), (357, 868), (372, 814),

Gene: PatrickStar_1 Start: 2767, Stop: 785, Start Num: 15

Candidate Starts for PatrickStar_1:

(Start: 12 @2779 has 1 MA's), (Start: 15 @2767 has 4 MA's), (28, 2671), (32, 2638), (33, 2632), (45, 2530), (63, 2389), (78, 2296), (81, 2290), (86, 2278), (131, 2062), (136, 2038), (179, 1786), (184, 1747), (190, 1732), (209, 1657), (213, 1630), (222, 1588), (271, 1306), (273, 1291), (275, 1288), (277, 1282), (284, 1237), (288, 1204), (292, 1189), (300, 1162), (314, 1087), (318, 1069), (340, 946), (346, 913), (357, 868), (372, 814),

Gene: Philon9_3 Start: 4857, Stop: 2704, Start Num: 9

Candidate Starts for Philon9_3:

(Start: 9 @4857 has 12 MA's), (21, 4764), (24, 4743), (34, 4635), (39, 4596), (47, 4548), (60, 4440), (65, 4404), (68, 4383), (138, 4062), (142, 4044), (152, 3975), (153, 3972), (156, 3963), (167, 3897), (170, 3849), (181, 3795), (186, 3765), (194, 3732), (219, 3603), (220, 3597), (223, 3591), (227, 3555), (228, 3552), (232, 3525), (244, 3456), (255, 3363), (256, 3354), (267, 3306), (270, 3285), (295, 3144),

(299, 3129), (301, 3120), (305, 3099), (306, 3096), (307, 3084), (311, 3066), (312, 3063), (324, 2997), (328, 2982), (363, 2808),

Gene: PierreThree_4 Start: 4067, Stop: 1800, Start Num: 10

Candidate Starts for PierreThree_4:

(2, 4169), (Start: 10 @4067 has 64 MA's), (17, 4034), (20, 4019), (51, 3764), (63, 3656), (64, 3653), (65, 3647), (66, 3644), (73, 3560), (108, 3350), (144, 3110), (147, 3092), (153, 3050), (160, 3011), (166, 2981), (170, 2930), (176, 2906), (188, 2840), (189, 2837), (207, 2762), (208, 2756), (209, 2753), (213, 2717), (224, 2666), (241, 2567), (250, 2495), (257, 2447), (269, 2393), (281, 2318), (282, 2315), (287, 2267), (296, 2234), (305, 2195), (306, 2192), (309, 2168), (311, 2162), (312, 2159), (322, 2105), (359, 1931), (375, 1871),

Gene: PokyPuppy_4 Start: 4153, Stop: 1892, Start Num: 10

Candidate Starts for PokyPuppy_4:

(Start: 10 @4153 has 64 MA's), (17, 4120), (20, 4105), (41, 3916), (51, 3850), (63, 3742), (65, 3733), (76, 3628), (89, 3532), (92, 3508), (94, 3490), (102, 3466), (103, 3457), (116, 3382), (126, 3295), (144, 3178), (165, 3052), (167, 3043), (173, 2986), (183, 2929), (194, 2878), (196, 2869), (205, 2839), (210, 2815), (213, 2782), (230, 2686), (231, 2680), (236, 2662), (242, 2620), (248, 2575), (258, 2509), (284, 2368), (305, 2269), (306, 2266), (312, 2233), (317, 2206), (321, 2188), (324, 2167), (339, 2086), (349, 2032), (353, 2020), (357, 2002), (369, 1954),

Gene: Poland_5 Start: 4241, Stop: 1974, Start Num: 10

Candidate Starts for Poland_5:

(Start: 10 @4241 has 64 MA's), (17, 4208), (20, 4193), (51, 3938), (65, 3821), (66, 3818), (73, 3734), (77, 3701), (87, 3638), (89, 3620), (94, 3578), (103, 3545), (116, 3470), (130, 3368), (134, 3329), (144, 3266), (159, 3167), (165, 3140), (167, 3131), (173, 3074), (196, 2957), (210, 2903), (213, 2870), (230, 2774), (231, 2768), (236, 2750), (242, 2708), (248, 2663), (264, 2567), (276, 2510), (284, 2456), (297, 2390), (306, 2354), (307, 2342), (312, 2321), (317, 2294), (321, 2276), (324, 2255), (345, 2138), (357, 2090), (369, 2042), (371, 2039), (378, 2015),

Gene: RemRem_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for RemRem_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Reynauld_1 Start: 3050, Stop: 1041, Start Num: 7

Candidate Starts for Reynauld_1:

(Start: 7 @3050 has 1 MA's), (48, 2720), (52, 2705), (56, 2657), (61, 2615), (62, 2603), (67, 2579), (70, 2555), (71, 2546), (82, 2507), (95, 2450), (96, 2447), (106, 2420), (118, 2351), (120, 2330), (124, 2291), (128, 2273), (132, 2252), (144, 2189), (147, 2174), (154, 2132), (157, 2123), (169, 2057), (172, 2018), (179, 1985), (180, 1982), (197, 1919), (202, 1910), (203, 1907), (212, 1859), (218, 1826), (223, 1811), (235, 1748), (239, 1727), (249, 1646), (252, 1631), (264, 1571), (280, 1493), (304, 1376), (305, 1364), (307, 1349), (313, 1319), (314, 1316), (317, 1301), (320, 1286), (326, 1250), (336, 1205), (347, 1151), (348, 1142),

Gene: RobinSparkles_4 Start: 3076, Stop: 1076, Start Num: 12

Candidate Starts for RobinSparkles_4:

(Start: 12 @3076 has 1 MA's), (Start: 15 @3064 has 4 MA's), (28, 2968), (32, 2935), (42, 2851), (45, 2827), (63, 2686), (67, 2668), (86, 2575), (131, 2392), (133, 2374), (136, 2368), (139, 2344), (140, 2338), (143, 2329), (145, 2317), (162, 2209), (168, 2185), (180, 2110), (215, 1963), (270, 1636), (288,

1516), (292, 1501), (298, 1483), (303, 1465), (315, 1393), (327, 1339), (334, 1309), (343, 1243), (358, 1183), (361, 1174), (368, 1147),

Gene: RoyalG_5 Start: 4282, Stop: 1997, Start Num: 10

Candidate Starts for RoyalG_5:

(Start: 10 @4282 has 64 MA's), (17, 4249), (20, 4234), (51, 3979), (63, 3871), (65, 3862), (73, 3775), (91, 3649), (94, 3619), (103, 3586), (134, 3352), (144, 3289), (146, 3277), (159, 3190), (165, 3163), (167, 3154), (173, 3097), (194, 2989), (210, 2926), (211, 2905), (213, 2893), (230, 2797), (231, 2791), (242, 2731), (248, 2686), (274, 2536), (284, 2479), (296, 2419), (306, 2377), (312, 2344), (317, 2317), (321, 2299), (324, 2278), (339, 2197), (357, 2113), (369, 2065), (371, 2062), (377, 2044), (378, 2038),

Gene: Sam12_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for Sam12_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (20, 4039), (51, 3784), (53, 3769), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (108, 3370), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Shelley_2 Start: 3439, Stop: 1151, Start Num: 10

Candidate Starts for Shelley_2:

(2, 3541), (Start: 10 @3439 has 64 MA's), (19, 3397), (46, 3166), (51, 3133), (65, 3016), (66, 3013), (84, 2869), (103, 2743), (137, 2494), (144, 2452), (145, 2446), (147, 2434), (170, 2272), (176, 2248), (208, 2098), (209, 2095), (213, 2059), (218, 2029), (224, 2008), (241, 1909), (247, 1855), (254, 1804), (257, 1789), (281, 1660), (282, 1657), (286, 1624), (309, 1510), (311, 1504), (312, 1501), (321, 1456), (351, 1300), (367, 1237), (369, 1228),

Gene: Sombrero_4 Start: 4121, Stop: 1854, Start Num: 10

Candidate Starts for Sombrero_4:

(Start: 10 @4121 has 64 MA's), (17, 4088), (20, 4073), (51, 3818), (65, 3701), (66, 3698), (73, 3614), (77, 3581), (103, 3425), (108, 3404), (144, 3164), (145, 3158), (147, 3146), (153, 3104), (170, 2984), (188, 2894), (194, 2867), (198, 2855), (207, 2816), (209, 2807), (211, 2783), (213, 2771), (224, 2720), (238, 2639), (241, 2621), (257, 2501), (269, 2447), (270, 2438), (279, 2393), (281, 2372), (282, 2369), (296, 2288), (306, 2246), (309, 2222), (312, 2213), (317, 2186), (359, 1985), (373, 1934), (375, 1925),

Gene: Squibbles_4 Start: 4075, Stop: 1808, Start Num: 10

Candidate Starts for Squibbles_4:

(Start: 10 @4075 has 64 MA's), (17, 4042), (20, 4027), (65, 3655), (66, 3652), (73, 3568), (77, 3535), (91, 3442), (94, 3412), (103, 3379), (116, 3304), (119, 3262), (134, 3163), (144, 3100), (159, 3001), (165, 2974), (167, 2965), (173, 2908), (183, 2851), (185, 2836), (194, 2800), (196, 2791), (198, 2788), (210, 2737), (213, 2704), (230, 2608), (231, 2602), (236, 2584), (242, 2542), (248, 2497), (284, 2290), (306, 2188), (307, 2176), (312, 2155), (317, 2128), (321, 2110), (324, 2089), (328, 2074), (338, 2014), (339, 2008), (351, 1948), (352, 1945), (369, 1876), (371, 1873), (378, 1849),

Gene: Srilaccoli3_1 Start: 3027, Stop: 1018, Start Num: 7

Candidate Starts for Srilaccoli3_1:

(1, 3318), (Start: 7 @3027 has 1 MA's), (48, 2697), (52, 2682), (56, 2634), (61, 2592), (67, 2556), (70, 2532), (71, 2523), (82, 2484), (85, 2475), (93, 2433), (95, 2427), (96, 2424), (100, 2412), (118, 2328), (120, 2307), (124, 2268), (128, 2250), (132, 2229), (144, 2166), (154, 2109), (157, 2100), (169, 2034), (172, 1995), (179, 1962), (180, 1959), (197, 1896), (202, 1887), (203, 1884), (212, 1836), (218, 1803), (223, 1788), (235, 1725), (239, 1704), (240, 1701), (249, 1623), (252, 1608), (264, 1548), (285, 1437), (304, 1353), (305, 1341), (307, 1326), (313, 1296), (314, 1293), (317, 1278), (320, 1263), (326, 1227),

(336, 1182), (347, 1128), (348, 1119), (354, 1098),

Gene: SteveFrench_4 Start: 4087, Stop: 1820, Start Num: 10

Candidate Starts for SteveFrench_4:

(Start: 10 @4087 has 64 MA's), (17, 4054), (51, 3784), (53, 3769), (65, 3667), (66, 3664), (73, 3580), (77, 3547), (103, 3391), (144, 3130), (145, 3124), (147, 3112), (153, 3070), (170, 2950), (188, 2860), (194, 2833), (198, 2821), (207, 2782), (209, 2773), (211, 2749), (213, 2737), (224, 2686), (238, 2605), (241, 2587), (257, 2467), (269, 2413), (270, 2404), (279, 2359), (281, 2338), (282, 2335), (296, 2254), (306, 2212), (309, 2188), (312, 2179), (317, 2152), (359, 1951), (373, 1900), (375, 1891),

Gene: Sticker17_2 Start: 3416, Stop: 1128, Start Num: 10

Candidate Starts for Sticker17_2:

(2, 3518), (Start: 10 @3416 has 64 MA's), (19, 3374), (41, 3176), (51, 3110), (63, 3002), (64, 2999), (65, 2993), (66, 2990), (103, 2720), (137, 2471), (144, 2429), (145, 2423), (147, 2411), (170, 2249), (176, 2225), (208, 2075), (209, 2072), (213, 2036), (218, 2006), (224, 1985), (241, 1886), (247, 1832), (254, 1781), (257, 1766), (281, 1637), (282, 1634), (286, 1601), (309, 1487), (311, 1481), (312, 1478), (321, 1433), (351, 1277), (367, 1214), (369, 1205),

Gene: Teal_2 Start: 3393, Stop: 1105, Start Num: 10

Candidate Starts for Teal_2:

(2, 3495), (Start: 10 @3393 has 64 MA's), (19, 3351), (41, 3153), (51, 3087), (65, 2970), (66, 2967), (84, 2823), (103, 2697), (137, 2448), (144, 2406), (145, 2400), (147, 2388), (170, 2226), (176, 2202), (208, 2052), (209, 2049), (213, 2013), (218, 1983), (224, 1962), (241, 1863), (247, 1809), (254, 1758), (257, 1743), (281, 1614), (282, 1611), (286, 1578), (309, 1464), (311, 1458), (312, 1455), (321, 1410), (351, 1254), (367, 1191), (369, 1182),

Gene: Teatealatte_3 Start: 5301, Stop: 3160, Start Num: 9

Candidate Starts for Teatealatte_3:

(Start: 9 @5301 has 12 MA's), (17, 5229), (39, 5040), (41, 5031), (43, 5019), (47, 4992), (60, 4884), (64, 4854), (65, 4848), (68, 4827), (152, 4431), (153, 4428), (155, 4425), (156, 4419), (170, 4305), (177, 4278), (178, 4269), (181, 4251), (208, 4131), (219, 4059), (223, 4047), (227, 4011), (230, 3990), (238, 3954), (256, 3810), (262, 3786), (270, 3741), (279, 3693), (295, 3600), (297, 3588), (301, 3576), (306, 3552), (307, 3540), (312, 3519), (313, 3510), (317, 3492), (363, 3264), (364, 3261), (365, 3258), (379, 3201),

Gene: Teech_3 Start: 5373, Stop: 3232, Start Num: 9

Candidate Starts for Teech_3:

(Start: 9 @5373 has 12 MA's), (17, 5301), (39, 5112), (41, 5103), (43, 5091), (47, 5064), (60, 4956), (64, 4926), (65, 4920), (68, 4899), (152, 4503), (153, 4500), (155, 4497), (156, 4491), (170, 4377), (177, 4350), (178, 4341), (181, 4323), (186, 4293), (194, 4260), (206, 4212), (208, 4203), (219, 4131), (223, 4119), (230, 4062), (247, 3954), (262, 3858), (270, 3813), (295, 3672), (299, 3657), (301, 3648), (306, 3624), (307, 3612), (312, 3591), (313, 3582), (328, 3510), (364, 3333),

Gene: Tredge_3 Start: 5301, Stop: 3160, Start Num: 9

Candidate Starts for Tredge_3:

(Start: 9 @5301 has 12 MA's), (17, 5229), (39, 5040), (41, 5031), (43, 5019), (47, 4992), (60, 4884), (64, 4854), (65, 4848), (68, 4827), (152, 4431), (153, 4428), (155, 4425), (156, 4419), (170, 4305), (177, 4278), (178, 4269), (181, 4251), (208, 4131), (219, 4059), (223, 4047), (227, 4011), (230, 3990), (238, 3954), (256, 3810), (262, 3786), (270, 3741), (279, 3693), (295, 3600), (297, 3588), (301, 3576), (306, 3552), (307, 3540), (312, 3519), (313, 3510), (317, 3492), (363, 3264), (364, 3261), (365, 3258), (379, 3201),

Gene: Trogglehumper_22 Start: 12535, Stop: 10136, Start Num: 3

Candidate Starts for Trogglehumper_22:

(Start: 3 @12535 has 1 MA's), (25, 12328), (26, 12319), (30, 12298), (35, 12235), (51, 12130), (57, 12073), (65, 11998), (74, 11902), (90, 11770), (97, 11719), (98, 11716), (109, 11662), (117, 11605), (132, 11461), (154, 11329), (171, 11188), (182, 11134), (192, 11089), (206, 11032), (209, 11020), (211, 11005), (213, 10993), (214, 10987), (217, 10966), (220, 10954), (239, 10864), (241, 10852), (245, 10813), (249, 10783), (251, 10777), (253, 10747), (260, 10717), (263, 10705), (267, 10687), (269, 10675), (278, 10624), (284, 10576), (289, 10537), (294, 10519), (302, 10486), (305, 10471), (307, 10456), (314, 10423), (323, 10378), (349, 10234), (352, 10225), (366, 10171), (370, 10153),

Gene: Vitaenoi_3 Start: 4857, Stop: 2704, Start Num: 9

Candidate Starts for Vitaenoi_3:

(Start: 9 @4857 has 12 MA's), (21, 4764), (24, 4743), (34, 4635), (39, 4596), (47, 4548), (60, 4440), (65, 4404), (68, 4383), (138, 4062), (142, 4044), (152, 3975), (153, 3972), (156, 3963), (167, 3897), (170, 3849), (181, 3795), (186, 3765), (212, 3639), (219, 3603), (220, 3597), (223, 3591), (227, 3555), (232, 3525), (237, 3501), (238, 3498), (244, 3456), (256, 3354), (262, 3330), (270, 3285), (301, 3120), (305, 3099), (306, 3096), (307, 3084), (311, 3066), (312, 3063), (324, 2997), (328, 2982), (363, 2808),

Gene: Woes_2 Start: 3432, Stop: 1129, Start Num: 10

Candidate Starts for Woes_2:

(Start: 10 @3432 has 64 MA's), (41, 3189), (51, 3123), (65, 3006), (66, 3003), (103, 2721), (125, 2553), (144, 2430), (145, 2424), (147, 2412), (170, 2250), (173, 2241), (176, 2226), (194, 2133), (208, 2076), (209, 2073), (213, 2037), (216, 2022), (218, 2007), (224, 1986), (241, 1887), (257, 1767), (270, 1704), (282, 1635), (301, 1536), (306, 1512), (309, 1488), (311, 1482), (312, 1479), (339, 1338), (351, 1278), (369, 1206),

Gene: Worcestershire_4 Start: 4086, Stop: 1819, Start Num: 10

Candidate Starts for Worcestershire_4:

(Start: 10 @4086 has 64 MA's), (17, 4053), (20, 4038), (51, 3783), (53, 3768), (65, 3666), (66, 3663), (73, 3579), (77, 3546), (103, 3390), (108, 3369), (144, 3129), (145, 3123), (147, 3111), (153, 3069), (170, 2949), (188, 2859), (194, 2832), (198, 2820), (207, 2781), (209, 2772), (211, 2748), (213, 2736), (224, 2685), (238, 2604), (241, 2586), (257, 2466), (269, 2412), (270, 2403), (279, 2358), (281, 2337), (282, 2334), (296, 2253), (306, 2211), (309, 2187), (312, 2178), (317, 2151), (359, 1950), (373, 1899), (375, 1890),