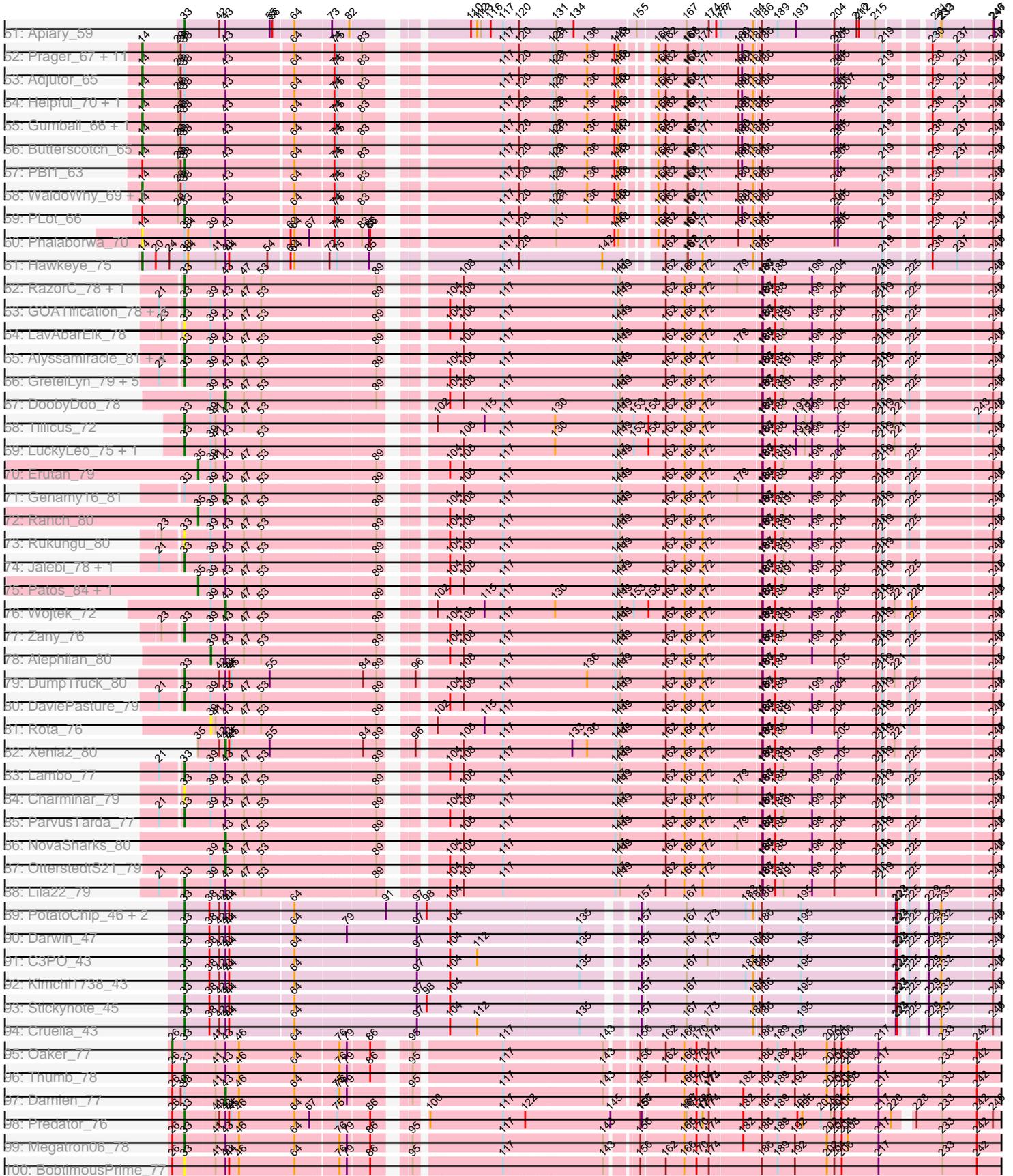# Zoomed Pham 283551

# Zoomed Pham 283551

# Zoomed Pham 283551

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 283551 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283551 has 156 members, 19 are drafts.

Phages represented in each track:
• Track 1 : Indlulamithi_76
• Track 2 : PHTowN_51
• Track 3 : Yara_46
• Track 4 : Lizz_51
• Track 5 : Rooney_51
• Track 6 : Wilkos_53
• Track 7 : ShakeNBake_51
• Track 8 : Virizion_56, Gibson_51
• Track 9 : Dryad_56
• Track 10 : SassyC_56
• Track 11 : Wentworth_52
• Track 12 : Greenbelt_49
• Track 13 : GTE5_49
• Track 14 : GRU1_49
• Track 15 : Turuncu_63
• Track 16 : Dalilpop_64
• Track 17 : Flapper_64
• Track 18 : Bonum_63
• Track 19 : Outis_61, StarStruck_61
• Track 20 : Commandaria_61
• Track 21 : Kabluna_63
• Track 22 : MerCougar_61
• Track 23 : NosilaM_62
• Track 24 : Emianna_60, Jifall16_59, KidneyBean_60, Kurt_60, Phomeo_59
• Track 25 : Buggaboo_61, SuperSulley_61
• Track 26 : GTE8_48
• Track 27 : Arti_59
• Track 28 : Wheezy_60
• Track 29 : Tracker_60
• Track 30 : Foxboro_61
• Track 31 : NovumRegina_60, GrootJr_62
• Track 32 : NatB6_60
• Track 33 : Float294_60
• Track 34 : Lollipop1437_64
• Track 35 : Ennea_66
• Track 36 : Skysand_61
• Track 37 : Patio_62

- Track 38 : RedRaider_67
- Track 39 : WhoseManz_60, Marietta_61
- Track 40 : Yndexa_60, Sukkupi_60
- Track 41 : Pemberton_62
- Track 42 : IDyn_59
- Track 43 : NadineRae_59
- Track 44 : HubbaBubba_55
- Track 45 : BiPauneto_61
- Track 46 : Scuba_68
- Track 47 : Fury_67, Pleakley_67
- Track 48 : HomeFry_63
- Track 49 : GuyFagieri_58
- Track 50 : Braxoaddie_59, Maselop_59, CoffeeBean_59, Polyyuki_59
- Track 51 : Apiary_59
- Track 52 : Prager_67, SuperheroCarly_68, Visconti_68, Delton_67, Penelope2018_67, Nova_66, Erk16_66, BigMama_65, Thoth_67, KandZ_65, Troll4_66, Giuseppe_68
- Track 53 : Adjutor_65
- Track 54 : Helpful_70, Mopey_68
- Track 55 : Gumball_66, SirHarley_69
- Track 56 : Butterscotch_65
- Track 57 : PBI1_63
- Track 58 : WaldoWhy_69, Chill_69
- Track 59 : PLot_66
- Track 60 : Phalaborwa_70
- Track 61 : Hawkeye_75
- Track 62 : RazorC_78, Avian_76
- Track 63 : GOATification_78, Fulcrum_78, BirthdayBoy_81
- Track 64 : LavAbarElk_78
- Track 65 : Alyssamiracle_81, Jamemuya19_76, Stormer_79, Astralis_78, Rumi_79
- Track 66 : GretelLyn_79, Mima20_77, Gibbin_81, Sadboi_79, MoiGyank_82, Yikes_80
- Track 67 : DoobyDoo_78
- Track 68 : Tillicus_72
- Track 69 : LuckyLeo_75, Apeppi_73
- Track 70 : Erutan_79
- Track 71 : Genamy16_81
- Track 72 : Ranch_80
- Track 73 : Rukungu_80
- Track 74 : Jalebi_78, Sampudon_80
- Track 75 : Patos_84, NorManre_84
- Track 76 : Wojtek_72
- Track 77 : Zany_76
- Track 78 : Alephilan_80
- Track 79 : DumpTruck_80
- Track 80 : DaviePasture_79
- Track 81 : Rota_76
- Track 82 : Xenia2_80
- Track 83 : Lambo_77
- Track 84 : Charminar_79
- Track 85 : ParvusTarda_77
- Track 86 : NovaSharks_80
- Track 87 : OtterstedtS21_79

• Track 88 : Lila22_79
• Track 89 : PotatoChip_46, PeteyPab_45, Zion_46
• Track 90 : Darwin_47
• Track 91 : C3PO_43
• Track 92 : Kimchi1738_43
• Track 93 : Stickynote_45
• Track 94 : Cruella_43
• Track 95 : Oaker_77
• Track 96 : Thumb_78
• Track 97 : Damien_77
• Track 98 : Predator_76
• Track 99 : Megatron06_78
• Track 100 : BobtimousPrime_77
• Track 101 : Cborch11_78
• Track 102 : Phreeze_76
• Track 103 : Beckerton_76
• Track 104 : Konstantine_80
• Track 105 : DrLupo_85
• Track 106 : Barnyard_80
• Track 107 : Madruga_89
• Track 108 : Patience_91
• Track 109 : Demikore_92
• Track 110 : Labelle_90
• Track 111 : SuperSonics_94

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

The start number called the most often in the published annotations is 33, it was called in 100 of the 137 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alyssamiracle_81, Apeppi_73, Apiary_59, Arti_59, Astralis_78, Avian_76, Barnyard_80, Beckerton_76, BiPauneto_61, BirthdayBoy_81, BobtimousPrime_77, Bonum_63, Braxoaddie_59, Buggaboo_61, C3PO_43, Cborch11_78, Charminar_79, CoffeeBean_59, Commandaria_61, Cruella_43, Dalilpop_64, Darwin_47, DaviePasture_79, Dryad_56, DumpTruck_80, Emianna_60, Ennea_66, Flapper_64, Float294_60, Foxboro_61, Fulcrum_78, GOATification_78, GTE5_49, GTE8_48, Gibbin_81, Gibson_51, Greenbelt_49, GretelLyn_79, GrootJr_62, GuyFagieri_58, HubbaBubba_55, IDyn_59, Jalebi_78, Jamemuya19_76, Jifall16_59, Kabluna_63, KidneyBean_60, Kimchi1738_43, Konstantine_80, Kurt_60, Labelle_90, Lambo_77, LavAbarElk_78, Lila22_79, Lizz_51, Lollipop1437_64, LuckyLeo_75, Madruga_89, Marietta_61, Maselop_59, Megatron06_78, MerCougar_61, Mima20_77, MoiGyank_82, NadineRae_59, NatB6_60, NosilaM_62, NovumRegina_60, Outis_61, PBI1_63, PHTowN_51, PLot_66, ParvusTarda_77, Patience_91, Patio_62, Pemberton_62, PeteyPab_45, Phomeo_59, Phreeze_76, Polyyuki_59, PotatoChip_46, Predator_76, RazorC_78, RedRaider_67, Rooney_51, Rukungu_80, Rumi_79, Sadboi_79, Sampudon_80, ShakeNBake_51, Skysand_61, StarStruck_61, Stickynote_45, Stormer_79, Sukkupi_60, SuperSulley_61, Thumb_78, Tillicus_72, Tracker_60, Turuncu_63, Virizion_56, Wentworth_52, Wheezy_60, WhoseManz_60, Yara_46, Yikes_80, Yndexa_60, Zany_76, Zion_46,

Genes that have the "Most Annotated" start but do not call it:
• Adjutor_65, BigMama_65, Butterscotch_65, Chill_69, Damien_77, Delton_67, Demikore_92, DrLupo_85, Erk16_66, Fury_67, GRU1_49, Genamy16_81, Giuseppe_68, Gumball_66, Hawkeye_75, Helpful_70, HomeFry_63, Indlulamithi_76, KandZ_65, Mopey_68, Nova_66, Oaker_77, Penelope2018_67, Phalaborwa_70, Pleakley_67, Prager_67, SassyC_56, Scuba_68, SirHarley_69, SuperSonics_94, SuperheroCarly_68, Thoth_67, Troll4_66, Visconti_68, WaldoWhy_69, Wilkos_53,

Genes that do not have the "Most Annotated" start:
• Alephilan_80, DoobyDoo_78, Erutan_79, NorManre_84, NovaSharks_80, OtterstedtS21_79, Patos_84, Ranch_80, Rota_76, Wojtek_72, Xenia2_80,

**Summary by start number:**

Start 14:
• Found in 24 of 156 ( 15.4% ) of genes in pham
• Manual Annotations of this start: 20 of 137
• Called 91.7% of time when present
• Phage (with cluster) where this start called: Adjutor_65 (D1), BigMama_65 (D1), Butterscotch_65 (D1), Chill_69 (D1), Delton_67 (D1), Erk16_66 (D1), Giuseppe_68 (D1), Gumball_66 (D1), Hawkeye_75 (D2), Helpful_70 (D1), KandZ_65 (D1), Mopey_68 (D1), Nova_66 (D1), Penelope2018_67 (D1), Phalaborwa_70 (D1), Prager_67 (D1), SirHarley_69 (D1), SuperheroCarly_68 (D1), Thoth_67 (D1), Troll4_66 (D1), Visconti_68 (D1), WaldoWhy_69 (D1),

Start 19:
• Found in 4 of 156 ( 2.6% ) of genes in pham
• Manual Annotations of this start: 2 of 137
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Fury_67 (CR5), Pleakley_67 (CR5), Scuba_68 (CR5),

Start 26:
• Found in 17 of 156 ( 10.9% ) of genes in pham
• Manual Annotations of this start: 2 of 137
• Called 17.6% of time when present
• Phage (with cluster) where this start called: Demikore_92 (U), DrLupo_85 (H2), Oaker_77 (H1),

Start 27:
• Found in 11 of 156 ( 7.1% ) of genes in pham
• No Manual Annotations of this start.
• Called 18.2% of time when present
• Phage (with cluster) where this start called: SassyC_56 (BN), Wilkos_53 (BN),

Start 29:
• Found in 23 of 156 ( 14.7% ) of genes in pham
• Manual Annotations of this start: 1 of 137
• Called 4.3% of time when present
• Phage (with cluster) where this start called: Indlulamithi_76 (AC),

Start 33:

• Found in 145 of 156 ( 92.9% ) of genes in pham
• Manual Annotations of this start: 100 of 137
• Called 75.2% of time when present
• Phage (with cluster) where this start called: Alyssamiracle_81 (DV), Apeppi_73 (DV), Apiary_59 (CR6), Arti_59 (CR2), Astralis_78 (DV), Avian_76 (DV), Barnyard_80 (H2), Beckerton_76 (H1), BiPauneto_61 (CR4), BirthdayBoy_81 (DV), BobtimousPrime_77 (H1), Bonum_63 (CR2), Braxoaddie_59 (CR6), Buggaboo_61 (CR2), C3PO_43 (EN), Cborch11_78 (H1), Charminar_79 (DV), CoffeeBean_59 (CR6), Commandaria_61 (CR2), Cruella_43 (EN), Dalilpop_64 (CR1), Darwin_47 (EN), DaviePasture_79 (DV), Dryad_56 (BN), DumpTruck_80 (DV), Emianna_60 (CR2), Ennea_66 (CR3), Flapper_64 (CR1), Float294_60 (CR3), Foxboro_61 (CR2), Fulcrum_78 (DV), GOATification_78 (DV), GTE5_49 (CR1), GTE8_48 (CR2), Gibbin_81 (DV), Gibson_51 (BN), Greenbelt_49 (BN), GretelLyn_79 (DV), GrootJr_62 (CR2), GuyFagieri_58 (CR6), HubbaBubba_55 (CR4), IDyn_59 (CR4), Jalebi_78 (DV), Jamemuya19_76 (DV), Jifall16_59 (CR2), Kabluna_63 (CR2), KidneyBean_60 (CR2), Kimchi1738_43 (EN), Konstantine_80 (H1), Kurt_60 (CR2), Labelle_90 (U), Lambo_77 (DV), LavAbarElk_78 (DV), Lila22_79 (DV), Lizz_51 (BN), Lollipop1437_64 (CR3), LuckyLeo_75 (DV), Madruga_89 (U), Marietta_61 (CR4), Maselop_59 (CR6), Megatron06_78 (H1), MerCougar_61 (CR2), Mima20_77 (DV), MoiGyank_82 (DV), NadineRae_59 (CR4), NatB6_60 (CR2), NosilaM_62 (CR2), NovumRegina_60 (CR2), Outis_61 (CR2), PBI1_63 (D1), PHTowN_51 (BN), PLot_66 (D1), ParvusTarda_77 (DV), Patience_91 (U), Patio_62 (CR3), Pemberton_62 (CR4), PeteyPab_45 (EN), Phomeo_59 (CR2), Phreeze_76 (H1), Polyyuki_59 (CR6), PotatoChip_46 (EN), Predator_76 (H1), RazorC_78 (DV), RedRaider_67 (CR3), Rooney_51 (BN), Rukungu_80 (DV), Rumi_79 (DV), Sadboi_79 (DV), Sampudon_80 (DV), ShakeNBake_51 (BN), Skysand_61 (CR3), StarStruck_61 (CR2), Stickynote_45 (EN), Stormer_79 (DV), Sukkupi_60 (CR4), SuperSulley_61 (CR2), Thumb_78 (H1), Tillicus_72 (DV), Tracker_60 (CR2), Turuncu_63 (CR1), Virizion_56 (BN), Wentworth_52 (BN), Wheezy_60 (CR2), WhoseManz_60 (CR4), Yara_46 (BN), Yikes_80 (DV), Yndexa_60 (CR4), Zany_76 (DV), Zion_46 (EN),

Start 35:
• Found in 6 of 156 ( 3.8% ) of genes in pham
• Manual Annotations of this start: 4 of 137
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Erutan_79 (DV), NorManre_84 (DV), Patos_84 (DV), Ranch_80 (DV),

Start 39:
• Found in 38 of 156 ( 24.4% ) of genes in pham
• Manual Annotations of this start: 1 of 137
• Called 5.3% of time when present
• Phage (with cluster) where this start called: Alephilan_80 (DV), Rota_76 (DV),

Start 43:
• Found in 156 of 156 ( 100.0% ) of genes in pham
• Manual Annotations of this start: 7 of 137
• Called 6.4% of time when present
• Phage (with cluster) where this start called: Damien_77 (H1), DoobyDoo_78 (DV), GRU1_49 (CR1), Genamy16_81 (DV), HomeFry_63 (CR5), NovaSharks_80 (DV), OtterstedtS21_79 (DV), SuperSonics_94 (U), Wojtek_72 (DV), Xenia2_80 (DV),

**Summary by clusters:**

There are 15 clusters represented in this pham: CR2, CR3, AC, EN, CR6, CR4, CR5, H2, BN, H1, CR1, U, DV, D2, D1,

Info for manual annotations of cluster AC:
•Start number 29 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster BN:
•Start number 33 was manually annotated 9 times for cluster BN.

Info for manual annotations of cluster CR1:
•Start number 33 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 33 was manually annotated 21 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 33 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 33 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 19 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CR6:
•Start number 33 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster D1:
•Start number 14 was manually annotated 19 times for cluster D1.
•Start number 33 was manually annotated 2 times for cluster D1.

Info for manual annotations of cluster D2:
•Start number 14 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DV:
•Start number 33 was manually annotated 26 times for cluster DV.
•Start number 35 was manually annotated 4 times for cluster DV.
•Start number 39 was manually annotated 1 time for cluster DV.
•Start number 43 was manually annotated 6 times for cluster DV.

Info for manual annotations of cluster EN:
•Start number 33 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster H1:
•Start number 26 was manually annotated 1 time for cluster H1.
•Start number 33 was manually annotated 7 times for cluster H1.
•Start number 43 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster H2:
•Start number 26 was manually annotated 1 time for cluster H2.
•Start number 33 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster U:
•Start number 33 was manually annotated 3 times for cluster U.

## *Gene Information:*

Gene: Adjutor_65 Start: 49699, Stop: 53001, Start Num: 14
Candidate Starts for Adjutor_65:
(Start: 14 @49699 has 20 MA's), (Start: 29 @49786 has 1 MA's), (30, 49792), (Start: 33 @49801 has 100 MA's), (Start: 43 @49897 has 7 MA's), (64, 50053), (74, 50140), (75, 50143), (83, 50194), (117, 50458), (120, 50497), (129, 50569), (131, 50578), (136, 50653), (146, 50719), (148, 50725), (160, 50779), (162, 50797), (167, 50848), (168, 50851), (171, 50881), (180, 50965), (181, 50974), (184, 51001), (186, 51016), (204, 51193), (205, 51202), (219, 51307), (230, 51388), (237, 51448), (246, 51523), (249, 51556), (250, 51562), (256, 51583), (258, 51592), (265, 51637), (277, 51706), (280, 51721), (288, 51790), (293, 51853), (296, 51886), (297, 51889), (306, 51940), (314, 52015), (334, 52138), (337, 52156), (345, 52234), (346, 52237), (347, 52249), (354, 52294), (360, 52315), (363, 52327), (368, 52357), (372, 52378), (398, 52450), (413, 52507), (432, 52606), (445, 52672), (460, 52762), (464, 52795), (469, 52825), (474, 52870), (480, 52912), (484, 52942), (486, 52954), (488, 52969), (490, 52978),

Gene: Alephilan_80 Start: 52529, Stop: 55810, Start Num: 39
Candidate Starts for Alephilan_80:
(Start: 39 @52529 has 1 MA's), (Start: 43 @52565 has 7 MA's), (47, 52610), (53, 52652), (89, 52913), (104, 53015), (108, 53048), (117, 53144), (147, 53414), (149, 53423), (162, 53531), (166, 53576), (172, 53618), (186, 53750), (187, 53753), (188, 53783), (199, 53873), (204, 53927), (216, 54026), (219, 54041), (225, 54083), (246, 54257), (249, 54290), (252, 54308), (258, 54326), (265, 54371), (266, 54374), (282, 54470), (287, 54512), (288, 54524), (291, 54560), (313, 54740), (318, 54782), (321, 54818), (334, 54872), (337, 54890), (346, 54986), (347, 54998), (394, 55187), (413, 55277), (432, 55382), (435, 55397), (438, 55412), (441, 55433), (445, 55445), (446, 55451), (447, 55454), (452, 55481), (457, 55526), (473, 55634), (479, 55679), (483, 55703), (488, 55739),

Gene: Alyssamiracle_81 Start: 50715, Stop: 54056, Start Num: 33
Candidate Starts for Alyssamiracle_81:
(Start: 33 @50715 has 100 MA's), (Start: 39 @50775 has 1 MA's), (Start: 43 @50811 has 7 MA's), (47, 50856), (53, 50898), (89, 51159), (108, 51294), (117, 51390), (147, 51660), (149, 51669), (162, 51777), (166, 51822), (172, 51864), (179, 51942), (186, 51996), (187, 51999), (188, 52029), (199, 52119), (204, 52173), (216, 52272), (219, 52287), (225, 52329), (246, 52503), (249, 52536), (252, 52554), (258, 52572), (265, 52617), (266, 52620), (282, 52716), (287, 52758), (288, 52770), (291, 52806), (313, 52986), (318, 53028), (321, 53064), (333, 53106), (334, 53118), (337, 53136), (346, 53232), (347, 53244), (396, 53439), (413, 53523), (432, 53628), (435, 53643), (438, 53658), (441, 53679), (445, 53691), (446, 53697), (447, 53700), (452, 53727), (457, 53772), (473, 53880), (479, 53925), (483, 53949), (488, 53985),

Gene: Apeppi_73 Start: 51198, Stop: 54536, Start Num: 33
Candidate Starts for Apeppi_73:
(Start: 33 @51198 has 100 MA's), (Start: 39 @51258 has 1 MA's), (41, 51270), (Start: 43 @51294 has 7 MA's), (53, 51381), (108, 51777), (117, 51873), (130, 51996), (147, 52143), (149, 52152), (153, 52185), (158, 52221), (162, 52263), (166, 52308), (172, 52350), (186, 52482), (187, 52485), (188, 52515), (193, 52566), (197, 52587), (199, 52605), (205, 52668), (216, 52758), (219, 52773), (221, 52794), (246, 52989), (249, 53022), (252, 53040), (265, 53103), (266, 53106), (276, 53169), (282, 53202), (287, 53244), (288, 53256), (291, 53292), (306, 53406), (313, 53472), (316, 53499), (318, 53514), (321, 53550), (334, 53604), (337, 53622), (346, 53718), (349, 53742), (364, 53814), (416,

54018), (435, 54129), (438, 54144), (441, 54165), (445, 54177), (446, 54183), (447, 54186), (452, 54213), (457, 54258), (473, 54366), (477, 54405), (479, 54411), (483, 54435), (485, 54450), (486, 54456), (488, 54471),

Gene: Apiary_59 Start: 45761, Stop: 42345, Start Num: 33
Candidate Starts for Apiary_59:
(Start: 33 @45761 has 100 MA's), (42, 45680), (Start: 43 @45665 has 7 MA's), (55, 45557), (56, 45551), (64, 45503), (73, 45422), (82, 45380), (110, 45170), (112, 45155), (113, 45146), (116, 45122), (117, 45092), (120, 45053), (131, 44972), (134, 44930), (155, 44795), (167, 44681), (174, 44630), (176, 44612), (177, 44603), (184, 44525), (186, 44510), (189, 44471), (193, 44432), (204, 44339), (210, 44288), (212, 44282), (215, 44243), (231, 44138), (232, 44123), (233, 44120), (246, 44006), (247, 44003), (249, 43973), (252, 43955), (254, 43952), (255, 43946), (257, 43943), (262, 43910), (265, 43889), (288, 43721), (295, 43643), (298, 43604), (299, 43601), (301, 43595), (305, 43577), (315, 43481), (318, 43463), (321, 43427), (337, 43355), (346, 43262), (347, 43250), (358, 43187), (369, 43130), (386, 43001), (392, 42971), (401, 42911), (402, 42908), (407, 42866), (408, 42854), (423, 42764), (430, 42728), (439, 42683), (442, 42668), (451, 42626), (456, 42581), (466, 42527), (467, 42518), (469, 42506), (470, 42500), (472, 42482), (477, 42431), (478, 42428), (485, 42386),

Gene: Arti_59 Start: 47894, Stop: 44583, Start Num: 33
Candidate Starts for Arti_59:
(1, 48146), (7, 48059), (10, 48032), (Start: 33 @47894 has 100 MA's), (41, 47822), (Start: 43 @47798 has 7 MA's), (62, 47645), (64, 47636), (104, 47354), (105, 47348), (107, 47324), (118, 47216), (120, 47186), (151, 46979), (172, 46808), (177, 46766), (184, 46688), (186, 46673), (201, 46535), (226, 46337), (233, 46280), (240, 46220), (246, 46169), (258, 46100), (265, 46055), (294, 45815), (299, 45770), (301, 45764), (305, 45746), (315, 45650), (321, 45596), (343, 45452), (346, 45443), (359, 45368), (375, 45293), (380, 45239), (398, 45149), (409, 45068), (415, 45047), (442, 44903), (443, 44900), (472, 44717), (480, 44660), (490, 44594),

Gene: Astralis_78 Start: 50294, Stop: 53635, Start Num: 33
Candidate Starts for Astralis_78:
(Start: 33 @50294 has 100 MA's), (Start: 39 @50354 has 1 MA's), (Start: 43 @50390 has 7 MA's), (47, 50435), (53, 50477), (89, 50738), (108, 50873), (117, 50969), (147, 51239), (149, 51248), (162, 51356), (166, 51401), (172, 51443), (179, 51521), (186, 51575), (187, 51578), (188, 51608), (199, 51698), (204, 51752), (216, 51851), (219, 51866), (225, 51908), (246, 52082), (249, 52115), (252, 52133), (258, 52151), (265, 52196), (266, 52199), (282, 52295), (287, 52337), (288, 52349), (291, 52385), (313, 52565), (318, 52607), (321, 52643), (333, 52685), (334, 52697), (337, 52715), (346, 52811), (347, 52823), (396, 53018), (413, 53102), (432, 53207), (435, 53222), (438, 53237), (441, 53258), (445, 53270), (446, 53276), (447, 53279), (452, 53306), (457, 53351), (473, 53459), (479, 53504), (483, 53528), (488, 53564),

Gene: Avian_76 Start: 50443, Stop: 53784, Start Num: 33
Candidate Starts for Avian_76:
(Start: 33 @50443 has 100 MA's), (Start: 43 @50539 has 7 MA's), (47, 50584), (53, 50626), (89, 50887), (108, 51022), (117, 51118), (147, 51388), (149, 51397), (162, 51505), (166, 51550), (172, 51592), (179, 51670), (186, 51724), (187, 51727), (188, 51757), (199, 51847), (204, 51901), (216, 52000), (219, 52015), (225, 52057), (246, 52231), (249, 52264), (252, 52282), (258, 52300), (265, 52345), (266, 52348), (282, 52444), (287, 52486), (288, 52498), (291, 52534), (313, 52714), (318, 52756), (321, 52792), (333, 52834), (334, 52846), (337, 52864), (346, 52960), (347, 52972), (396, 53167), (413, 53251), (432, 53356), (435, 53371), (438, 53386), (441, 53407), (445, 53419), (446, 53425), (447, 53428), (452, 53455), (457, 53500), (473, 53608), (479, 53653), (483, 53677), (488, 53713),

Gene: Barnyard_80 Start: 54919, Stop: 58254, Start Num: 33

Candidate Starts for Barnyard_80:
(Start: 26 @54892 has 2 MA's), (Start: 33 @54919 has 100 MA's), (37, 54970), (38, 54976), (Start: 43 @55015 has 7 MA's), (46, 55048), (57, 55132), (64, 55183), (75, 55273), (94, 55393), (103, 55453), (131, 55711), (162, 55906), (174, 56008), (179, 56071), (182, 56086), (186, 56131), (187, 56134), (213, 56368), (225, 56476), (226, 56482), (242, 56638), (246, 56677), (248, 56686), (249, 56710), (251, 56725), (253, 56728), (258, 56746), (259, 56752), (264, 56803), (274, 56908), (277, 56938), (279, 56950), (281, 56959), (284, 56974), (289, 57043), (295, 57100), (299, 57142), (304, 57160), (337, 57391), (339, 57403), (373, 57604), (394, 57658), (404, 57715), (406, 57718), (418, 57808), (433, 57892), (446, 57952), (455, 58021), (472, 58120), (480, 58180), (489, 58240),

Gene: Beckerton_76 Start: 56006, Stop: 59302, Start Num: 33
Candidate Starts for Beckerton_76:
(Start: 26 @55979 has 2 MA's), (Start: 33 @56006 has 100 MA's), (41, 56078), (Start: 43 @56102 has 7 MA's), (44, 56111), (46, 56135), (64, 56270), (76, 56363), (79, 56381), (95, 56489), (117, 56681), (143, 56915), (156, 56972), (162, 57026), (166, 57071), (170, 57098), (174, 57128), (186, 57251), (189, 57290), (192, 57332), (202, 57410), (204, 57428), (206, 57446), (208, 57458), (217, 57533), (233, 57689), (242, 57773), (250, 57851), (255, 57872), (258, 57881), (259, 57887), (261, 57896), (270, 57968), (273, 57983), (277, 58022), (279, 58034), (289, 58127), (290, 58133), (295, 58181), (299, 58223), (319, 58373), (320, 58385), (337, 58469), (351, 58610), (394, 58715), (410, 58814), (412, 58823), (427, 58901), (434, 58940), (436, 58955), (447, 59003), (461, 59099), (464, 59117), (468, 59144), (475, 59192), (478, 59222), (479, 59225), (482, 59240), (486, 59270), (487, 59279), (488, 59285), (489, 59288),

Gene: BiPauneto_61 Start: 47338, Stop: 44087, Start Num: 33
Candidate Starts for BiPauneto_61:
(9, 47470), (12, 47440), (13, 47428), (Start: 33 @47338 has 100 MA's), (42, 47257), (Start: 43 @47242 has 7 MA's), (47, 47197), (62, 47089), (64, 47080), (105, 46792), (111, 46741), (115, 46714), (118, 46660), (120, 46630), (151, 46423), (164, 46315), (174, 46237), (177, 46210), (184, 46132), (186, 46117), (201, 45979), (226, 45781), (227, 45775), (230, 45748), (246, 45613), (249, 45580), (258, 45544), (265, 45499), (269, 45487), (278, 45424), (294, 45259), (295, 45256), (298, 45217), (299, 45214), (301, 45208), (303, 45199), (305, 45190), (315, 45094), (318, 45076), (321, 45040), (345, 44890), (353, 44836), (380, 44740), (398, 44656), (400, 44647), (408, 44596), (423, 44506), (442, 44410), (443, 44407), (453, 44356), (472, 44224), (490, 44101),

Gene: BigMama_65 Start: 49772, Stop: 53074, Start Num: 14
Candidate Starts for BigMama_65:
(Start: 14 @49772 has 20 MA's), (Start: 29 @49859 has 1 MA's), (30, 49865), (Start: 33 @49874 has 100 MA's), (Start: 43 @49970 has 7 MA's), (64, 50126), (74, 50213), (75, 50216), (83, 50267), (117, 50531), (120, 50570), (129, 50642), (131, 50651), (136, 50726), (146, 50792), (148, 50798), (160, 50852), (162, 50870), (167, 50921), (168, 50924), (171, 50954), (180, 51038), (181, 51047), (184, 51074), (186, 51089), (204, 51266), (205, 51275), (219, 51380), (230, 51461), (237, 51521), (246, 51596), (249, 51629), (250, 51635), (256, 51656), (258, 51665), (265, 51710), (277, 51779), (280, 51794), (288, 51863), (293, 51926), (296, 51959), (297, 51962), (306, 52013), (314, 52088), (334, 52211), (337, 52229), (345, 52307), (346, 52310), (347, 52322), (354, 52367), (360, 52388), (363, 52400), (368, 52430), (372, 52451), (398, 52523), (413, 52580), (432, 52679), (445, 52745), (460, 52835), (463, 52865), (464, 52868), (469, 52898), (474, 52943), (480, 52985), (484, 53015), (486, 53027), (488, 53042), (490, 53051),

Gene: BirthdayBoy_81 Start: 52357, Stop: 55698, Start Num: 33
Candidate Starts for BirthdayBoy_81:
(21, 52309), (Start: 33 @52357 has 100 MA's), (Start: 39 @52417 has 1 MA's), (Start: 43 @52453 has 7 MA's), (47, 52498), (53, 52540), (89, 52801), (104, 52903), (108, 52936), (117, 53032), (147, 53302), (149, 53311), (162, 53419), (166, 53464), (172, 53506), (186, 53638), (187, 53641), (188, 53671),

(199, 53761), (204, 53815), (216, 53914), (219, 53929), (225, 53971), (246, 54145), (249, 54178), (252, 54196), (258, 54214), (265, 54259), (266, 54262), (282, 54358), (287, 54400), (288, 54412), (291, 54448), (313, 54628), (318, 54670), (321, 54706), (334, 54760), (337, 54778), (346, 54874), (347, 54886), (396, 55081), (413, 55165), (432, 55270), (435, 55285), (441, 55321), (445, 55333), (446, 55339), (447, 55342), (452, 55369), (457, 55414), (473, 55522), (479, 55567), (483, 55591), (488, 55627),

Gene: BobtimousPrime_77 Start: 56307, Stop: 59603, Start Num: 33
Candidate Starts for BobtimousPrime_77:
(Start: 26 @56280 has 2 MA's), (Start: 33 @56307 has 100 MA's), (41, 56379), (Start: 43 @56403 has 7 MA's), (44, 56412), (46, 56436), (64, 56571), (76, 56664), (79, 56682), (86, 56730), (95, 56790), (117, 56982), (143, 57216), (156, 57273), (162, 57327), (166, 57372), (170, 57399), (174, 57429), (186, 57552), (189, 57591), (192, 57633), (202, 57711), (204, 57729), (206, 57747), (217, 57834), (233, 57990), (242, 58074), (250, 58152), (255, 58173), (258, 58182), (259, 58188), (261, 58197), (270, 58269), (273, 58284), (277, 58323), (279, 58335), (289, 58428), (290, 58434), (295, 58482), (299, 58524), (319, 58674), (320, 58686), (337, 58770), (351, 58911), (394, 59016), (410, 59115), (412, 59124), (427, 59202), (434, 59241), (436, 59256), (447, 59304), (461, 59400), (464, 59418), (468, 59445), (475, 59493), (478, 59523), (479, 59526), (482, 59541), (486, 59571), (487, 59580), (488, 59586), (489, 59589),

Gene: Bonum_63 Start: 48540, Stop: 45238, Start Num: 33
Candidate Starts for Bonum_63:
(Start: 33 @48540 has 100 MA's), (34, 48531), (Start: 43 @48444 has 7 MA's), (62, 48291), (64, 48282), (82, 48159), (104, 48000), (105, 47994), (107, 47970), (118, 47862), (131, 47751), (151, 47625), (172, 47454), (177, 47412), (184, 47334), (186, 47319), (201, 47181), (215, 47049), (226, 46983), (233, 46926), (240, 46866), (246, 46815), (258, 46746), (265, 46701), (294, 46458), (298, 46416), (299, 46413), (301, 46407), (305, 46389), (315, 46293), (321, 46239), (346, 46086), (355, 46026), (359, 46011), (380, 45882), (398, 45804), (408, 45744), (409, 45723), (410, 45720), (415, 45702), (430, 45618), (442, 45558), (449, 45531), (450, 45528), (459, 45462), (485, 45279), (490, 45249),

Gene: Braxoaddie_59 Start: 45750, Stop: 42334, Start Num: 33
Candidate Starts for Braxoaddie_59:
(Start: 33 @45750 has 100 MA's), (42, 45669), (Start: 43 @45654 has 7 MA's), (55, 45546), (56, 45540), (64, 45492), (73, 45411), (82, 45369), (110, 45159), (112, 45144), (113, 45135), (116, 45111), (117, 45081), (120, 45042), (131, 44961), (134, 44919), (155, 44784), (167, 44670), (174, 44619), (176, 44601), (177, 44592), (184, 44514), (186, 44499), (189, 44460), (193, 44421), (204, 44328), (210, 44277), (212, 44271), (215, 44232), (231, 44127), (232, 44112), (233, 44109), (246, 43995), (247, 43992), (249, 43962), (252, 43944), (254, 43941), (255, 43935), (257, 43932), (262, 43899), (265, 43878), (288, 43710), (295, 43632), (298, 43593), (299, 43590), (301, 43584), (305, 43566), (315, 43470), (318, 43452), (321, 43416), (337, 43344), (346, 43251), (347, 43239), (358, 43176), (369, 43119), (386, 42990), (392, 42960), (401, 42900), (402, 42897), (408, 42843), (423, 42753), (430, 42717), (439, 42672), (442, 42657), (451, 42615), (456, 42570), (466, 42516), (467, 42507), (469, 42495), (470, 42489), (472, 42471), (477, 42420), (478, 42417), (485, 42375),

Gene: Buggaboo_61 Start: 49019, Stop: 45717, Start Num: 33
Candidate Starts for Buggaboo_61:
(16, 49094), (Start: 33 @49019 has 100 MA's), (Start: 43 @48923 has 7 MA's), (62, 48770), (64, 48761), (82, 48638), (104, 48479), (105, 48473), (107, 48449), (118, 48341), (131, 48230), (151, 48104), (172, 47933), (177, 47891), (184, 47813), (186, 47798), (201, 47660), (215, 47528), (226, 47462), (233, 47405), (240, 47345), (246, 47294), (250, 47255), (258, 47225), (265, 47180), (294, 46937), (298, 46895), (299, 46892), (301, 46886), (305, 46868), (315, 46772), (321, 46718), (346, 46565), (355, 46505), (359, 46490), (380, 46361), (398, 46283), (408, 46223), (409, 46202), (410,

46199), (415, 46181), (430, 46097), (442, 46037), (449, 46010), (485, 45758), (490, 45728),

Gene: Butterscotch_65 Start: 49750, Stop: 53052, Start Num: 14
Candidate Starts for Butterscotch_65:
(Start: 14 @49750 has 20 MA's), (29 @49837 has 1 MA's), (30, 49843), (Start: 33 @49852 has 100 MA's), (Start: 43 @49948 has 7 MA's), (64, 50104), (74, 50191), (75, 50194), (83, 50245), (117, 50509), (120, 50548), (129, 50620), (131, 50629), (136, 50704), (146, 50770), (148, 50776), (160, 50830), (162, 50848), (167, 50899), (168, 50902), (171, 50932), (180, 51016), (181, 51025), (184, 51052), (186, 51067), (204, 51244), (205, 51253), (219, 51358), (230, 51439), (237, 51499), (246, 51574), (249, 51607), (250, 51613), (256, 51634), (258, 51643), (265, 51688), (277, 51757), (280, 51772), (288, 51841), (293, 51904), (296, 51937), (297, 51940), (306, 51991), (314, 52066), (334, 52189), (337, 52207), (345, 52285), (346, 52288), (347, 52300), (354, 52345), (360, 52366), (363, 52378), (368, 52408), (372, 52429), (398, 52501), (413, 52558), (432, 52657), (445, 52723), (460, 52813), (463, 52843), (464, 52846), (474, 52921), (480, 52963), (484, 52993), (486, 53005), (488, 53020), (490, 53029),

Gene: C3PO_43 Start: 41952, Stop: 38659, Start Num: 33
Candidate Starts for C3PO_43:
(Start: 33 @41952 has 100 MA's), (38, 41895), (42, 41871), (Start: 43 @41856 has 7 MA's), (44, 41847), (64, 41700), (97, 41418), (104, 41340), (112, 41274), (135, 41031), (157, 40926), (167, 40824), (173, 40776), (184, 40671), (186, 40656), (195, 40560), (223, 40341), (224, 40338), (225, 40323), (229, 40293), (232, 40263), (246, 40146), (249, 40113), (255, 40086), (260, 40062), (283, 39915), (284, 39909), (287, 39873), (288, 39861), (289, 39840), (297, 39765), (299, 39747), (321, 39570), (332, 39540), (335, 39513), (337, 39498), (355, 39369), (376, 39336), (393, 39249), (413, 39135), (415, 39129), (417, 39117), (447, 38967), (448, 38964), (449, 38958), (452, 38940), (453, 38931), (454, 38913), (471, 38811), (473, 38787), (476, 38751), (477, 38745),

Gene: Cborch11_78 Start: 55192, Stop: 58488, Start Num: 33
Candidate Starts for Cborch11_78:
(Start: 26 @55162 has 2 MA's), (30, 55183), (Start: 33 @55192 has 100 MA's), (41, 55264), (Start: 43 @55288 has 7 MA's), (46, 55321), (64, 55456), (75, 55546), (76, 55549), (79, 55567), (95, 55675), (117, 55867), (143, 56101), (156, 56158), (166, 56257), (170, 56284), (173, 56311), (174, 56314), (186, 56437), (189, 56476), (192, 56518), (202, 56596), (204, 56614), (206, 56632), (208, 56644), (217, 56719), (233, 56875), (242, 56959), (250, 57037), (255, 57058), (258, 57067), (259, 57073), (261, 57082), (270, 57154), (273, 57169), (277, 57208), (279, 57220), (289, 57313), (290, 57319), (295, 57367), (299, 57409), (319, 57559), (320, 57571), (337, 57655), (351, 57796), (394, 57901), (410, 58000), (412, 58009), (427, 58087), (434, 58126), (436, 58141), (447, 58189), (461, 58285), (464, 58303), (468, 58330), (475, 58378), (478, 58408), (479, 58411), (482, 58426), (486, 58456), (487, 58465), (488, 58471), (489, 58474),

Gene: Charminar_79 Start: 49951, Stop: 53292, Start Num: 33
Candidate Starts for Charminar_79:
(Start: 33 @49951 has 100 MA's), (Start: 39 @50011 has 1 MA's), (Start: 43 @50047 has 7 MA's), (47, 50092), (53, 50134), (89, 50395), (108, 50530), (117, 50626), (147, 50896), (149, 50905), (162, 51013), (166, 51058), (172, 51100), (179, 51178), (186, 51232), (187, 51235), (188, 51265), (199, 51355), (204, 51409), (216, 51508), (219, 51523), (225, 51565), (246, 51739), (249, 51772), (252, 51790), (258, 51808), (265, 51853), (266, 51856), (282, 51952), (287, 51994), (288, 52006), (291, 52042), (313, 52222), (318, 52264), (321, 52300), (334, 52354), (335, 52357), (337, 52372), (346, 52468), (347, 52480), (396, 52675), (413, 52759), (432, 52864), (435, 52879), (438, 52894), (441, 52915), (445, 52927), (446, 52933), (447, 52936), (452, 52963), (457, 53008), (473, 53116), (479, 53161), (483, 53185), (488, 53221),

Gene: Chill_69 Start: 49783, Stop: 53085, Start Num: 14

Candidate Starts for Chill_69:
(Start: 14 @49783 has 20 MA's), (Start: 29 @49870 has 1 MA's), (30, 49876), (Start: 33 @49885 has 100 MA's), (Start: 43 @49981 has 7 MA's), (64, 50137), (74, 50224), (75, 50227), (83, 50278), (117, 50542), (120, 50581), (129, 50653), (131, 50662), (136, 50737), (146, 50803), (148, 50809), (160, 50863), (162, 50881), (167, 50932), (168, 50935), (171, 50965), (180, 51049), (184, 51085), (186, 51100), (204, 51277), (219, 51391), (230, 51472), (246, 51607), (249, 51640), (250, 51646), (256, 51667), (258, 51676), (265, 51721), (277, 51790), (280, 51805), (284, 51826), (288, 51874), (293, 51937), (296, 51970), (297, 51973), (298, 51988), (306, 52024), (314, 52099), (334, 52222), (337, 52240), (345, 52318), (346, 52321), (347, 52333), (360, 52399), (363, 52411), (368, 52441), (372, 52462), (398, 52534), (413, 52591), (432, 52690), (445, 52756), (460, 52846), (463, 52876), (464, 52879), (469, 52909), (474, 52954), (480, 52996), (484, 53026), (486, 53038), (488, 53053), (490, 53062),

Gene: CoffeeBean_59 Start: 45708, Stop: 42292, Start Num: 33
Candidate Starts for CoffeeBean_59:
(Start: 33 @45708 has 100 MA's), (42, 45627), (Start: 43 @45612 has 7 MA's), (55, 45504), (56, 45498), (64, 45450), (73, 45369), (82, 45327), (110, 45117), (112, 45102), (113, 45093), (116, 45069), (117, 45039), (120, 45000), (131, 44919), (134, 44877), (155, 44742), (167, 44628), (174, 44577), (176, 44559), (177, 44550), (184, 44472), (186, 44457), (189, 44418), (193, 44379), (204, 44286), (210, 44235), (212, 44229), (215, 44190), (231, 44085), (232, 44070), (233, 44067), (246, 43953), (247, 43950), (249, 43920), (252, 43902), (254, 43899), (255, 43893), (257, 43890), (262, 43857), (265, 43836), (288, 43668), (295, 43590), (298, 43551), (299, 43548), (301, 43542), (305, 43524), (315, 43428), (318, 43410), (321, 43374), (337, 43302), (346, 43209), (347, 43197), (358, 43134), (369, 43077), (386, 42948), (392, 42918), (401, 42858), (402, 42855), (408, 42801), (423, 42711), (430, 42675), (439, 42630), (442, 42615), (451, 42573), (456, 42528), (466, 42474), (467, 42465), (469, 42453), (470, 42447), (472, 42429), (477, 42378), (478, 42375), (485, 42333),

Gene: Commandaria_61 Start: 49218, Stop: 45910, Start Num: 33
Candidate Starts for Commandaria_61:
(Start: 33 @49218 has 100 MA's), (41, 49146), (42, 49137), (Start: 43 @49122 has 7 MA's), (47, 49077), (62, 48969), (64, 48960), (82, 48837), (104, 48678), (105, 48672), (107, 48648), (116, 48579), (118, 48540), (131, 48429), (151, 48303), (172, 48132), (176, 48099), (177, 48090), (184, 48012), (186, 47997), (193, 47919), (201, 47859), (203, 47835), (204, 47826), (226, 47661), (246, 47493), (249, 47460), (250, 47454), (252, 47442), (258, 47424), (265, 47379), (294, 47139), (299, 47094), (301, 47088), (305, 47070), (315, 46974), (318, 46956), (321, 46920), (359, 46692), (361, 46680), (371, 46635), (380, 46560), (398, 46476), (415, 46374), (423, 46326), (442, 46230), (443, 46227), (449, 46203), (469, 46068), (471, 46056), (480, 45987), (485, 45951),

Gene: Cruella_43 Start: 41952, Stop: 38659, Start Num: 33
Candidate Starts for Cruella_43:
(Start: 33 @41952 has 100 MA's), (38, 41895), (42, 41871), (Start: 43 @41856 has 7 MA's), (44, 41847), (64, 41700), (97, 41418), (104, 41340), (112, 41274), (135, 41031), (157, 40926), (167, 40824), (173, 40776), (184, 40671), (186, 40656), (195, 40560), (223, 40341), (224, 40338), (225, 40323), (229, 40293), (232, 40263), (246, 40146), (249, 40113), (255, 40086), (260, 40062), (283, 39915), (284, 39909), (287, 39873), (288, 39861), (289, 39840), (297, 39765), (299, 39747), (321, 39570), (332, 39540), (335, 39513), (337, 39498), (355, 39369), (376, 39336), (393, 39249), (413, 39135), (415, 39129), (417, 39117), (447, 38967), (448, 38964), (449, 38958), (452, 38940), (453, 38931), (471, 38811), (473, 38787), (476, 38751), (477, 38745),

Gene: Dalilpop_64 Start: 50147, Stop: 46866, Start Num: 33
Candidate Starts for Dalilpop_64:
(5, 50339), (31, 50153), (Start: 33 @50147 has 100 MA's), (42, 50066), (Start: 43 @50051 has 7 MA's), (47, 50006), (62, 49895), (64, 49886), (71, 49820), (82, 49763), (101, 49637), (105, 49598), (107,

49574), (111, 49547), (113, 49529), (115, 49520), (118, 49466), (140, 49253), (151, 49229), (184, 48935), (186, 48920), (223, 48602), (226, 48578), (233, 48521), (246, 48410), (247, 48407), (258, 48341), (261, 48326), (290, 48107), (294, 48059), (298, 48017), (299, 48014), (301, 48008), (305, 47990), (315, 47894), (318, 47876), (321, 47840), (346, 47675), (350, 47645), (355, 47615), (378, 47528), (380, 47522), (398, 47435), (408, 47375), (415, 47333), (442, 47189), (443, 47186), (449, 47162), (480, 46946), (485, 46910), (490, 46880),

Gene: Damien_77 Start: 55598, Stop: 58798, Start Num: 43
Candidate Starts for Damien_77:
(Start: 26 @55472 has 2 MA's), (30, 55493), (Start: 33 @55502 has 100 MA's), (41, 55574), (Start: 43 @55598 has 7 MA's), (46, 55631), (64, 55766), (75, 55856), (76, 55859), (79, 55877), (95, 55985), (117, 56177), (143, 56411), (156, 56468), (166, 56567), (170, 56594), (173, 56621), (174, 56624), (182, 56702), (186, 56747), (189, 56786), (192, 56828), (202, 56906), (204, 56924), (206, 56942), (208, 56954), (217, 57029), (233, 57185), (242, 57269), (250, 57347), (255, 57368), (258, 57377), (259, 57383), (261, 57392), (270, 57464), (273, 57479), (277, 57518), (279, 57530), (289, 57623), (290, 57629), (295, 57677), (299, 57719), (319, 57869), (320, 57881), (337, 57965), (351, 58106), (394, 58211), (410, 58310), (412, 58319), (427, 58397), (434, 58436), (436, 58451), (447, 58499), (461, 58595), (464, 58613), (468, 58640), (475, 58688), (478, 58718), (479, 58721), (482, 58736), (486, 58766), (487, 58775), (488, 58781), (489, 58784),

Gene: Darwin_47 Start: 41830, Stop: 38537, Start Num: 33
Candidate Starts for Darwin_47:
(Start: 33 @41830 has 100 MA's), (38, 41773), (42, 41749), (Start: 43 @41734 has 7 MA's), (44, 41725), (64, 41578), (79, 41458), (97, 41296), (104, 41218), (135, 40909), (157, 40804), (167, 40702), (173, 40654), (186, 40534), (195, 40438), (223, 40219), (224, 40216), (225, 40201), (229, 40171), (232, 40141), (246, 40024), (249, 39991), (255, 39964), (260, 39940), (278, 39835), (283, 39793), (288, 39739), (289, 39718), (297, 39643), (299, 39625), (317, 39493), (321, 39448), (332, 39418), (335, 39391), (337, 39376), (355, 39247), (376, 39214), (393, 39127), (399, 39100), (413, 39013), (415, 39007), (417, 38995), (447, 38845), (448, 38842), (449, 38836), (452, 38818), (453, 38809), (454, 38791), (471, 38689), (473, 38665), (476, 38629), (477, 38623), (485, 38578),

Gene: DaviePasture_79 Start: 51941, Stop: 55282, Start Num: 33
Candidate Starts for DaviePasture_79:
(21, 51893), (Start: 33 @51941 has 100 MA's), (Start: 39 @52001 has 1 MA's), (Start: 43 @52037 has 7 MA's), (47, 52082), (53, 52124), (89, 52385), (104, 52487), (108, 52520), (117, 52616), (147, 52886), (149, 52895), (162, 53003), (166, 53048), (172, 53090), (186, 53222), (187, 53225), (188, 53255), (199, 53345), (204, 53399), (216, 53498), (219, 53513), (225, 53555), (246, 53729), (249, 53762), (252, 53780), (254, 53783), (258, 53798), (265, 53843), (266, 53846), (282, 53942), (287, 53984), (288, 53996), (291, 54032), (313, 54212), (318, 54254), (321, 54290), (334, 54344), (337, 54362), (346, 54458), (347, 54470), (394, 54659), (413, 54749), (432, 54854), (435, 54869), (441, 54905), (445, 54917), (446, 54923), (447, 54926), (452, 54953), (457, 54998), (473, 55106), (479, 55151), (483, 55175), (488, 55211),

Gene: Delton_67 Start: 50148, Stop: 53450, Start Num: 14
Candidate Starts for Delton_67:
(Start: 14 @50148 has 20 MA's), (Start: 29 @50235 has 1 MA's), (30, 50241), (Start: 33 @50250 has 100 MA's), (Start: 43 @50346 has 7 MA's), (64, 50502), (74, 50589), (75, 50592), (83, 50643), (117, 50907), (120, 50946), (129, 51018), (131, 51027), (136, 51102), (146, 51168), (148, 51174), (160, 51228), (162, 51246), (167, 51297), (168, 51300), (171, 51330), (180, 51414), (181, 51423), (184, 51450), (186, 51465), (204, 51642), (205, 51651), (219, 51756), (230, 51837), (237, 51897), (246, 51972), (249, 52005), (250, 52011), (256, 52032), (258, 52041), (265, 52086), (277, 52155), (280, 52170), (288, 52239), (293, 52302), (296, 52335), (297, 52338), (306, 52389), (314, 52464), (334, 52587), (337, 52605), (345, 52683), (346, 52686), (347, 52698), (354, 52743), (360, 52764), (363,

52776), (368, 52806), (372, 52827), (398, 52899), (413, 52956), (432, 53055), (445, 53121), (460, 53211), (463, 53241), (464, 53244), (469, 53274), (474, 53319), (480, 53361), (484, 53391), (486, 53403), (488, 53418), (490, 53427),

Gene: Demikore_92 Start: 57551, Stop: 60811, Start Num: 26
Candidate Starts for Demikore_92:
(Start: 26 @57551 has 2 MA's), (Start: 33 @57578 has 100 MA's), (Start: 43 @57674 has 7 MA's), (64, 57839), (80, 57953), (86, 57998), (92, 58037), (101, 58088), (117, 58253), (182, 58751), (186, 58796), (189, 58835), (214, 59039), (230, 59180), (235, 59231), (246, 59327), (248, 59336), (249, 59360), (250, 59366), (258, 59396), (259, 59402), (261, 59411), (277, 59534), (278, 59537), (279, 59546), (286, 59588), (287, 59606), (299, 59738), (337, 59984), (357, 60134), (374, 60191), (394, 60233), (401, 60257), (413, 60326), (445, 60494), (460, 60584), (468, 60656), (477, 60731),

Gene: DoobyDoo_78 Start: 50921, Stop: 54166, Start Num: 43
Candidate Starts for DoobyDoo_78:
(Start: 39 @50885 has 1 MA's), (Start: 43 @50921 has 7 MA's), (47, 50966), (53, 51008), (89, 51269), (104, 51371), (108, 51404), (117, 51500), (147, 51770), (149, 51779), (162, 51887), (166, 51932), (172, 51974), (186, 52106), (187, 52109), (188, 52139), (191, 52160), (199, 52229), (204, 52283), (216, 52382), (219, 52397), (225, 52439), (246, 52613), (249, 52646), (252, 52664), (258, 52682), (265, 52727), (266, 52730), (282, 52826), (287, 52868), (288, 52880), (291, 52916), (313, 53096), (318, 53138), (321, 53174), (334, 53228), (337, 53246), (346, 53342), (347, 53354), (396, 53549), (413, 53633), (428, 53714), (432, 53738), (435, 53753), (441, 53789), (445, 53801), (446, 53807), (447, 53810), (452, 53837), (457, 53882), (473, 53990), (479, 54035), (483, 54059), (488, 54095),

Gene: DrLupo_85 Start: 55971, Stop: 59333, Start Num: 26
Candidate Starts for DrLupo_85:
(Start: 26 @55971 has 2 MA's), (Start: 33 @55998 has 100 MA's), (38, 56055), (Start: 43 @56094 has 7 MA's), (64, 56262), (67, 56298), (69, 56313), (82, 56379), (85, 56418), (86, 56421), (94, 56472), (101, 56505), (104, 56538), (109, 56574), (113, 56613), (118, 56676), (119, 56679), (125, 56760), (131, 56790), (150, 56913), (162, 56985), (165, 57018), (179, 57150), (186, 57210), (187, 57213), (199, 57333), (200, 57342), (213, 57447), (225, 57555), (226, 57561), (242, 57717), (245, 57750), (246, 57756), (248, 57765), (249, 57789), (251, 57804), (253, 57807), (258, 57825), (259, 57831), (264, 57882), (267, 57921), (268, 57951), (274, 57987), (277, 58017), (284, 58053), (295, 58179), (299, 58221), (304, 58239), (308, 58263), (311, 58296), (337, 58470), (362, 58650), (365, 58656), (367, 58677), (394, 58737), (404, 58794), (418, 58887), (446, 59031), (455, 59100), (461, 59130), (480, 59259), (489, 59319),

Gene: Dryad_56 Start: 40017, Stop: 36817, Start Num: 33
Candidate Starts for Dryad_56:
(27, 40038), (Start: 33 @40017 has 100 MA's), (34, 40008), (36, 39975), (Start: 43 @39921 has 7 MA's), (49, 39867), (53, 39834), (58, 39798), (59, 39789), (60, 39780), (65, 39750), (68, 39717), (70, 39693), (78, 39639), (81, 39627), (87, 39573), (100, 39504), (109, 39423), (121, 39288), (126, 39225), (127, 39222), (138, 39117), (147, 39066), (152, 39051), (156, 39036), (169, 38940), (172, 38910), (178, 38865), (180, 38829), (184, 38793), (186, 38778), (187, 38775), (195, 38682), (205, 38592), (207, 38577), (221, 38466), (232, 38385), (234, 38379), (236, 38352), (242, 38301), (249, 38229), (250, 38223), (258, 38193), (263, 38163), (273, 38118), (276, 38082), (292, 37953), (307, 37842), (310, 37818), (332, 37674), (333, 37662), (334, 37650), (348, 37539), (398, 37359), (410, 37299), (413, 37287), (420, 37254), (431, 37188), (445, 37122), (462, 37011), (465, 36999), (468, 36978), (472, 36954), (480, 36894), (485, 36858), (487, 36843),

Gene: DumpTruck_80 Start: 51478, Stop: 54825, Start Num: 33
Candidate Starts for DumpTruck_80:

(Start: 33 @51478 has 100 MA's), (42, 51559), (Start: 43 @51574 has 7 MA's), (44, 51583), (45, 51589), (55, 51682), (84, 51892), (89, 51922), (96, 51970), (108, 52057), (117, 52153), (136, 52354), (147, 52423), (149, 52432), (162, 52543), (166, 52588), (172, 52630), (186, 52762), (187, 52765), (188, 52795), (205, 52948), (216, 53038), (219, 53053), (221, 53074), (246, 53269), (249, 53302), (252, 53320), (263, 53368), (265, 53383), (266, 53386), (282, 53482), (288, 53536), (291, 53572), (306, 53686), (313, 53752), (318, 53794), (321, 53830), (334, 53884), (337, 53902), (346, 53998), (347, 54010), (349, 54022), (366, 54106), (416, 54301), (432, 54397), (435, 54412), (445, 54460), (446, 54466), (447, 54469), (452, 54496), (457, 54541), (477, 54688), (479, 54694), (483, 54718), (488, 54754),

Gene: Emianna_60 Start: 49104, Stop: 45793, Start Num: 33
Candidate Starts for Emianna_60:
(3, 49347), (Start: 33 @49104 has 100 MA's), (41, 49032), (Start: 43 @49008 has 7 MA's), (62, 48855), (64, 48846), (82, 48723), (104, 48564), (105, 48558), (107, 48534), (118, 48426), (120, 48396), (128, 48327), (151, 48189), (154, 48171), (172, 48018), (177, 47976), (184, 47898), (186, 47883), (201, 47745), (226, 47547), (232, 47493), (233, 47490), (240, 47430), (246, 47379), (258, 47310), (265, 47265), (294, 47025), (298, 46983), (299, 46980), (301, 46974), (305, 46956), (315, 46860), (321, 46806), (343, 46662), (346, 46653), (359, 46578), (375, 46503), (380, 46449), (390, 46407), (398, 46359), (409, 46278), (415, 46257), (432, 46167), (438, 46137), (442, 46113), (443, 46110), (472, 45927), (480, 45870),

Gene: Ennea_66 Start: 49878, Stop: 46564, Start Num: 33
Candidate Starts for Ennea_66:
(1, 50130), (6, 50043), (10, 50016), (Start: 33 @49878 has 100 MA's), (Start: 43 @49782 has 7 MA's), (62, 49629), (64, 49620), (82, 49497), (104, 49338), (105, 49332), (107, 49308), (115, 49254), (118, 49200), (120, 49170), (124, 49131), (131, 49089), (137, 49008), (151, 48963), (172, 48792), (177, 48750), (184, 48672), (186, 48657), (201, 48519), (226, 48321), (238, 48219), (246, 48153), (252, 48102), (258, 48084), (265, 48039), (294, 47796), (298, 47754), (299, 47751), (301, 47745), (305, 47727), (315, 47631), (318, 47613), (321, 47577), (343, 47433), (346, 47424), (349, 47400), (359, 47349), (380, 47220), (398, 47130), (400, 47121), (409, 47049), (415, 47028), (446, 46872), (450, 46857), (485, 46608),

Gene: Erk16_66 Start: 49865, Stop: 53167, Start Num: 14
Candidate Starts for Erk16_66:
(Start: 14 @49865 has 20 MA's), (Start: 29 @49952 has 1 MA's), (30, 49958), (Start: 33 @49967 has 100 MA's), (Start: 43 @50063 has 7 MA's), (64, 50219), (74, 50306), (75, 50309), (83, 50360), (117, 50624), (120, 50663), (129, 50735), (131, 50744), (136, 50819), (146, 50885), (148, 50891), (160, 50945), (162, 50963), (167, 51014), (168, 51017), (171, 51047), (180, 51131), (181, 51140), (184, 51167), (186, 51182), (204, 51359), (205, 51368), (219, 51473), (230, 51554), (237, 51614), (246, 51689), (249, 51722), (250, 51728), (256, 51749), (258, 51758), (265, 51803), (277, 51872), (280, 51887), (288, 51956), (293, 52019), (296, 52052), (297, 52055), (306, 52106), (314, 52181), (334, 52304), (337, 52322), (345, 52400), (346, 52403), (347, 52415), (354, 52460), (360, 52481), (363, 52493), (368, 52523), (372, 52544), (398, 52616), (413, 52673), (432, 52772), (445, 52838), (460, 52928), (463, 52958), (464, 52961), (469, 52991), (474, 53036), (480, 53078), (484, 53108), (486, 53120), (488, 53135), (490, 53144),

Gene: Erutan_79 Start: 51975, Stop: 55283, Start Num: 35
Candidate Starts for Erutan_79:
(Start: 35 @51975 has 4 MA's), (Start: 39 @52002 has 1 MA's), (41, 52014), (Start: 43 @52038 has 7 MA's), (47, 52083), (53, 52125), (89, 52386), (104, 52488), (108, 52521), (117, 52617), (147, 52887), (149, 52896), (162, 53004), (166, 53049), (172, 53091), (186, 53223), (187, 53226), (188, 53256), (191, 53277), (199, 53346), (204, 53400), (216, 53499), (219, 53514), (225, 53556), (246, 53730), (249, 53763), (252, 53781), (258, 53799), (265, 53844), (266, 53847), (282, 53943), (287, 53985),

(288, 53997), (291, 54033), (313, 54213), (318, 54255), (321, 54291), (334, 54345), (337, 54363), (346, 54459), (347, 54471), (396, 54666), (413, 54750), (428, 54831), (432, 54855), (435, 54870), (441, 54906), (445, 54918), (446, 54924), (447, 54927), (452, 54954), (457, 54999), (473, 55107), (479, 55152), (483, 55176), (488, 55212),

Gene: Flapper_64 Start: 49579, Stop: 46298, Start Num: 33
Candidate Starts for Flapper_64:
(15, 49672), (32, 49582), (Start: 33 @49579 has 100 MA's), (34, 49570), (42, 49498), (Start: 43 @49483 has 7 MA's), (47, 49438), (62, 49327), (64, 49318), (71, 49252), (82, 49195), (101, 49069), (105, 49030), (107, 49006), (111, 48979), (113, 48961), (115, 48952), (118, 48898), (140, 48685), (151, 48661), (167, 48526), (184, 48367), (186, 48352), (223, 48034), (226, 48010), (233, 47953), (246, 47842), (258, 47773), (261, 47758), (265, 47728), (290, 47539), (294, 47491), (298, 47449), (299, 47446), (301, 47440), (305, 47422), (315, 47326), (318, 47308), (321, 47272), (346, 47107), (350, 47077), (355, 47047), (375, 47008), (380, 46954), (387, 46930), (398, 46867), (408, 46807), (415, 46765), (442, 46621), (443, 46618), (449, 46594), (480, 46378), (485, 46342), (490, 46312),

Gene: Float294_60 Start: 49099, Stop: 45785, Start Num: 33
Candidate Starts for Float294_60:
(2, 49324), (8, 49240), (Start: 33 @49099 has 100 MA's), (Start: 43 @49003 has 7 MA's), (62, 48850), (64, 48841), (82, 48718), (104, 48559), (105, 48553), (118, 48421), (120, 48391), (131, 48310), (137, 48229), (151, 48184), (172, 48013), (177, 47971), (184, 47893), (186, 47878), (201, 47740), (209, 47662), (226, 47542), (238, 47440), (246, 47374), (252, 47323), (258, 47305), (265, 47260), (294, 47017), (298, 46975), (299, 46972), (301, 46966), (305, 46948), (315, 46852), (318, 46834), (321, 46798), (343, 46654), (346, 46645), (349, 46621), (359, 46570), (380, 46441), (398, 46351), (400, 46342), (408, 46291), (409, 46270), (415, 46249), (446, 46093), (450, 46078), (485, 45829),

Gene: Foxboro_61 Start: 49613, Stop: 46299, Start Num: 33
Candidate Starts for Foxboro_61:
(3, 49856), (Start: 33 @49613 has 100 MA's), (41, 49541), (Start: 43 @49517 has 7 MA's), (47, 49472), (62, 49364), (64, 49355), (82, 49232), (104, 49073), (105, 49067), (107, 49043), (118, 48935), (120, 48905), (128, 48836), (151, 48698), (154, 48680), (172, 48527), (177, 48485), (179, 48446), (184, 48407), (186, 48392), (201, 48254), (226, 48056), (233, 47999), (240, 47939), (246, 47888), (258, 47819), (265, 47774), (298, 47489), (299, 47486), (301, 47480), (305, 47462), (315, 47366), (321, 47312), (336, 47243), (346, 47159), (353, 47108), (355, 47099), (375, 47009), (380, 46955), (390, 46913), (398, 46865), (409, 46784), (415, 46763), (432, 46673), (438, 46643), (442, 46619), (443, 46616), (472, 46433), (480, 46376),

Gene: Fulcrum_78 Start: 51710, Stop: 55051, Start Num: 33
Candidate Starts for Fulcrum_78:
(21, 51662), (Start: 33 @51710 has 100 MA's), (Start: 39 @51770 has 1 MA's), (Start: 43 @51806 has 7 MA's), (47, 51851), (53, 51893), (89, 52154), (104, 52256), (108, 52289), (117, 52385), (147, 52655), (149, 52664), (162, 52772), (166, 52817), (172, 52859), (186, 52991), (187, 52994), (188, 53024), (199, 53114), (204, 53168), (216, 53267), (219, 53282), (225, 53324), (246, 53498), (249, 53531), (252, 53549), (258, 53567), (265, 53612), (266, 53615), (282, 53711), (287, 53753), (288, 53765), (291, 53801), (313, 53981), (318, 54023), (321, 54059), (334, 54113), (337, 54131), (346, 54227), (347, 54239), (396, 54434), (413, 54518), (432, 54623), (435, 54638), (441, 54674), (445, 54686), (446, 54692), (447, 54695), (452, 54722), (457, 54767), (473, 54875), (479, 54920), (483, 54944), (488, 54980),

Gene: Fury_67 Start: 47998, Stop: 44609, Start Num: 19
Candidate Starts for Fury_67:
(11, 48049), (Start: 19 @47998 has 2 MA's), (22, 47980), (25, 47953), (Start: 33 @47929 has 100 MA's), (42, 47848), (Start: 43 @47833 has 7 MA's), (48, 47782), (62, 47680), (64, 47671), (77, 47566),

(82, 47548), (93, 47455), (104, 47389), (105, 47383), (106, 47371), (115, 47305), (118, 47251), (131, 47140), (132, 47119), (137, 47059), (141, 47032), (151, 47014), (165, 46897), (184, 46723), (186, 46708), (201, 46570), (212, 46477), (215, 46438), (226, 46372), (230, 46339), (233, 46315), (240, 46255), (246, 46204), (247, 46201), (248, 46195), (249, 46171), (252, 46153), (258, 46135), (265, 46090), (294, 45850), (297, 45823), (299, 45805), (301, 45799), (305, 45781), (315, 45685), (318, 45667), (320, 45643), (321, 45631), (342, 45499), (344, 45478), (346, 45472), (350, 45442), (380, 45265), (388, 45229), (398, 45178), (408, 45118), (409, 45097), (415, 45076), (450, 44902), (480, 44689), (490, 44623),

Gene: GOATification_78 Start: 51710, Stop: 55051, Start Num: 33
Candidate Starts for GOATification_78:
(21, 51662), (Start: 33 @51710 has 100 MA's), (Start: 39 @51770 has 1 MA's), (Start: 43 @51806 has 7 MA's), (47, 51851), (53, 51893), (89, 52154), (104, 52256), (108, 52289), (117, 52385), (147, 52655), (149, 52664), (162, 52772), (166, 52817), (172, 52859), (186, 52991), (187, 52994), (188, 53024), (199, 53114), (204, 53168), (216, 53267), (219, 53282), (225, 53324), (246, 53498), (249, 53531), (252, 53549), (258, 53567), (265, 53612), (266, 53615), (282, 53711), (287, 53753), (288, 53765), (291, 53801), (313, 53981), (318, 54023), (321, 54059), (334, 54113), (337, 54131), (346, 54227), (347, 54239), (396, 54434), (413, 54518), (432, 54623), (435, 54638), (441, 54674), (445, 54686), (446, 54692), (447, 54695), (452, 54722), (457, 54767), (473, 54875), (479, 54920), (483, 54944), (488, 54980),

Gene: GRU1_49 Start: 41041, Stop: 37856, Start Num: 43
Candidate Starts for GRU1_49:
(Start: 33 @41137 has 100 MA's), (42, 41056), (Start: 43 @41041 has 7 MA's), (47, 40996), (62, 40885), (64, 40876), (71, 40810), (82, 40753), (101, 40627), (105, 40588), (107, 40564), (111, 40537), (115, 40510), (118, 40456), (140, 40243), (151, 40219), (184, 39925), (186, 39910), (223, 39592), (226, 39568), (233, 39511), (240, 39451), (246, 39400), (258, 39331), (261, 39316), (290, 39097), (294, 39049), (298, 39007), (299, 39004), (301, 38998), (305, 38980), (315, 38884), (318, 38866), (321, 38830), (346, 38665), (350, 38635), (355, 38605), (378, 38518), (380, 38512), (398, 38425), (408, 38365), (415, 38323), (442, 38179), (449, 38152), (480, 37936), (485, 37900), (490, 37870), (491, 37861),

Gene: GTE5_49 Start: 42214, Stop: 38933, Start Num: 33
Candidate Starts for GTE5_49:
(31, 42220), (Start: 33 @42214 has 100 MA's), (34, 42205), (42, 42133), (Start: 43 @42118 has 7 MA's), (62, 41962), (64, 41953), (82, 41830), (105, 41665), (107, 41641), (114, 41590), (118, 41533), (131, 41422), (140, 41320), (151, 41296), (184, 41002), (186, 40987), (223, 40669), (226, 40645), (233, 40588), (246, 40477), (247, 40474), (258, 40408), (261, 40393), (290, 40174), (294, 40126), (298, 40084), (299, 40081), (301, 40075), (305, 40057), (315, 39961), (318, 39943), (321, 39907), (346, 39742), (350, 39712), (355, 39682), (378, 39595), (380, 39589), (398, 39502), (408, 39442), (415, 39400), (442, 39256), (443, 39253), (449, 39229), (480, 39013), (485, 38977), (490, 38947),

Gene: GTE8_48 Start: 42138, Stop: 38830, Start Num: 33
Candidate Starts for GTE8_48:
(1, 42387), (7, 42309), (10, 42282), (Start: 33 @42138 has 100 MA's), (42, 42057), (Start: 43 @42042 has 7 MA's), (62, 41889), (64, 41880), (82, 41757), (104, 41598), (105, 41592), (107, 41568), (118, 41460), (120, 41430), (151, 41223), (167, 41088), (177, 41010), (184, 40932), (186, 40917), (226, 40581), (233, 40524), (240, 40464), (246, 40413), (258, 40344), (271, 40278), (298, 40014), (299, 40011), (301, 40005), (305, 39987), (309, 39963), (315, 39891), (321, 39837), (343, 39693), (346, 39684), (359, 39609), (380, 39480), (398, 39396), (409, 39315), (415, 39294), (442, 39150), (443, 39147), (449, 39123), (450, 39120), (464, 39018), (490, 38841),

Gene: Genamy16_81 Start: 50797, Stop: 54042, Start Num: 43

Candidate Starts for Genamy16_81:
(Start: 33 @50701 has 100 MA's), (Start: 39 @50761 has 1 MA's), (Start: 43 @50797 has 7 MA's), (47, 50842), (53, 50884), (89, 51145), (108, 51280), (117, 51376), (147, 51646), (149, 51655), (162, 51763), (166, 51808), (172, 51850), (179, 51928), (186, 51982), (187, 51985), (188, 52015), (199, 52105), (204, 52159), (216, 52258), (219, 52273), (225, 52315), (246, 52489), (249, 52522), (252, 52540), (258, 52558), (265, 52603), (266, 52606), (282, 52702), (287, 52744), (288, 52756), (291, 52792), (313, 52972), (318, 53014), (321, 53050), (333, 53092), (334, 53104), (337, 53122), (346, 53218), (347, 53230), (396, 53425), (413, 53509), (432, 53614), (435, 53629), (438, 53644), (441, 53665), (445, 53677), (446, 53683), (447, 53686), (452, 53713), (457, 53758), (473, 53866), (479, 53911), (483, 53935), (488, 53971),

Gene: Gibbin_81 Start: 52515, Stop: 55856, Start Num: 33
Candidate Starts for Gibbin_81:
(21, 52467), (Start: 33 @52515 has 100 MA's), (Start: 39 @52575 has 1 MA's), (Start: 43 @52611 has 7 MA's), (47, 52656), (53, 52698), (89, 52959), (104, 53061), (108, 53094), (117, 53190), (147, 53460), (149, 53469), (162, 53577), (166, 53622), (172, 53664), (186, 53796), (187, 53799), (188, 53829), (191, 53850), (199, 53919), (204, 53973), (216, 54072), (219, 54087), (225, 54129), (246, 54303), (249, 54336), (252, 54354), (258, 54372), (265, 54417), (266, 54420), (282, 54516), (287, 54558), (288, 54570), (291, 54606), (313, 54786), (318, 54828), (321, 54864), (334, 54918), (337, 54936), (346, 55032), (347, 55044), (396, 55239), (413, 55323), (428, 55404), (432, 55428), (435, 55443), (441, 55479), (445, 55491), (446, 55497), (447, 55500), (452, 55527), (457, 55572), (473, 55680), (479, 55725), (483, 55749), (488, 55785),

Gene: Gibson_51 Start: 39054, Stop: 35857, Start Num: 33
Candidate Starts for Gibson_51:
(27, 39075), (Start: 33 @39054 has 100 MA's), (36, 39012), (Start: 43 @38958 has 7 MA's), (49, 38904), (58, 38835), (59, 38826), (60, 38817), (65, 38787), (68, 38754), (71, 38718), (78, 38676), (81, 38664), (87, 38610), (100, 38541), (103, 38502), (109, 38460), (111, 38439), (117, 38367), (121, 38325), (126, 38262), (127, 38259), (136, 38169), (138, 38154), (139, 38145), (147, 38103), (152, 38088), (156, 38073), (169, 37977), (172, 37947), (180, 37866), (182, 37854), (184, 37830), (186, 37815), (187, 37812), (195, 37719), (203, 37647), (205, 37629), (210, 37587), (218, 37530), (221, 37503), (232, 37422), (234, 37416), (236, 37389), (242, 37338), (247, 37296), (249, 37266), (250, 37260), (258, 37230), (261, 37215), (263, 37200), (272, 37158), (273, 37155), (276, 37119), (279, 37104), (292, 36990), (332, 36711), (333, 36699), (334, 36687), (337, 36669), (348, 36576), (372, 36471), (408, 36360), (410, 36336), (433, 36219), (451, 36126), (462, 36048), (465, 36036), (468, 36015), (475, 35967), (480, 35931), (485, 35895), (487, 35880),

Gene: Giuseppe_68 Start: 49677, Stop: 52979, Start Num: 14
Candidate Starts for Giuseppe_68:
(Start: 14 @49677 has 20 MA's), (Start: 29 @49764 has 1 MA's), (30, 49770), (Start: 33 @49779 has 100 MA's), (Start: 43 @49875 has 7 MA's), (64, 50031), (74, 50118), (75, 50121), (83, 50172), (117, 50436), (120, 50475), (129, 50547), (131, 50556), (136, 50631), (146, 50697), (148, 50703), (160, 50757), (162, 50775), (167, 50826), (168, 50829), (171, 50859), (180, 50943), (181, 50952), (184, 50979), (186, 50994), (204, 51171), (205, 51180), (219, 51285), (230, 51366), (237, 51426), (246, 51501), (249, 51534), (250, 51540), (256, 51561), (258, 51570), (265, 51615), (277, 51684), (280, 51699), (288, 51768), (293, 51831), (296, 51864), (297, 51867), (306, 51918), (314, 51993), (334, 52116), (337, 52134), (345, 52212), (346, 52215), (347, 52227), (354, 52272), (360, 52293), (363, 52305), (368, 52335), (372, 52356), (398, 52428), (413, 52485), (432, 52584), (445, 52650), (460, 52740), (463, 52770), (464, 52773), (469, 52803), (474, 52848), (480, 52890), (484, 52920), (486, 52932), (488, 52947), (490, 52956),

Gene: Greenbelt_49 Start: 35561, Stop: 32364, Start Num: 33
Candidate Starts for Greenbelt_49:

(17, 35642), (27, 35579), (Start: 33 @35561 has 100 MA's), (36, 35519), (Start: 43 @35465 has 7 MA's), (49, 35411), (58, 35342), (59, 35333), (65, 35294), (68, 35261), (81, 35171), (87, 35117), (100, 35048), (121, 34832), (138, 34661), (147, 34610), (152, 34595), (161, 34544), (169, 34484), (172, 34454), (180, 34373), (184, 34337), (185, 34334), (186, 34322), (187, 34319), (195, 34226), (205, 34136), (218, 34037), (221, 34010), (232, 33929), (234, 33923), (236, 33896), (249, 33773), (250, 33767), (258, 33737), (263, 33707), (276, 33626), (277, 33623), (332, 33218), (333, 33206), (334, 33194), (348, 33083), (356, 33041), (410, 32843), (411, 32837), (413, 32831), (426, 32765), (444, 32672), (445, 32666), (462, 32555), (465, 32543), (468, 32522), (472, 32498), (478, 32444), (480, 32438), (485, 32402), (487, 32387),

Gene: GretelLyn_79 Start: 52344, Stop: 55685, Start Num: 33
Candidate Starts for GretelLyn_79:
(21, 52296), (Start: 33 @52344 has 100 MA's), (Start: 39 @52404 has 1 MA's), (Start: 43 @52440 has 7 MA's), (47, 52485), (53, 52527), (89, 52788), (104, 52890), (108, 52923), (117, 53019), (147, 53289), (149, 53298), (162, 53406), (166, 53451), (172, 53493), (186, 53625), (187, 53628), (188, 53658), (191, 53679), (199, 53748), (204, 53802), (216, 53901), (219, 53916), (225, 53958), (246, 54132), (249, 54165), (252, 54183), (258, 54201), (265, 54246), (266, 54249), (282, 54345), (287, 54387), (288, 54399), (291, 54435), (313, 54615), (318, 54657), (321, 54693), (334, 54747), (337, 54765), (346, 54861), (347, 54873), (396, 55068), (413, 55152), (428, 55233), (432, 55257), (435, 55272), (441, 55308), (445, 55320), (446, 55326), (447, 55329), (452, 55356), (457, 55401), (473, 55509), (479, 55554), (483, 55578), (488, 55614),

Gene: GrootJr_62 Start: 48486, Stop: 45175, Start Num: 33
Candidate Starts for GrootJr_62:
(3, 48729), (Start: 33 @48486 has 100 MA's), (41, 48414), (Start: 43 @48390 has 7 MA's), (47, 48345), (62, 48237), (64, 48228), (82, 48105), (104, 47946), (105, 47940), (107, 47916), (118, 47808), (120, 47778), (128, 47709), (151, 47571), (154, 47553), (172, 47400), (177, 47358), (184, 47280), (186, 47265), (201, 47127), (226, 46929), (232, 46875), (233, 46872), (240, 46812), (246, 46761), (258, 46692), (265, 46647), (294, 46407), (298, 46365), (299, 46362), (301, 46356), (305, 46338), (315, 46242), (321, 46188), (343, 46044), (346, 46035), (359, 45960), (375, 45885), (380, 45831), (390, 45789), (398, 45741), (409, 45660), (415, 45639), (432, 45549), (438, 45519), (442, 45495), (443, 45492), (472, 45309), (480, 45252),

Gene: Gumball_66 Start: 50219, Stop: 53521, Start Num: 14
Candidate Starts for Gumball_66:
(Start: 14 @50219 has 20 MA's), (Start: 29 @50306 has 1 MA's), (30, 50312), (Start: 33 @50321 has 100 MA's), (Start: 43 @50417 has 7 MA's), (64, 50573), (74, 50660), (75, 50663), (83, 50714), (117, 50978), (120, 51017), (129, 51089), (131, 51098), (136, 51173), (146, 51239), (148, 51245), (160, 51299), (162, 51317), (167, 51368), (168, 51371), (171, 51401), (180, 51485), (181, 51494), (184, 51521), (186, 51536), (204, 51713), (205, 51722), (219, 51827), (230, 51908), (237, 51968), (246, 52043), (249, 52076), (250, 52082), (256, 52103), (258, 52112), (265, 52157), (277, 52226), (280, 52241), (288, 52310), (296, 52406), (297, 52409), (306, 52460), (314, 52535), (334, 52658), (337, 52676), (345, 52754), (346, 52757), (347, 52769), (354, 52814), (360, 52835), (363, 52847), (368, 52877), (372, 52898), (398, 52970), (413, 53027), (432, 53126), (445, 53192), (460, 53282), (463, 53312), (464, 53315), (469, 53345), (474, 53390), (480, 53432), (484, 53462), (486, 53474), (488, 53489), (490, 53498),

Gene: GuyFagieri_58 Start: 45944, Stop: 42528, Start Num: 33
Candidate Starts for GuyFagieri_58:
(Start: 33 @45944 has 100 MA's), (42, 45863), (Start: 43 @45848 has 7 MA's), (55, 45740), (56, 45734), (64, 45686), (82, 45563), (110, 45353), (112, 45338), (113, 45329), (116, 45305), (117, 45275), (120, 45236), (159, 44942), (174, 44810), (175, 44807), (176, 44792), (177, 44783), (184, 44705), (186, 44690), (189, 44651), (193, 44612), (204, 44519), (210, 44468), (212, 44462), (215,

44423), (231, 44318), (232, 44303), (233, 44300), (246, 44186), (247, 44183), (249, 44153), (252, 44135), (254, 44132), (255, 44126), (257, 44123), (262, 44090), (265, 44069), (288, 43901), (293, 43835), (295, 43823), (299, 43781), (301, 43775), (305, 43757), (315, 43661), (318, 43643), (321, 43607), (333, 43565), (337, 43535), (340, 43499), (346, 43442), (347, 43430), (358, 43367), (369, 43310), (377, 43241), (385, 43193), (386, 43184), (391, 43157), (392, 43154), (401, 43094), (423, 42947), (439, 42866), (442, 42851), (443, 42848), (451, 42809), (466, 42710), (467, 42701), (469, 42689), (470, 42683), (471, 42677), (472, 42665), (477, 42614), (478, 42611), (485, 42569),

Gene: Hawkeye_75 Start: 50526, Stop: 53972, Start Num: 14
Candidate Starts for Hawkeye_75:
(Start: 14 @50526 has 20 MA's), (20, 50559), (24, 50589), (Start: 33 @50625 has 100 MA's), (34, 50634), (41, 50697), (Start: 43 @50721 has 7 MA's), (44, 50730), (54, 50823), (62, 50868), (64, 50877), (72, 50952), (75, 50967), (85, 51033), (117, 51282), (120, 51321), (142, 51513), (162, 51621), (167, 51672), (168, 51675), (172, 51708), (184, 51825), (186, 51840), (219, 52131), (230, 52212), (237, 52272), (246, 52347), (249, 52380), (250, 52386), (258, 52416), (280, 52545), (286, 52584), (288, 52614), (296, 52710), (297, 52713), (298, 52728), (306, 52764), (314, 52839), (334, 52962), (335, 52965), (337, 52980), (345, 53058), (346, 53061), (347, 53073), (381, 53280), (382, 53283), (394, 53364), (413, 53478), (425, 53541), (433, 53583), (445, 53643), (460, 53733), (464, 53766), (469, 53796), (474, 53841), (477, 53874), (478, 53877), (486, 53925), (492, 53967),

Gene: Helpful_70 Start: 50059, Stop: 53361, Start Num: 14
Candidate Starts for Helpful_70:
(Start: 14 @50059 has 20 MA's), (Start: 29 @50146 has 1 MA's), (30, 50152), (Start: 33 @50161 has 100 MA's), (Start: 43 @50257 has 7 MA's), (64, 50413), (74, 50500), (75, 50503), (83, 50554), (117, 50818), (120, 50857), (129, 50929), (131, 50938), (136, 51013), (146, 51079), (148, 51085), (160, 51139), (162, 51157), (167, 51208), (168, 51211), (171, 51241), (180, 51325), (181, 51334), (184, 51361), (186, 51376), (204, 51553), (205, 51562), (207, 51577), (219, 51667), (230, 51748), (237, 51808), (246, 51883), (249, 51916), (250, 51922), (256, 51943), (258, 51952), (265, 51997), (277, 52066), (280, 52081), (288, 52150), (293, 52213), (296, 52246), (297, 52249), (306, 52300), (314, 52375), (334, 52498), (337, 52516), (345, 52594), (346, 52597), (347, 52609), (354, 52654), (360, 52675), (363, 52687), (368, 52717), (372, 52738), (398, 52810), (413, 52867), (432, 52966), (445, 53032), (460, 53122), (463, 53152), (464, 53155), (469, 53185), (474, 53230), (480, 53272), (484, 53302), (486, 53314), (488, 53329), (490, 53338),

Gene: HomeFry_63 Start: 46443, Stop: 43219, Start Num: 43
Candidate Starts for HomeFry_63:
(11, 46644), (Start: 19 @46611 has 2 MA's), (22, 46593), (Start: 33 @46539 has 100 MA's), (42, 46458), (Start: 43 @46443 has 7 MA's), (48, 46392), (62, 46290), (64, 46281), (71, 46215), (77, 46176), (82, 46158), (104, 45999), (105, 45993), (106, 45981), (107, 45969), (115, 45915), (118, 45861), (123, 45798), (131, 45750), (140, 45648), (151, 45624), (165, 45507), (177, 45411), (184, 45333), (186, 45318), (201, 45180), (215, 45048), (223, 45006), (226, 44982), (230, 44949), (233, 44925), (246, 44814), (247, 44811), (248, 44805), (249, 44781), (252, 44763), (258, 44745), (261, 44730), (265, 44700), (289, 44514), (294, 44460), (298, 44418), (299, 44415), (301, 44409), (303, 44400), (305, 44391), (315, 44295), (318, 44277), (320, 44253), (321, 44241), (342, 44109), (344, 44088), (346, 44082), (350, 44052), (355, 44022), (370, 43953), (380, 43875), (398, 43788), (408, 43728), (409, 43707), (415, 43686), (423, 43638), (450, 43512), (453, 43488), (480, 43299), (490, 43233),

Gene: HubbaBubba_55 Start: 44123, Stop: 40872, Start Num: 33
Candidate Starts for HubbaBubba_55:
(4, 44351), (Start: 33 @44123 has 100 MA's), (42, 44042), (Start: 43 @44027 has 7 MA's), (47, 43982), (62, 43874), (64, 43865), (86, 43700), (105, 43577), (111, 43526), (115, 43499), (118, 43445), (119, 43442), (120, 43415), (140, 43232), (151, 43208), (164, 43100), (174, 43022), (177, 42995), (184,

42917), (186, 42902), (201, 42764), (226, 42566), (227, 42560), (230, 42533), (246, 42398), (249, 42365), (258, 42329), (265, 42284), (269, 42272), (278, 42209), (294, 42044), (295, 42041), (298, 42002), (299, 41999), (301, 41993), (303, 41984), (305, 41975), (315, 41879), (318, 41861), (321, 41825), (353, 41621), (380, 41525), (398, 41441), (400, 41432), (423, 41291), (442, 41195), (443, 41192), (472, 41009),

Gene: IDyn_59 Start: 45555, Stop: 42304, Start Num: 33
Candidate Starts for IDyn_59:
(4, 45774), (Start: 33 @45555 has 100 MA's), (42, 45474), (Start: 43 @45459 has 7 MA's), (47, 45414), (62, 45306), (64, 45297), (105, 45009), (111, 44958), (115, 44931), (118, 44877), (120, 44847), (140, 44664), (151, 44640), (174, 44454), (177, 44427), (184, 44349), (186, 44334), (201, 44196), (212, 44103), (226, 43998), (227, 43992), (230, 43965), (246, 43830), (249, 43797), (258, 43761), (265, 43716), (269, 43704), (278, 43641), (294, 43476), (295, 43473), (298, 43434), (299, 43431), (301, 43425), (303, 43416), (305, 43407), (315, 43311), (318, 43293), (321, 43257), (345, 43107), (353, 43053), (380, 42957), (398, 42873), (400, 42864), (408, 42813), (423, 42723), (442, 42627), (443, 42624), (472, 42441), (490, 42318),

Gene: Indlulamithi_76 Start: 52921, Stop: 56100, Start Num: 29
Candidate Starts for Indlulamithi_76:
(Start: 29 @52921 has 1 MA's), (Start: 33 @52936 has 100 MA's), (41, 53008), (Start: 43 @53032 has 7 MA's), (48, 53083), (52, 53110), (61, 53173), (64, 53188), (66, 53203), (75, 53278), (76, 53281), (85, 53344), (86, 53347), (90, 53377), (103, 53458), (131, 53713), (134, 53755), (160, 53905), (162, 53923), (165, 53956), (179, 54091), (180, 54094), (181, 54103), (184, 54130), (186, 54142), (211, 54373), (212, 54376), (222, 54454), (225, 54475), (232, 54535), (235, 54565), (246, 54649), (249, 54682), (256, 54709), (258, 54718), (259, 54724), (261, 54733), (263, 54748), (273, 54793), (275, 54817), (279, 54844), (282, 54862), (285, 54877), (300, 55033), (304, 55048), (309, 55081), (311, 55105), (321, 55204), (366, 55477), (411, 55609), (416, 55624), (419, 55648), (421, 55666), (422, 55669), (432, 55714), (461, 55888), (464, 55906), (469, 55936), (477, 56011), (478, 56014),

Gene: Jalebi_78 Start: 52937, Stop: 56278, Start Num: 33
Candidate Starts for Jalebi_78:
(21, 52889), (Start: 33 @52937 has 100 MA's), (Start: 39 @52997 has 1 MA's), (Start: 43 @53033 has 7 MA's), (47, 53078), (53, 53120), (89, 53381), (104, 53483), (108, 53516), (117, 53612), (147, 53882), (149, 53891), (162, 53999), (166, 54044), (172, 54086), (186, 54218), (187, 54221), (188, 54251), (191, 54272), (199, 54341), (204, 54395), (216, 54494), (219, 54509), (246, 54725), (249, 54758), (252, 54776), (258, 54794), (265, 54839), (266, 54842), (282, 54938), (287, 54980), (288, 54992), (291, 55028), (304, 55127), (313, 55208), (318, 55250), (321, 55286), (334, 55340), (337, 55358), (346, 55454), (347, 55466), (396, 55661), (413, 55745), (428, 55826), (432, 55850), (435, 55865), (441, 55901), (445, 55913), (446, 55919), (447, 55922), (452, 55949), (457, 55994), (473, 56102), (479, 56147), (483, 56171), (488, 56207),

Gene: Jamemuya19_76 Start: 50306, Stop: 53647, Start Num: 33
Candidate Starts for Jamemuya19_76:
(Start: 33 @50306 has 100 MA's), (Start: 39 @50366 has 1 MA's), (Start: 43 @50402 has 7 MA's), (47, 50447), (53, 50489), (89, 50750), (108, 50885), (117, 50981), (147, 51251), (149, 51260), (162, 51368), (166, 51413), (172, 51455), (179, 51533), (186, 51587), (187, 51590), (188, 51620), (199, 51710), (204, 51764), (216, 51863), (219, 51878), (225, 51920), (246, 52094), (249, 52127), (252, 52145), (258, 52163), (265, 52208), (266, 52211), (282, 52307), (287, 52349), (288, 52361), (291, 52397), (313, 52577), (318, 52619), (321, 52655), (333, 52697), (334, 52709), (337, 52727), (346, 52823), (347, 52835), (396, 53030), (413, 53114), (432, 53219), (435, 53234), (438, 53249), (441, 53270), (445, 53282), (446, 53288), (447, 53291), (452, 53318), (457, 53363), (473, 53471), (479, 53516), (483, 53540), (488, 53576),

Gene: Jifall16_59 Start: 48758, Stop: 45447, Start Num: 33
Candidate Starts for Jifall16_59:
(3, 49001), (Start: 33 @48758 has 100 MA's), (41, 48686), (Start: 43 @48662 has 7 MA's), (62, 48509), (64, 48500), (82, 48377), (104, 48218), (105, 48212), (107, 48188), (118, 48080), (120, 48050), (128, 47981), (151, 47843), (154, 47825), (172, 47672), (177, 47630), (184, 47552), (186, 47537), (201, 47399), (226, 47201), (232, 47147), (233, 47144), (240, 47084), (246, 47033), (258, 46964), (265, 46919), (294, 46679), (298, 46637), (299, 46634), (301, 46628), (305, 46610), (315, 46514), (321, 46460), (343, 46316), (346, 46307), (359, 46232), (375, 46157), (380, 46103), (390, 46061), (398, 46013), (409, 45932), (415, 45911), (432, 45821), (438, 45791), (442, 45767), (443, 45764), (472, 45581), (480, 45524),

Gene: Kabluna_63 Start: 47955, Stop: 44653, Start Num: 33
Candidate Starts for Kabluna_63:
(Start: 33 @47955 has 100 MA's), (Start: 43 @47859 has 7 MA's), (62, 47706), (64, 47697), (82, 47574), (104, 47415), (105, 47409), (107, 47385), (118, 47277), (131, 47166), (151, 47040), (172, 46869), (177, 46827), (184, 46749), (186, 46734), (201, 46596), (215, 46464), (226, 46398), (233, 46341), (240, 46281), (246, 46230), (258, 46161), (265, 46116), (294, 45873), (298, 45831), (299, 45828), (301, 45822), (305, 45804), (315, 45708), (321, 45654), (346, 45501), (355, 45441), (359, 45426), (380, 45297), (398, 45219), (408, 45159), (409, 45138), (410, 45135), (415, 45117), (430, 45033), (442, 44973), (449, 44946), (450, 44943), (459, 44877), (485, 44694), (490, 44664),

Gene: KandZ_65 Start: 49894, Stop: 53196, Start Num: 14
Candidate Starts for KandZ_65:
(Start: 14 @49894 has 20 MA's), (Start: 29 @49981 has 1 MA's), (30, 49987), (Start: 33 @49996 has 100 MA's), (Start: 43 @50092 has 7 MA's), (64, 50248), (74, 50335), (75, 50338), (83, 50389), (117, 50653), (120, 50692), (129, 50764), (131, 50773), (136, 50848), (146, 50914), (148, 50920), (160, 50974), (162, 50992), (167, 51043), (168, 51046), (171, 51076), (180, 51160), (181, 51169), (184, 51196), (186, 51211), (204, 51388), (205, 51397), (219, 51502), (230, 51583), (237, 51643), (246, 51718), (249, 51751), (250, 51757), (256, 51778), (258, 51787), (265, 51832), (277, 51901), (280, 51916), (288, 51985), (293, 52048), (296, 52081), (297, 52084), (306, 52135), (314, 52210), (334, 52333), (337, 52351), (345, 52429), (346, 52432), (347, 52444), (354, 52489), (360, 52510), (363, 52522), (368, 52552), (372, 52573), (398, 52645), (413, 52702), (432, 52801), (445, 52867), (460, 52957), (463, 52987), (464, 52990), (469, 53020), (474, 53065), (480, 53107), (484, 53137), (486, 53149), (488, 53164), (490, 53173),

Gene: KidneyBean_60 Start: 48882, Stop: 45571, Start Num: 33
Candidate Starts for KidneyBean_60:
(3, 49125), (Start: 33 @48882 has 100 MA's), (41, 48810), (Start: 43 @48786 has 7 MA's), (62, 48633), (64, 48624), (82, 48501), (104, 48342), (105, 48336), (107, 48312), (118, 48204), (120, 48174), (128, 48105), (151, 47967), (154, 47949), (172, 47796), (177, 47754), (184, 47676), (186, 47661), (201, 47523), (226, 47325), (232, 47271), (233, 47268), (240, 47208), (246, 47157), (258, 47088), (265, 47043), (294, 46803), (298, 46761), (299, 46758), (301, 46752), (305, 46734), (315, 46638), (321, 46584), (343, 46440), (346, 46431), (359, 46356), (375, 46281), (380, 46227), (390, 46185), (398, 46137), (409, 46056), (415, 46035), (432, 45945), (438, 45915), (442, 45891), (443, 45888), (472, 45705), (480, 45648),

Gene: Kimchi1738_43 Start: 41039, Stop: 37746, Start Num: 33
Candidate Starts for Kimchi1738_43:
(Start: 33 @41039 has 100 MA's), (38, 40982), (42, 40958), (Start: 43 @40943 has 7 MA's), (44, 40934), (64, 40787), (97, 40505), (104, 40427), (135, 40118), (157, 40013), (167, 39911), (183, 39776), (184, 39758), (186, 39743), (195, 39647), (223, 39428), (224, 39425), (225, 39410), (229, 39380), (232, 39350), (246, 39233), (249, 39200), (255, 39173), (260, 39149), (283, 39002), (288, 38948), (289, 38927), (297, 38852), (299, 38834), (321, 38657), (332, 38627), (335, 38600), (337,

38585), (355, 38456), (376, 38423), (393, 38336), (413, 38222), (415, 38216), (417, 38204), (447, 38054), (448, 38051), (449, 38045), (452, 38027), (453, 38018), (454, 38000), (473, 37874), (476, 37838), (477, 37832),

Gene: Konstantine_80 Start: 55996, Stop: 59292, Start Num: 33
Candidate Starts for Konstantine_80:
(Start: 26 @55969 has 2 MA's), (Start: 33 @55996 has 100 MA's), (41, 56068), (Start: 43 @56092 has 7 MA's), (46, 56125), (64, 56260), (76, 56353), (79, 56371), (86, 56419), (95, 56479), (117, 56671), (143, 56905), (156, 56962), (162, 57016), (166, 57061), (170, 57088), (173, 57115), (174, 57118), (182, 57196), (186, 57241), (189, 57280), (192, 57322), (202, 57400), (204, 57418), (206, 57436), (208, 57448), (217, 57523), (233, 57679), (242, 57763), (250, 57841), (255, 57862), (258, 57871), (259, 57877), (261, 57886), (270, 57958), (273, 57973), (277, 58012), (279, 58024), (289, 58117), (290, 58123), (295, 58171), (299, 58213), (319, 58363), (320, 58375), (337, 58459), (351, 58600), (394, 58705), (410, 58804), (412, 58813), (427, 58891), (434, 58930), (436, 58945), (447, 58993), (461, 59089), (464, 59107), (468, 59134), (475, 59182), (478, 59212), (479, 59215), (482, 59230), (486, 59260), (487, 59269), (488, 59275), (489, 59278),

Gene: Kurt_60 Start: 49119, Stop: 45808, Start Num: 33
Candidate Starts for Kurt_60:
(3, 49362), (Start: 33 @49119 has 100 MA's), (41, 49047), (Start: 43 @49023 has 7 MA's), (62, 48870), (64, 48861), (82, 48738), (104, 48579), (105, 48573), (107, 48549), (118, 48441), (120, 48411), (128, 48342), (151, 48204), (154, 48186), (172, 48033), (177, 47991), (184, 47913), (186, 47898), (201, 47760), (226, 47562), (232, 47508), (233, 47505), (240, 47445), (246, 47394), (258, 47325), (265, 47280), (294, 47040), (298, 46998), (299, 46995), (301, 46989), (305, 46971), (315, 46875), (321, 46821), (343, 46677), (346, 46668), (359, 46593), (375, 46518), (380, 46464), (390, 46422), (398, 46374), (409, 46293), (415, 46272), (432, 46182), (438, 46152), (442, 46128), (443, 46125), (472, 45942), (480, 45885),

Gene: Labelle_90 Start: 57766, Stop: 60999, Start Num: 33
Candidate Starts for Labelle_90:
(Start: 26 @57739 has 2 MA's), (Start: 33 @57766 has 100 MA's), (Start: 43 @57862 has 7 MA's), (64, 58027), (80, 58141), (86, 58186), (92, 58225), (101, 58276), (117, 58441), (182, 58939), (186, 58984), (189, 59023), (214, 59227), (223, 59308), (230, 59368), (235, 59419), (246, 59515), (248, 59524), (249, 59548), (250, 59554), (258, 59584), (259, 59590), (261, 59599), (277, 59722), (278, 59725), (279, 59734), (286, 59776), (287, 59794), (299, 59926), (337, 60172), (357, 60322), (374, 60379), (394, 60421), (401, 60445), (413, 60514), (445, 60682), (460, 60772), (468, 60844), (477, 60919),

Gene: Lambo_77 Start: 51507, Stop: 54848, Start Num: 33
Candidate Starts for Lambo_77:
(21, 51459), (Start: 33 @51507 has 100 MA's), (Start: 39 @51567 has 1 MA's), (Start: 43 @51603 has 7 MA's), (47, 51648), (53, 51690), (89, 51951), (104, 52053), (108, 52086), (117, 52182), (147, 52452), (149, 52461), (162, 52569), (166, 52614), (172, 52656), (186, 52788), (187, 52791), (188, 52821), (191, 52842), (199, 52911), (205, 52974), (216, 53064), (219, 53079), (225, 53121), (246, 53295), (249, 53328), (252, 53346), (258, 53364), (265, 53409), (266, 53412), (282, 53508), (287, 53550), (288, 53562), (291, 53598), (313, 53778), (318, 53820), (321, 53856), (334, 53910), (337, 53928), (346, 54024), (347, 54036), (396, 54231), (413, 54315), (428, 54396), (432, 54420), (435, 54435), (441, 54471), (445, 54483), (446, 54489), (447, 54492), (452, 54519), (457, 54564), (473, 54672), (479, 54717), (483, 54741), (488, 54777),

Gene: LavAbarElk_78 Start: 51143, Stop: 54484, Start Num: 33
Candidate Starts for LavAbarElk_78:
(23, 51101), (Start: 33 @51143 has 100 MA's), (Start: 39 @51203 has 1 MA's), (Start: 43 @51239 has 7 MA's), (47, 51284), (53, 51326), (89, 51587), (104, 51689), (108, 51722), (117, 51818), (147, 52088),

(149, 52097), (162, 52205), (166, 52250), (172, 52292), (186, 52424), (187, 52427), (188, 52457), (191, 52478), (199, 52547), (204, 52601), (216, 52700), (219, 52715), (225, 52757), (246, 52931), (249, 52964), (252, 52982), (258, 53000), (265, 53045), (266, 53048), (282, 53144), (287, 53186), (288, 53198), (291, 53234), (313, 53414), (318, 53456), (321, 53492), (334, 53546), (337, 53564), (346, 53660), (347, 53672), (396, 53867), (413, 53951), (432, 54056), (435, 54071), (441, 54107), (445, 54119), (446, 54125), (447, 54128), (452, 54155), (457, 54200), (473, 54308), (479, 54353), (483, 54377), (488, 54413),

Gene: Lila22_79 Start: 52415, Stop: 55756, Start Num: 33
Candidate Starts for Lila22_79:
(21, 52367), (Start: 33 @52415 has 100 MA's), (Start: 39 @52475 has 1 MA's), (Start: 43 @52511 has 7 MA's), (47, 52556), (53, 52598), (89, 52859), (104, 52961), (108, 52994), (117, 53090), (147, 53360), (149, 53369), (162, 53477), (166, 53522), (172, 53564), (186, 53696), (187, 53699), (188, 53729), (191, 53750), (199, 53819), (204, 53873), (216, 53972), (219, 53987), (225, 54029), (246, 54203), (249, 54236), (252, 54254), (258, 54272), (265, 54317), (266, 54320), (282, 54416), (287, 54458), (288, 54470), (291, 54506), (313, 54686), (318, 54728), (321, 54764), (334, 54818), (337, 54836), (346, 54932), (347, 54944), (396, 55139), (413, 55223), (432, 55328), (435, 55343), (441, 55379), (445, 55391), (446, 55397), (447, 55400), (452, 55427), (457, 55472), (473, 55580), (479, 55625), (483, 55649), (488, 55685),

Gene: Lizz_51 Start: 38864, Stop: 35667, Start Num: 33
Candidate Starts for Lizz_51:
(17, 38945), (27, 38885), (Start: 33 @38864 has 100 MA's), (34, 38855), (36, 38822), (Start: 43 @38768 has 7 MA's), (49, 38714), (52, 38690), (58, 38645), (59, 38636), (60, 38627), (65, 38597), (68, 38564), (78, 38486), (81, 38474), (87, 38420), (88, 38417), (102, 38333), (117, 38177), (121, 38135), (126, 38072), (127, 38069), (138, 37964), (139, 37955), (147, 37913), (152, 37898), (156, 37883), (172, 37757), (180, 37676), (184, 37640), (186, 37625), (187, 37622), (195, 37529), (205, 37439), (232, 37232), (236, 37199), (242, 37148), (249, 37076), (250, 37070), (258, 37040), (263, 37010), (276, 36929), (279, 36914), (292, 36800), (310, 36665), (332, 36521), (333, 36509), (334, 36497), (337, 36479), (348, 36386), (372, 36281), (408, 36170), (410, 36146), (433, 36029), (462, 35858), (465, 35846), (468, 35825), (478, 35747), (480, 35741), (485, 35705), (487, 35690),

Gene: Lollipop1437_64 Start: 49866, Stop: 46552, Start Num: 33
Candidate Starts for Lollipop1437_64:
(Start: 33 @49866 has 100 MA's), (Start: 43 @49770 has 7 MA's), (62, 49617), (64, 49608), (82, 49485), (104, 49326), (105, 49320), (118, 49188), (131, 49077), (137, 48996), (151, 48951), (172, 48780), (177, 48738), (184, 48660), (186, 48645), (201, 48507), (226, 48309), (238, 48207), (246, 48141), (252, 48090), (258, 48072), (265, 48027), (294, 47784), (298, 47742), (299, 47739), (301, 47733), (305, 47715), (315, 47619), (318, 47601), (321, 47565), (343, 47421), (346, 47412), (349, 47388), (353, 47361), (359, 47337), (380, 47208), (398, 47118), (400, 47109), (408, 47058), (409, 47037), (415, 47016), (446, 46860), (450, 46845), (475, 46665), (485, 46596),

Gene: LuckyLeo_75 Start: 51198, Stop: 54536, Start Num: 33
Candidate Starts for LuckyLeo_75:
(Start: 33 @51198 has 100 MA's), (Start: 39 @51258 has 1 MA's), (41, 51270), (Start: 43 @51294 has 7 MA's), (53, 51381), (108, 51777), (117, 51873), (130, 51996), (147, 52143), (149, 52152), (153, 52185), (158, 52221), (162, 52263), (166, 52308), (172, 52350), (186, 52482), (187, 52485), (188, 52515), (193, 52566), (197, 52587), (199, 52605), (205, 52668), (216, 52758), (219, 52773), (221, 52794), (246, 52989), (249, 53022), (252, 53040), (265, 53103), (266, 53106), (276, 53169), (282, 53202), (287, 53244), (288, 53256), (291, 53292), (306, 53406), (313, 53472), (316, 53499), (318, 53514), (321, 53550), (334, 53604), (337, 53622), (346, 53718), (349, 53742), (364, 53814), (416, 54018), (435, 54129), (438, 54144), (441, 54165), (445, 54177), (446, 54183), (447, 54186), (452, 54213), (457, 54258), (473, 54366), (477, 54405), (479, 54411), (483, 54435), (485, 54450), (486,

54456), (488, 54471),

Gene: Madruga_89 Start: 57366, Stop: 60599, Start Num: 33
Candidate Starts for Madruga_89:
(Start: 26 @57339 has 2 MA's), (Start: 33 @57366 has 100 MA's), (Start: 43 @57462 has 7 MA's), (64, 57627), (80, 57741), (86, 57786), (92, 57825), (101, 57876), (117, 58041), (182, 58539), (186, 58584), (189, 58623), (214, 58827), (223, 58908), (230, 58968), (235, 59019), (246, 59115), (248, 59124), (249, 59148), (250, 59154), (258, 59184), (259, 59190), (277, 59322), (278, 59325), (279, 59334), (286, 59376), (287, 59394), (299, 59526), (337, 59772), (357, 59922), (374, 59979), (394, 60021), (401, 60045), (413, 60114), (445, 60282), (460, 60372), (468, 60444), (477, 60519),

Gene: Marietta_61 Start: 45676, Stop: 42425, Start Num: 33
Candidate Starts for Marietta_61:
(4, 45904), (Start: 33 @45676 has 100 MA's), (42, 45595), (Start: 43 @45580 has 7 MA's), (47, 45535), (62, 45427), (64, 45418), (86, 45253), (105, 45130), (111, 45079), (115, 45052), (118, 44998), (120, 44968), (140, 44785), (151, 44761), (164, 44653), (174, 44575), (177, 44548), (184, 44470), (186, 44455), (201, 44317), (226, 44119), (227, 44113), (230, 44086), (237, 44026), (246, 43951), (249, 43918), (258, 43882), (269, 43825), (278, 43762), (294, 43597), (295, 43594), (298, 43555), (299, 43552), (301, 43546), (303, 43537), (305, 43528), (315, 43432), (318, 43414), (321, 43378), (345, 43228), (353, 43174), (380, 43078), (398, 42994), (400, 42985), (408, 42934), (423, 42844), (442, 42748), (443, 42745), (472, 42562), (490, 42439),

Gene: Maselop_59 Start: 45784, Stop: 42368, Start Num: 33
Candidate Starts for Maselop_59:
(Start: 33 @45784 has 100 MA's), (42, 45703), (Start: 43 @45688 has 7 MA's), (55, 45580), (56, 45574), (64, 45526), (73, 45445), (82, 45403), (110, 45193), (112, 45178), (113, 45169), (116, 45145), (117, 45115), (120, 45076), (131, 44995), (134, 44953), (155, 44818), (167, 44704), (174, 44653), (176, 44635), (177, 44626), (184, 44548), (186, 44533), (189, 44494), (193, 44455), (204, 44362), (210, 44311), (212, 44305), (215, 44266), (231, 44161), (232, 44146), (233, 44143), (246, 44029), (247, 44026), (249, 43996), (252, 43978), (254, 43975), (255, 43969), (257, 43966), (262, 43933), (265, 43912), (288, 43744), (295, 43666), (298, 43627), (299, 43624), (301, 43618), (305, 43600), (315, 43504), (318, 43486), (321, 43450), (337, 43378), (346, 43285), (347, 43273), (358, 43210), (369, 43153), (386, 43024), (392, 42994), (401, 42934), (402, 42931), (408, 42877), (423, 42787), (430, 42751), (439, 42706), (442, 42691), (451, 42649), (456, 42604), (466, 42550), (467, 42541), (469, 42529), (470, 42523), (472, 42505), (477, 42454), (478, 42451), (485, 42409),

Gene: Megatron06_78 Start: 56087, Stop: 59383, Start Num: 33
Candidate Starts for Megatron06_78:
(Start: 26 @56060 has 2 MA's), (Start: 33 @56087 has 100 MA's), (41, 56159), (Start: 43 @56183 has 7 MA's), (46, 56216), (64, 56351), (76, 56444), (79, 56462), (86, 56510), (95, 56570), (117, 56762), (143, 56996), (156, 57053), (166, 57152), (170, 57179), (174, 57209), (182, 57287), (186, 57332), (189, 57371), (192, 57413), (202, 57491), (204, 57509), (206, 57527), (208, 57539), (217, 57614), (233, 57770), (242, 57854), (250, 57932), (255, 57953), (258, 57962), (259, 57968), (261, 57977), (270, 58049), (273, 58064), (277, 58103), (279, 58115), (289, 58208), (290, 58214), (295, 58262), (299, 58304), (319, 58454), (320, 58466), (337, 58550), (351, 58691), (394, 58796), (410, 58895), (412, 58904), (427, 58982), (434, 59021), (436, 59036), (447, 59084), (461, 59180), (464, 59198), (468, 59225), (475, 59273), (478, 59303), (479, 59306), (482, 59321), (486, 59351), (487, 59360), (488, 59366), (489, 59369),

Gene: MerCougar_61 Start: 49170, Stop: 45856, Start Num: 33
Candidate Starts for MerCougar_61:
(Start: 33 @49170 has 100 MA's), (Start: 43 @49074 has 7 MA's), (62, 48921), (64, 48912), (77, 48807), (82, 48789), (104, 48630), (105, 48624), (107, 48600), (118, 48492), (131, 48381), (151,

48255), (172, 48084), (177, 48042), (179, 48003), (184, 47964), (186, 47949), (201, 47811), (215, 47679), (226, 47613), (233, 47556), (240, 47496), (246, 47445), (258, 47376), (265, 47331), (286, 47196), (298, 47046), (299, 47043), (301, 47037), (305, 47019), (315, 46923), (321, 46869), (346, 46716), (353, 46665), (355, 46656), (380, 46512), (398, 46422), (408, 46362), (409, 46341), (415, 46320), (423, 46272), (440, 46188), (442, 46176), (443, 46173), (459, 46080), (485, 45897), (490, 45867),

Gene: Mima20_77 Start: 51887, Stop: 55228, Start Num: 33
Candidate Starts for Mima20_77:
(21, 51839), (Start: 33 @51887 has 100 MA's), (Start: 39 @51947 has 1 MA's), (Start: 43 @51983 has 7 MA's), (47, 52028), (53, 52070), (89, 52331), (104, 52433), (108, 52466), (117, 52562), (147, 52832), (149, 52841), (162, 52949), (166, 52994), (172, 53036), (186, 53168), (187, 53171), (188, 53201), (191, 53222), (199, 53291), (204, 53345), (216, 53444), (219, 53459), (225, 53501), (246, 53675), (249, 53708), (252, 53726), (258, 53744), (265, 53789), (266, 53792), (282, 53888), (287, 53930), (288, 53942), (291, 53978), (313, 54158), (318, 54200), (321, 54236), (334, 54290), (337, 54308), (346, 54404), (347, 54416), (396, 54611), (413, 54695), (428, 54776), (432, 54800), (435, 54815), (441, 54851), (445, 54863), (446, 54869), (447, 54872), (452, 54899), (457, 54944), (473, 55052), (479, 55097), (483, 55121), (488, 55157),

Gene: MoiGyank_82 Start: 52491, Stop: 55832, Start Num: 33
Candidate Starts for MoiGyank_82:
(21, 52443), (Start: 33 @52491 has 100 MA's), (Start: 39 @52551 has 1 MA's), (Start: 43 @52587 has 7 MA's), (47, 52632), (53, 52674), (89, 52935), (104, 53037), (108, 53070), (117, 53166), (147, 53436), (149, 53445), (162, 53553), (166, 53598), (172, 53640), (186, 53772), (187, 53775), (188, 53805), (191, 53826), (199, 53895), (204, 53949), (216, 54048), (219, 54063), (225, 54105), (246, 54279), (249, 54312), (252, 54330), (258, 54348), (265, 54393), (266, 54396), (282, 54492), (287, 54534), (288, 54546), (291, 54582), (313, 54762), (318, 54804), (321, 54840), (334, 54894), (337, 54912), (346, 55008), (347, 55020), (396, 55215), (413, 55299), (428, 55380), (432, 55404), (435, 55419), (441, 55455), (445, 55467), (446, 55473), (447, 55476), (452, 55503), (457, 55548), (473, 55656), (479, 55701), (483, 55725), (488, 55761),

Gene: Mopey_68 Start: 49703, Stop: 53005, Start Num: 14
Candidate Starts for Mopey_68:
(Start: 14 @49703 has 20 MA's), (Start: 29 @49790 has 1 MA's), (30, 49796), (Start: 33 @49805 has 100 MA's), (Start: 43 @49901 has 7 MA's), (64, 50057), (74, 50144), (75, 50147), (83, 50198), (117, 50462), (120, 50501), (129, 50573), (131, 50582), (136, 50657), (146, 50723), (148, 50729), (160, 50783), (162, 50801), (167, 50852), (168, 50855), (171, 50885), (180, 50969), (181, 50978), (184, 51005), (186, 51020), (204, 51197), (205, 51206), (207, 51221), (219, 51311), (230, 51392), (237, 51452), (246, 51527), (249, 51560), (250, 51566), (256, 51587), (258, 51596), (265, 51641), (277, 51710), (280, 51725), (288, 51794), (293, 51857), (296, 51890), (297, 51893), (306, 51944), (314, 52019), (334, 52142), (337, 52160), (345, 52238), (346, 52241), (347, 52253), (354, 52298), (360, 52319), (363, 52331), (368, 52361), (372, 52382), (398, 52454), (413, 52511), (432, 52610), (445, 52676), (460, 52766), (463, 52796), (464, 52799), (469, 52829), (474, 52874), (480, 52916), (484, 52946), (486, 52958), (488, 52973), (490, 52982),

Gene: NadineRae_59 Start: 44917, Stop: 41666, Start Num: 33
Candidate Starts for NadineRae_59:
(12, 45019), (13, 45007), (28, 44938), (Start: 33 @44917 has 100 MA's), (42, 44836), (Start: 43 @44821 has 7 MA's), (47, 44776), (62, 44668), (64, 44659), (105, 44371), (111, 44320), (115, 44293), (118, 44239), (120, 44209), (140, 44026), (151, 44002), (164, 43894), (174, 43816), (177, 43789), (184, 43711), (186, 43696), (201, 43558), (212, 43465), (226, 43360), (227, 43354), (230, 43327), (237, 43267), (246, 43192), (249, 43159), (258, 43123), (265, 43078), (269, 43066), (278, 43003), (294, 42838), (295, 42835), (298, 42796), (299, 42793), (301, 42787), (303, 42778), (305, 42769),

(315, 42673), (318, 42655), (321, 42619), (353, 42415), (380, 42319), (383, 42316), (398, 42235), (400, 42226), (408, 42175), (423, 42085), (442, 41989), (443, 41986), (472, 41803),

Gene: NatB6_60 Start: 48176, Stop: 44865, Start Num: 33
Candidate Starts for NatB6_60:
(3, 48419), (Start: 33 @48176 has 100 MA's), (41, 48104), (Start: 43 @48080 has 7 MA's), (47, 48035), (62, 47927), (64, 47918), (82, 47795), (104, 47636), (105, 47630), (107, 47606), (118, 47498), (120, 47468), (131, 47387), (151, 47261), (154, 47243), (172, 47090), (177, 47048), (184, 46970), (186, 46955), (201, 46817), (226, 46619), (232, 46565), (233, 46562), (240, 46502), (246, 46451), (252, 46400), (258, 46382), (265, 46337), (294, 46097), (298, 46055), (299, 46052), (301, 46046), (305, 46028), (315, 45932), (321, 45878), (343, 45734), (346, 45725), (352, 45680), (359, 45650), (375, 45575), (380, 45521), (390, 45479), (398, 45431), (409, 45350), (415, 45329), (432, 45239), (438, 45209), (442, 45185), (443, 45182), (472, 44999), (480, 44942),

Gene: NorManre_84 Start: 53277, Stop: 56585, Start Num: 35
Candidate Starts for NorManre_84:
(Start: 35 @53277 has 4 MA's), (Start: 39 @53304 has 1 MA's), (Start: 43 @53340 has 7 MA's), (47, 53385), (53, 53427), (89, 53688), (104, 53790), (108, 53823), (117, 53919), (147, 54189), (149, 54198), (162, 54306), (166, 54351), (172, 54393), (186, 54525), (187, 54528), (188, 54558), (191, 54579), (199, 54648), (204, 54702), (216, 54801), (219, 54816), (225, 54858), (246, 55032), (249, 55065), (252, 55083), (258, 55101), (265, 55146), (266, 55149), (282, 55245), (287, 55287), (288, 55299), (291, 55335), (313, 55515), (318, 55557), (321, 55593), (334, 55647), (337, 55665), (346, 55761), (347, 55773), (396, 55968), (413, 56052), (432, 56157), (435, 56172), (441, 56208), (445, 56220), (446, 56226), (447, 56229), (452, 56256), (457, 56301), (473, 56409), (479, 56454), (483, 56478), (488, 56514),

Gene: NosilaM_62 Start: 48632, Stop: 45330, Start Num: 33
Candidate Starts for NosilaM_62:
(Start: 33 @48632 has 100 MA's), (Start: 43 @48536 has 7 MA's), (62, 48383), (64, 48374), (82, 48251), (104, 48092), (105, 48086), (107, 48062), (118, 47954), (131, 47843), (151, 47717), (172, 47546), (177, 47504), (181, 47453), (184, 47426), (186, 47411), (201, 47273), (206, 47222), (215, 47141), (226, 47075), (233, 47018), (240, 46958), (246, 46907), (258, 46838), (265, 46793), (290, 46601), (293, 46559), (294, 46550), (298, 46508), (299, 46505), (301, 46499), (305, 46481), (315, 46385), (321, 46331), (346, 46178), (355, 46118), (359, 46103), (380, 45974), (398, 45896), (408, 45836), (409, 45815), (410, 45812), (415, 45794), (430, 45710), (442, 45650), (443, 45647), (449, 45623), (459, 45554), (490, 45341),

Gene: Nova_66 Start: 50242, Stop: 53544, Start Num: 14
Candidate Starts for Nova_66:
(Start: 14 @50242 has 20 MA's), (Start: 29 @50329 has 1 MA's), (30, 50335), (Start: 33 @50344 has 100 MA's), (Start: 43 @50440 has 7 MA's), (64, 50596), (74, 50683), (75, 50686), (83, 50737), (117, 51001), (120, 51040), (129, 51112), (131, 51121), (136, 51196), (146, 51262), (148, 51268), (160, 51322), (162, 51340), (167, 51391), (168, 51394), (171, 51424), (180, 51508), (181, 51517), (184, 51544), (186, 51559), (204, 51736), (205, 51745), (219, 51850), (230, 51931), (237, 51991), (246, 52066), (249, 52099), (250, 52105), (256, 52126), (258, 52135), (265, 52180), (277, 52249), (280, 52264), (288, 52333), (293, 52396), (296, 52429), (297, 52432), (306, 52483), (314, 52558), (334, 52681), (337, 52699), (345, 52777), (346, 52780), (347, 52792), (354, 52837), (360, 52858), (363, 52870), (368, 52900), (372, 52921), (398, 52993), (413, 53050), (432, 53149), (445, 53215), (460, 53305), (463, 53335), (464, 53338), (469, 53368), (474, 53413), (480, 53455), (484, 53485), (486, 53497), (488, 53512), (490, 53521),

Gene: NovaSharks_80 Start: 50500, Stop: 53745, Start Num: 43
Candidate Starts for NovaSharks_80:

(Start: 43 @50500 has 7 MA's), (47, 50545), (53, 50587), (89, 50848), (108, 50983), (117, 51079), (147, 51349), (149, 51358), (162, 51466), (166, 51511), (172, 51553), (179, 51631), (186, 51685), (187, 51688), (188, 51718), (199, 51808), (204, 51862), (216, 51961), (219, 51976), (225, 52018), (246, 52192), (249, 52225), (252, 52243), (258, 52261), (265, 52306), (266, 52309), (282, 52405), (287, 52447), (288, 52459), (291, 52495), (313, 52675), (318, 52717), (321, 52753), (333, 52795), (334, 52807), (337, 52825), (346, 52921), (347, 52933), (396, 53128), (413, 53212), (432, 53317), (435, 53332), (438, 53347), (441, 53368), (445, 53380), (446, 53386), (447, 53389), (452, 53416), (457, 53461), (473, 53569), (479, 53614), (483, 53638), (488, 53674),

Gene: NovumRegina_60 Start: 48485, Stop: 45174, Start Num: 33
Candidate Starts for NovumRegina_60:
(3, 48728), (Start: 33 @48485 has 100 MA's), (41, 48413), (Start: 43 @48389 has 7 MA's), (47, 48344), (62, 48236), (64, 48227), (82, 48104), (104, 47945), (105, 47939), (107, 47915), (118, 47807), (120, 47777), (128, 47708), (151, 47570), (154, 47552), (172, 47399), (177, 47357), (184, 47279), (186, 47264), (201, 47126), (226, 46928), (232, 46874), (233, 46871), (240, 46811), (246, 46760), (258, 46691), (265, 46646), (294, 46406), (298, 46364), (299, 46361), (301, 46355), (305, 46337), (315, 46241), (321, 46187), (343, 46043), (346, 46034), (359, 45959), (375, 45884), (380, 45830), (390, 45788), (398, 45740), (409, 45659), (415, 45638), (432, 45548), (438, 45518), (442, 45494), (443, 45491), (472, 45308), (480, 45251),

Gene: Oaker_77 Start: 56089, Stop: 59412, Start Num: 26
Candidate Starts for Oaker_77:
(Start: 26 @56089 has 2 MA's), (Start: 33 @56116 has 100 MA's), (41, 56188), (Start: 43 @56212 has 7 MA's), (46, 56245), (64, 56380), (76, 56473), (79, 56491), (86, 56539), (95, 56599), (117, 56791), (143, 57025), (156, 57082), (162, 57136), (166, 57181), (170, 57208), (174, 57238), (186, 57361), (189, 57400), (192, 57442), (202, 57520), (204, 57538), (206, 57556), (217, 57643), (233, 57799), (242, 57883), (250, 57961), (255, 57982), (258, 57991), (259, 57997), (261, 58006), (270, 58078), (273, 58093), (277, 58132), (279, 58144), (289, 58237), (290, 58243), (295, 58291), (299, 58333), (319, 58483), (320, 58495), (337, 58579), (351, 58720), (394, 58825), (410, 58924), (412, 58933), (427, 59011), (434, 59050), (436, 59065), (447, 59113), (461, 59209), (464, 59227), (468, 59254), (475, 59302), (478, 59332), (479, 59335), (482, 59350), (486, 59380), (487, 59389), (488, 59395), (489, 59398),

Gene: OtterstedtS21_79 Start: 52012, Stop: 55257, Start Num: 43
Candidate Starts for OtterstedtS21_79:
(Start: 39 @51976 has 1 MA's), (Start: 43 @52012 has 7 MA's), (47, 52057), (53, 52099), (89, 52360), (104, 52462), (108, 52495), (117, 52591), (147, 52861), (149, 52870), (162, 52978), (166, 53023), (172, 53065), (186, 53197), (187, 53200), (188, 53230), (199, 53320), (204, 53374), (216, 53473), (219, 53488), (225, 53530), (246, 53704), (249, 53737), (252, 53755), (254, 53758), (258, 53773), (265, 53818), (266, 53821), (282, 53917), (287, 53959), (288, 53971), (291, 54007), (313, 54187), (318, 54229), (321, 54265), (334, 54319), (337, 54337), (346, 54433), (347, 54445), (396, 54640), (413, 54724), (432, 54829), (435, 54844), (441, 54880), (445, 54892), (446, 54898), (447, 54901), (452, 54928), (457, 54973), (473, 55081), (479, 55126), (483, 55150), (488, 55186),

Gene: Outis_61 Start: 48867, Stop: 45550, Start Num: 33
Candidate Starts for Outis_61:
(Start: 33 @48867 has 100 MA's), (38, 48810), (Start: 43 @48771 has 7 MA's), (62, 48618), (64, 48609), (82, 48486), (104, 48327), (105, 48321), (107, 48297), (118, 48189), (131, 48078), (151, 47952), (172, 47781), (177, 47739), (179, 47700), (184, 47661), (186, 47646), (201, 47508), (215, 47376), (226, 47310), (233, 47253), (240, 47193), (246, 47142), (258, 47073), (265, 47028), (294, 46785), (298, 46743), (299, 46740), (301, 46734), (305, 46716), (315, 46620), (321, 46566), (346, 46413), (353, 46362), (355, 46353), (380, 46209), (395, 46131), (398, 46116), (408, 46056), (409, 46035), (415, 46014), (423, 45966), (440, 45882), (442, 45870), (443, 45867), (459, 45774), (485,

45591), (490, 45561),

Gene: PBI1_63 Start: 49783, Stop: 52983, Start Num: 33
Candidate Starts for PBI1_63:
(Start: 14 @49681 has 20 MA's), (Start: 29 @49768 has 1 MA's), (30, 49774), (Start: 33 @49783 has 100 MA's), (Start: 43 @49879 has 7 MA's), (64, 50035), (74, 50122), (75, 50125), (83, 50176), (117, 50440), (120, 50479), (129, 50551), (131, 50560), (136, 50635), (146, 50701), (148, 50707), (160, 50761), (162, 50779), (167, 50830), (168, 50833), (171, 50863), (180, 50947), (181, 50956), (184, 50983), (186, 50998), (204, 51175), (205, 51184), (219, 51289), (230, 51370), (237, 51430), (246, 51505), (249, 51538), (250, 51544), (256, 51565), (258, 51574), (265, 51619), (277, 51688), (280, 51703), (288, 51772), (293, 51835), (296, 51868), (297, 51871), (306, 51922), (314, 51997), (334, 52120), (337, 52138), (345, 52216), (346, 52219), (347, 52231), (354, 52276), (360, 52297), (363, 52309), (368, 52339), (372, 52360), (398, 52432), (413, 52489), (432, 52588), (445, 52654), (460, 52744), (463, 52774), (464, 52777), (469, 52807), (474, 52852), (480, 52894), (484, 52924), (486, 52936), (488, 52951), (490, 52960),

Gene: PHTowN_51 Start: 38862, Stop: 35665, Start Num: 33
Candidate Starts for PHTowN_51:
(27, 38883), (Start: 33 @38862 has 100 MA's), (36, 38820), (Start: 43 @38766 has 7 MA's), (49, 38712), (58, 38643), (59, 38634), (60, 38625), (65, 38595), (68, 38562), (71, 38526), (78, 38484), (81, 38472), (87, 38418), (100, 38349), (103, 38310), (109, 38268), (111, 38247), (117, 38175), (121, 38133), (126, 38070), (127, 38067), (138, 37962), (139, 37953), (147, 37911), (152, 37896), (156, 37881), (172, 37755), (180, 37674), (184, 37638), (186, 37623), (187, 37620), (195, 37527), (205, 37437), (232, 37230), (236, 37197), (242, 37146), (249, 37074), (250, 37068), (258, 37038), (263, 37008), (276, 36927), (279, 36912), (292, 36798), (310, 36663), (332, 36519), (333, 36507), (334, 36495), (337, 36477), (348, 36384), (372, 36279), (394, 36222), (408, 36168), (410, 36144), (433, 36027), (462, 35856), (465, 35844), (468, 35823), (478, 35745), (480, 35739), (485, 35703), (487, 35688),

Gene: PLot_66 Start: 49805, Stop: 53005, Start Num: 33
Candidate Starts for PLot_66:
(Start: 14 @49703 has 20 MA's), (Start: 29 @49790 has 1 MA's), (Start: 33 @49805 has 100 MA's), (Start: 43 @49901 has 7 MA's), (64, 50057), (74, 50144), (75, 50147), (83, 50198), (117, 50462), (120, 50501), (129, 50573), (131, 50582), (136, 50657), (146, 50723), (148, 50729), (160, 50783), (162, 50801), (167, 50852), (168, 50855), (171, 50885), (180, 50969), (181, 50978), (184, 51005), (186, 51020), (204, 51197), (205, 51206), (219, 51311), (230, 51392), (246, 51527), (249, 51560), (250, 51566), (256, 51587), (258, 51596), (265, 51641), (277, 51710), (280, 51725), (284, 51746), (288, 51794), (293, 51857), (296, 51890), (297, 51893), (298, 51908), (306, 51944), (314, 52019), (334, 52142), (337, 52160), (345, 52238), (346, 52241), (347, 52253), (354, 52298), (360, 52319), (363, 52331), (368, 52361), (372, 52382), (398, 52454), (413, 52511), (432, 52610), (445, 52676), (460, 52766), (463, 52796), (464, 52799), (469, 52829), (474, 52874), (475, 52877), (480, 52916), (484, 52946), (486, 52958), (488, 52973), (490, 52982),

Gene: ParvusTarda_77 Start: 51186, Stop: 54527, Start Num: 33
Candidate Starts for ParvusTarda_77:
(21, 51138), (Start: 33 @51186 has 100 MA's), (Start: 39 @51246 has 1 MA's), (Start: 43 @51282 has 7 MA's), (47, 51327), (53, 51369), (89, 51630), (104, 51732), (108, 51765), (117, 51861), (147, 52131), (149, 52140), (162, 52248), (166, 52293), (172, 52335), (186, 52467), (187, 52470), (188, 52500), (191, 52521), (199, 52590), (204, 52644), (216, 52743), (219, 52758), (246, 52974), (249, 53007), (252, 53025), (258, 53043), (265, 53088), (266, 53091), (282, 53187), (287, 53229), (288, 53241), (291, 53277), (313, 53457), (318, 53499), (321, 53535), (334, 53589), (337, 53607), (346, 53703), (347, 53715), (396, 53910), (413, 53994), (432, 54099), (435, 54114), (441, 54150), (445, 54162), (446, 54168), (447, 54171), (452, 54198), (457, 54243), (473, 54351), (479, 54396), (483, 54420),

(488, 54456),

Gene: Patience_91 Start: 58279, Stop: 61512, Start Num: 33
Candidate Starts for Patience_91:
(Start: 26 @58252 has 2 MA's), (Start: 33 @58279 has 100 MA's), (Start: 43 @58375 has 7 MA's), (64, 58540), (80, 58654), (92, 58738), (101, 58789), (117, 58954), (182, 59452), (186, 59497), (189, 59536), (214, 59740), (223, 59821), (230, 59881), (235, 59932), (246, 60028), (248, 60037), (249, 60061), (250, 60067), (258, 60097), (259, 60103), (277, 60235), (278, 60238), (279, 60247), (286, 60289), (287, 60307), (299, 60439), (337, 60685), (357, 60835), (374, 60892), (394, 60934), (401, 60958), (413, 61027), (445, 61195), (460, 61285), (468, 61357), (477, 61432),

Gene: Patio_62 Start: 48881, Stop: 45567, Start Num: 33
Candidate Starts for Patio_62:
(1, 49133), (6, 49046), (10, 49019), (Start: 33 @48881 has 100 MA's), (Start: 43 @48785 has 7 MA's), (62, 48632), (64, 48623), (82, 48500), (104, 48341), (105, 48335), (118, 48203), (120, 48173), (124, 48134), (131, 48092), (137, 48011), (151, 47966), (172, 47795), (177, 47753), (184, 47675), (186, 47660), (201, 47522), (226, 47324), (233, 47267), (238, 47222), (246, 47156), (252, 47105), (258, 47087), (265, 47042), (294, 46799), (298, 46757), (299, 46754), (301, 46748), (305, 46730), (315, 46634), (318, 46616), (321, 46580), (343, 46436), (346, 46427), (349, 46403), (359, 46352), (380, 46223), (390, 46181), (398, 46133), (400, 46124), (408, 46073), (409, 46052), (415, 46031), (446, 45875), (450, 45860), (485, 45611),

Gene: Patos_84 Start: 53276, Stop: 56584, Start Num: 35
Candidate Starts for Patos_84:
(Start: 35 @53276 has 4 MA's), (Start: 39 @53303 has 1 MA's), (Start: 43 @53339 has 7 MA's), (47, 53384), (53, 53426), (89, 53687), (104, 53789), (108, 53822), (117, 53918), (147, 54188), (149, 54197), (162, 54305), (166, 54350), (172, 54392), (186, 54524), (187, 54527), (188, 54557), (191, 54578), (199, 54647), (204, 54701), (216, 54800), (219, 54815), (225, 54857), (246, 55031), (249, 55064), (252, 55082), (258, 55100), (265, 55145), (266, 55148), (282, 55244), (287, 55286), (288, 55298), (291, 55334), (313, 55514), (318, 55556), (321, 55592), (334, 55646), (337, 55664), (346, 55760), (347, 55772), (396, 55967), (413, 56051), (432, 56156), (435, 56171), (441, 56207), (445, 56219), (446, 56225), (447, 56228), (452, 56255), (457, 56300), (473, 56408), (479, 56453), (483, 56477), (488, 56513),

Gene: Pemberton_62 Start: 45661, Stop: 42410, Start Num: 33
Candidate Starts for Pemberton_62:
(9, 45793), (12, 45763), (13, 45751), (Start: 33 @45661 has 100 MA's), (42, 45580), (Start: 43 @45565 has 7 MA's), (47, 45520), (62, 45412), (64, 45403), (85, 45241), (86, 45238), (105, 45115), (111, 45064), (115, 45037), (118, 44983), (120, 44953), (140, 44770), (151, 44746), (164, 44638), (174, 44560), (177, 44533), (184, 44455), (186, 44440), (201, 44302), (226, 44104), (227, 44098), (230, 44071), (237, 44011), (246, 43936), (249, 43903), (258, 43867), (265, 43822), (269, 43810), (278, 43747), (294, 43582), (295, 43579), (298, 43540), (299, 43537), (301, 43531), (303, 43522), (305, 43513), (315, 43417), (318, 43399), (321, 43363), (345, 43213), (353, 43159), (380, 43063), (398, 42979), (400, 42970), (408, 42919), (423, 42829), (437, 42760), (442, 42733), (443, 42730), (472, 42547), (490, 42424),

Gene: Penelope2018_67 Start: 49737, Stop: 53039, Start Num: 14
Candidate Starts for Penelope2018_67:
(Start: 14 @49737 has 20 MA's), (Start: 29 @49824 has 1 MA's), (30, 49830), (Start: 33 @49839 has 100 MA's), (Start: 43 @49935 has 7 MA's), (64, 50091), (74, 50178), (75, 50181), (83, 50232), (117, 50496), (120, 50535), (129, 50607), (131, 50616), (136, 50691), (146, 50757), (148, 50763), (160, 50817), (162, 50835), (167, 50886), (168, 50889), (171, 50919), (180, 51003), (181, 51012), (184, 51039), (186, 51054), (204, 51231), (205, 51240), (219, 51345), (230, 51426), (237, 51486), (246,

51561), (249, 51594), (250, 51600), (256, 51621), (258, 51630), (265, 51675), (277, 51744), (280, 51759), (288, 51828), (293, 51891), (296, 51924), (297, 51927), (306, 51978), (314, 52053), (334, 52176), (337, 52194), (345, 52272), (346, 52275), (347, 52287), (354, 52332), (360, 52353), (363, 52365), (368, 52395), (372, 52416), (398, 52488), (413, 52545), (432, 52644), (445, 52710), (460, 52800), (463, 52830), (464, 52833), (469, 52863), (474, 52908), (480, 52950), (484, 52980), (486, 52992), (488, 53007), (490, 53016),

Gene: PeteyPab_45 Start: 42797, Stop: 39504, Start Num: 33
Candidate Starts for PeteyPab_45:
(Start: 33 @42797 has 100 MA's), (38, 42740), (42, 42716), (Start: 43 @42701 has 7 MA's), (44, 42692), (64, 42545), (91, 42338), (97, 42263), (98, 42239), (104, 42185), (157, 41771), (167, 41669), (183, 41534), (184, 41516), (186, 41501), (195, 41405), (223, 41186), (224, 41183), (225, 41168), (229, 41138), (232, 41108), (246, 40991), (249, 40958), (255, 40931), (260, 40907), (283, 40760), (288, 40706), (289, 40685), (297, 40610), (299, 40592), (321, 40415), (332, 40385), (335, 40358), (337, 40343), (355, 40214), (376, 40181), (393, 40094), (413, 39980), (415, 39974), (417, 39962), (447, 39812), (448, 39809), (449, 39803), (452, 39785), (453, 39776), (454, 39758), (471, 39656), (473, 39632), (476, 39596), (477, 39590),

Gene: Phalaborwa_70 Start: 50156, Stop: 53653, Start Num: 14
Candidate Starts for Phalaborwa_70:
(Start: 14 @50156 has 20 MA's), (Start: 33 @50258 has 100 MA's), (34, 50267), (Start: 39 @50318 has 1 MA's), (Start: 43 @50354 has 7 MA's), (62, 50501), (64, 50510), (67, 50546), (74, 50597), (75, 50600), (83, 50651), (85, 50666), (86, 50669), (117, 50915), (120, 50954), (131, 51035), (146, 51176), (148, 51182), (160, 51236), (162, 51254), (167, 51305), (168, 51308), (171, 51338), (180, 51422), (184, 51458), (186, 51473), (204, 51650), (205, 51659), (219, 51764), (230, 51845), (237, 51905), (246, 51980), (249, 52013), (250, 52019), (256, 52040), (258, 52049), (265, 52094), (277, 52163), (280, 52178), (284, 52199), (288, 52247), (296, 52343), (297, 52346), (298, 52361), (306, 52397), (308, 52406), (314, 52472), (334, 52595), (337, 52613), (346, 52694), (347, 52706), (360, 52772), (363, 52784), (368, 52814), (372, 52835), (379, 52913), (384, 52958), (389, 52991), (397, 53036), (405, 53099), (413, 53159), (432, 53258), (445, 53324), (460, 53414), (463, 53444), (464, 53447), (469, 53477), (474, 53522), (480, 53564), (484, 53594), (486, 53606), (488, 53621), (490, 53630),

Gene: Phomeo_59 Start: 48754, Stop: 45443, Start Num: 33
Candidate Starts for Phomeo_59:
(3, 48997), (Start: 33 @48754 has 100 MA's), (41, 48682), (Start: 43 @48658 has 7 MA's), (62, 48505), (64, 48496), (82, 48373), (104, 48214), (105, 48208), (107, 48184), (118, 48076), (120, 48046), (128, 47977), (151, 47839), (154, 47821), (172, 47668), (177, 47626), (184, 47548), (186, 47533), (201, 47395), (226, 47197), (232, 47143), (233, 47140), (240, 47080), (246, 47029), (258, 46960), (265, 46915), (294, 46675), (298, 46633), (299, 46630), (301, 46624), (305, 46606), (315, 46510), (321, 46456), (343, 46312), (346, 46303), (359, 46228), (375, 46153), (380, 46099), (390, 46057), (398, 46009), (409, 45928), (415, 45907), (432, 45817), (438, 45787), (442, 45763), (443, 45760), (472, 45577), (480, 45520),

Gene: Phreeze_76 Start: 55086, Stop: 58382, Start Num: 33
Candidate Starts for Phreeze_76:
(Start: 26 @55059 has 2 MA's), (Start: 33 @55086 has 100 MA's), (41, 55158), (Start: 43 @55182 has 7 MA's), (44, 55191), (46, 55215), (64, 55350), (76, 55443), (79, 55461), (86, 55509), (95, 55569), (117, 55761), (143, 55995), (156, 56052), (162, 56106), (166, 56151), (170, 56178), (174, 56208), (186, 56331), (189, 56370), (192, 56412), (202, 56490), (204, 56508), (206, 56526), (208, 56538), (217, 56613), (233, 56769), (242, 56853), (250, 56931), (255, 56952), (258, 56961), (259, 56967), (261, 56976), (270, 57048), (273, 57063), (277, 57102), (279, 57114), (289, 57207), (290, 57213), (295, 57261), (299, 57303), (319, 57453), (320, 57465), (337, 57549), (351, 57690), (394, 57795), (410, 57894), (412, 57903), (427, 57981), (434, 58020), (436, 58035), (447, 58083), (461, 58179),

(464, 58197), (468, 58224), (475, 58272), (478, 58302), (479, 58305), (482, 58320), (486, 58350), (487, 58359), (488, 58365), (489, 58368),

Gene: Pleakley_67 Start: 47999, Stop: 44610, Start Num: 19
Candidate Starts for Pleakley_67:
(11, 48050), (Start: 19 @47999 has 2 MA's), (22, 47981), (25, 47954), (Start: 33 @47930 has 100 MA's), (42, 47849), (Start: 43 @47834 has 7 MA's), (48, 47783), (62, 47681), (64, 47672), (77, 47567), (82, 47549), (93, 47456), (104, 47390), (105, 47384), (106, 47372), (115, 47306), (118, 47252), (131, 47141), (132, 47120), (137, 47060), (141, 47033), (151, 47015), (165, 46898), (184, 46724), (186, 46709), (201, 46571), (212, 46478), (215, 46439), (226, 46373), (230, 46340), (233, 46316), (240, 46256), (246, 46205), (247, 46202), (248, 46196), (249, 46172), (252, 46154), (258, 46136), (265, 46091), (294, 45851), (297, 45824), (299, 45806), (301, 45800), (305, 45782), (315, 45686), (318, 45668), (320, 45644), (321, 45632), (342, 45500), (344, 45479), (346, 45473), (350, 45443), (380, 45266), (388, 45230), (398, 45179), (408, 45119), (409, 45098), (415, 45077), (450, 44903), (480, 44690), (490, 44624),

Gene: Polyyuki_59 Start: 45773, Stop: 42357, Start Num: 33
Candidate Starts for Polyyuki_59:
(Start: 33 @45773 has 100 MA's), (42, 45692), (Start: 43 @45677 has 7 MA's), (55, 45569), (56, 45563), (64, 45515), (73, 45434), (82, 45392), (110, 45182), (112, 45167), (113, 45158), (116, 45134), (117, 45104), (120, 45065), (131, 44984), (134, 44942), (155, 44807), (167, 44693), (174, 44642), (176, 44624), (177, 44615), (184, 44537), (186, 44522), (189, 44483), (193, 44444), (204, 44351), (210, 44300), (212, 44294), (215, 44255), (231, 44150), (232, 44135), (233, 44132), (246, 44018), (247, 44015), (249, 43985), (252, 43967), (254, 43964), (255, 43958), (257, 43955), (262, 43922), (265, 43901), (288, 43733), (295, 43655), (298, 43616), (299, 43613), (301, 43607), (305, 43589), (315, 43493), (318, 43475), (321, 43439), (337, 43367), (346, 43274), (347, 43262), (358, 43199), (369, 43142), (386, 43013), (392, 42983), (401, 42923), (402, 42920), (408, 42866), (423, 42776), (430, 42740), (439, 42695), (442, 42680), (451, 42638), (456, 42593), (466, 42539), (467, 42530), (469, 42518), (470, 42512), (472, 42494), (477, 42443), (478, 42440), (485, 42398),

Gene: PotatoChip_46 Start: 42799, Stop: 39506, Start Num: 33
Candidate Starts for PotatoChip_46:
(Start: 33 @42799 has 100 MA's), (38, 42742), (42, 42718), (Start: 43 @42703 has 7 MA's), (44, 42694), (64, 42547), (91, 42340), (97, 42265), (98, 42241), (104, 42187), (157, 41773), (167, 41671), (183, 41536), (184, 41518), (186, 41503), (195, 41407), (223, 41188), (224, 41185), (225, 41170), (229, 41140), (232, 41110), (246, 40993), (249, 40960), (255, 40933), (260, 40909), (283, 40762), (288, 40708), (289, 40687), (297, 40612), (299, 40594), (321, 40417), (332, 40387), (335, 40360), (337, 40345), (355, 40216), (376, 40183), (393, 40096), (413, 39982), (415, 39976), (417, 39964), (447, 39814), (448, 39811), (449, 39805), (452, 39787), (453, 39778), (454, 39760), (471, 39658), (473, 39634), (476, 39598), (477, 39592),

Gene: Prager_67 Start: 49797, Stop: 53099, Start Num: 14
Candidate Starts for Prager_67:
(Start: 14 @49797 has 20 MA's), (Start: 29 @49884 has 1 MA's), (30, 49890), (Start: 33 @49899 has 100 MA's), (Start: 43 @49995 has 7 MA's), (64, 50151), (74, 50238), (75, 50241), (83, 50292), (117, 50556), (120, 50595), (129, 50667), (131, 50676), (136, 50751), (146, 50817), (148, 50823), (160, 50877), (162, 50895), (167, 50946), (168, 50949), (171, 50979), (180, 51063), (181, 51072), (184, 51099), (186, 51114), (204, 51291), (205, 51300), (219, 51405), (230, 51486), (237, 51546), (246, 51621), (249, 51654), (250, 51660), (256, 51681), (258, 51690), (265, 51735), (277, 51804), (280, 51819), (288, 51888), (293, 51951), (296, 51984), (297, 51987), (306, 52038), (314, 52113), (334, 52236), (337, 52254), (345, 52332), (346, 52335), (347, 52347), (354, 52392), (360, 52413), (363, 52425), (368, 52455), (372, 52476), (398, 52548), (413, 52605), (432, 52704), (445, 52770), (460, 52860), (463, 52890), (464, 52893), (469, 52923), (474, 52968), (480, 53010), (484, 53040), (486,

53052), (488, 53067), (490, 53076),

Gene: Predator_76 Start: 54791, Stop: 58105, Start Num: 33
Candidate Starts for Predator_76:
(Start: 26 @54761 has 2 MA's), (Start: 33 @54791 has 100 MA's), (41, 54863), (42, 54872), (Start: 43 @54887 has 7 MA's), (44, 54896), (45, 54902), (46, 54920), (64, 55055), (67, 55091), (75, 55145), (86, 55214), (100, 55292), (117, 55466), (122, 55514), (145, 55718), (156, 55790), (157, 55793), (166, 55889), (167, 55895), (170, 55916), (171, 55928), (172, 55931), (174, 55946), (182, 56024), (186, 56069), (189, 56108), (194, 56156), (196, 56168), (201, 56213), (203, 56237), (204, 56246), (206, 56264), (217, 56351), (220, 56381), (228, 56414), (233, 56477), (242, 56561), (246, 56600), (250, 56639), (255, 56660), (258, 56669), (259, 56675), (261, 56684), (262, 56693), (280, 56825), (297, 56993), (299, 57011), (302, 57020), (308, 57053), (320, 57173), (337, 57257), (365, 57437), (403, 57566), (412, 57626), (413, 57629), (414, 57632), (427, 57704), (436, 57758), (447, 57806), (464, 57920), (468, 57947), (475, 57995), (477, 58022), (482, 58043), (485, 58067),

Gene: Ranch_80 Start: 51036, Stop: 54344, Start Num: 35
Candidate Starts for Ranch_80:
(Start: 35 @51036 has 4 MA's), (Start: 39 @51063 has 1 MA's), (Start: 43 @51099 has 7 MA's), (47, 51144), (53, 51186), (89, 51447), (104, 51549), (108, 51582), (117, 51678), (147, 51948), (149, 51957), (162, 52065), (166, 52110), (172, 52152), (186, 52284), (187, 52287), (188, 52317), (191, 52338), (199, 52407), (204, 52461), (216, 52560), (219, 52575), (225, 52617), (246, 52791), (249, 52824), (252, 52842), (258, 52860), (265, 52905), (266, 52908), (282, 53004), (287, 53046), (288, 53058), (291, 53094), (313, 53274), (318, 53316), (321, 53352), (334, 53406), (337, 53424), (346, 53520), (347, 53532), (396, 53727), (413, 53811), (432, 53916), (435, 53931), (438, 53946), (441, 53967), (445, 53979), (446, 53985), (447, 53988), (452, 54015), (457, 54060), (473, 54168), (479, 54213), (483, 54237), (488, 54273),

Gene: RazorC_78 Start: 50446, Stop: 53787, Start Num: 33
Candidate Starts for RazorC_78:
(Start: 33 @50446 has 100 MA's), (Start: 43 @50542 has 7 MA's), (47, 50587), (53, 50629), (89, 50890), (108, 51025), (117, 51121), (147, 51391), (149, 51400), (162, 51508), (166, 51553), (172, 51595), (179, 51673), (186, 51727), (187, 51730), (188, 51760), (199, 51850), (204, 51904), (216, 52003), (219, 52018), (225, 52060), (246, 52234), (249, 52267), (252, 52285), (258, 52303), (265, 52348), (266, 52351), (282, 52447), (287, 52489), (288, 52501), (291, 52537), (313, 52717), (318, 52759), (321, 52795), (333, 52837), (334, 52849), (337, 52867), (346, 52963), (347, 52975), (396, 53170), (413, 53254), (432, 53359), (435, 53374), (438, 53389), (441, 53410), (445, 53422), (446, 53428), (447, 53431), (452, 53458), (457, 53503), (473, 53611), (479, 53656), (483, 53680), (488, 53716),

Gene: RedRaider_67 Start: 51121, Stop: 47807, Start Num: 33
Candidate Starts for RedRaider_67:
(Start: 33 @51121 has 100 MA's), (Start: 35 @51088 has 4 MA's), (Start: 43 @51025 has 7 MA's), (62, 50872), (64, 50863), (82, 50740), (104, 50581), (105, 50575), (107, 50551), (108, 50548), (115, 50497), (118, 50443), (120, 50413), (151, 50206), (172, 50035), (177, 49993), (184, 49915), (186, 49900), (201, 49762), (206, 49711), (226, 49564), (233, 49507), (238, 49462), (246, 49396), (252, 49345), (258, 49327), (265, 49282), (294, 49039), (298, 48997), (299, 48994), (301, 48988), (305, 48970), (312, 48901), (315, 48874), (318, 48856), (321, 48820), (343, 48676), (346, 48667), (349, 48643), (359, 48592), (380, 48463), (390, 48421), (398, 48373), (400, 48364), (408, 48313), (409, 48292), (415, 48271), (450, 48100), (485, 47851),

Gene: Rooney_51 Start: 39051, Stop: 35854, Start Num: 33
Candidate Starts for Rooney_51:

(27, 39072), (Start: 33 @39051 has 100 MA's), (36, 39009), (Start: 43 @38955 has 7 MA's), (49, 38901), (58, 38832), (59, 38823), (60, 38814), (65, 38784), (68, 38751), (71, 38715), (78, 38673), (81, 38661), (87, 38607), (100, 38538), (103, 38499), (109, 38457), (111, 38436), (117, 38364), (121, 38322), (126, 38259), (127, 38256), (136, 38166), (138, 38151), (139, 38142), (147, 38100), (152, 38085), (156, 38070), (172, 37944), (180, 37863), (182, 37851), (184, 37827), (186, 37812), (187, 37809), (195, 37716), (203, 37644), (205, 37626), (210, 37584), (218, 37527), (221, 37500), (232, 37419), (234, 37413), (236, 37386), (242, 37335), (247, 37293), (249, 37263), (250, 37257), (258, 37227), (261, 37212), (263, 37197), (272, 37155), (273, 37152), (276, 37116), (279, 37101), (292, 36987), (332, 36708), (333, 36696), (334, 36684), (337, 36666), (348, 36573), (372, 36468), (408, 36357), (410, 36333), (429, 36231), (433, 36216), (451, 36123), (462, 36045), (465, 36033), (468, 36012), (475, 35964), (480, 35928), (485, 35892), (487, 35877),

Gene: Rota_76 Start: 52096, Stop: 55377, Start Num: 39
Candidate Starts for Rota_76:
(Start: 39 @52096 has 1 MA's), (41, 52108), (Start: 43 @52132 has 7 MA's), (47, 52177), (53, 52219), (89, 52480), (102, 52555), (115, 52666), (117, 52711), (147, 52981), (149, 52990), (162, 53098), (166, 53143), (172, 53185), (186, 53317), (187, 53320), (188, 53350), (191, 53371), (199, 53440), (204, 53494), (216, 53593), (219, 53608), (225, 53650), (246, 53824), (249, 53857), (252, 53875), (258, 53893), (265, 53938), (266, 53941), (282, 54037), (287, 54079), (288, 54091), (291, 54127), (313, 54307), (318, 54349), (321, 54385), (334, 54439), (337, 54457), (346, 54553), (347, 54565), (396, 54760), (413, 54844), (428, 54925), (432, 54949), (435, 54964), (441, 55000), (445, 55012), (446, 55018), (447, 55021), (452, 55048), (457, 55093), (473, 55201), (479, 55246), (483, 55270), (488, 55306),

Gene: Rukungu_80 Start: 52624, Stop: 55965, Start Num: 33
Candidate Starts for Rukungu_80:
(23, 52582), (Start: 33 @52624 has 100 MA's), (Start: 39 @52684 has 1 MA's), (Start: 43 @52720 has 7 MA's), (47, 52765), (53, 52807), (89, 53068), (104, 53170), (108, 53203), (117, 53299), (147, 53569), (149, 53578), (162, 53686), (166, 53731), (172, 53773), (186, 53905), (187, 53908), (188, 53938), (191, 53959), (199, 54028), (204, 54082), (216, 54181), (219, 54196), (225, 54238), (246, 54412), (249, 54445), (252, 54463), (258, 54481), (265, 54526), (266, 54529), (282, 54625), (287, 54667), (288, 54679), (291, 54715), (313, 54895), (318, 54937), (321, 54973), (334, 55027), (337, 55045), (346, 55141), (347, 55153), (396, 55348), (413, 55432), (428, 55513), (432, 55537), (435, 55552), (438, 55567), (441, 55588), (445, 55600), (446, 55606), (447, 55609), (452, 55636), (457, 55681), (473, 55789), (479, 55834), (483, 55858), (488, 55894),

Gene: Rumi_79 Start: 49989, Stop: 53330, Start Num: 33
Candidate Starts for Rumi_79:
(Start: 33 @49989 has 100 MA's), (Start: 39 @50049 has 1 MA's), (Start: 43 @50085 has 7 MA's), (47, 50130), (53, 50172), (89, 50433), (108, 50568), (117, 50664), (147, 50934), (149, 50943), (162, 51051), (166, 51096), (172, 51138), (179, 51216), (186, 51270), (187, 51273), (188, 51303), (199, 51393), (204, 51447), (216, 51546), (219, 51561), (225, 51603), (246, 51777), (249, 51810), (252, 51828), (258, 51846), (265, 51891), (266, 51894), (282, 51990), (287, 52032), (288, 52044), (291, 52080), (313, 52260), (318, 52302), (321, 52338), (333, 52380), (334, 52392), (337, 52410), (346, 52506), (347, 52518), (396, 52713), (413, 52797), (432, 52902), (435, 52917), (438, 52932), (441, 52953), (445, 52965), (446, 52971), (447, 52974), (452, 53001), (457, 53046), (473, 53154), (479, 53199), (483, 53223), (488, 53259),

Gene: Sadboi_79 Start: 52345, Stop: 55686, Start Num: 33
Candidate Starts for Sadboi_79:
(21, 52297), (Start: 33 @52345 has 100 MA's), (Start: 39 @52405 has 1 MA's), (Start: 43 @52441 has 7 MA's), (47, 52486), (53, 52528), (89, 52789), (104, 52891), (108, 52924), (117, 53020), (147, 53290), (149, 53299), (162, 53407), (166, 53452), (172, 53494), (186, 53626), (187, 53629), (188, 53659),

(191, 53680), (199, 53749), (204, 53803), (216, 53902), (219, 53917), (225, 53959), (246, 54133),
(249, 54166), (252, 54184), (258, 54202), (265, 54247), (266, 54250), (282, 54346), (287, 54388),
(288, 54400), (291, 54436), (313, 54616), (318, 54658), (321, 54694), (334, 54748), (337, 54766),
(346, 54862), (347, 54874), (396, 55069), (413, 55153), (428, 55234), (432, 55258), (435, 55273),
(441, 55309), (445, 55321), (446, 55327), (447, 55330), (452, 55357), (457, 55402), (473, 55510),
(479, 55555), (483, 55579), (488, 55615),

Gene: Sampudon_80 Start: 52937, Stop: 56278, Start Num: 33
Candidate Starts for Sampudon_80:
(21, 52889), (Start: 33 @52937 has 100 MA's), (Start: 39 @52997 has 1 MA's), (Start: 43 @53033 has
7 MA's), (47, 53078), (53, 53120), (89, 53381), (104, 53483), (108, 53516), (117, 53612), (147, 53882),
(149, 53891), (162, 53999), (166, 54044), (172, 54086), (186, 54218), (187, 54221), (188, 54251),
(191, 54272), (199, 54341), (204, 54395), (216, 54494), (219, 54509), (246, 54725), (249, 54758),
(252, 54776), (258, 54794), (265, 54839), (266, 54842), (282, 54938), (287, 54980), (288, 54992),
(291, 55028), (304, 55127), (313, 55208), (318, 55250), (321, 55286), (334, 55340), (337, 55358),
(346, 55454), (347, 55466), (396, 55661), (413, 55745), (428, 55826), (432, 55850), (435, 55865),
(441, 55901), (445, 55913), (446, 55919), (447, 55922), (452, 55949), (457, 55994), (473, 56102),
(479, 56147), (483, 56171), (488, 56207),

Gene: SassyC_56 Start: 39581, Stop: 36360, Start Num: 27
Candidate Starts for SassyC_56:
(27, 39581), (Start: 33 @39560 has 100 MA's), (36, 39518), (Start: 43 @39464 has 7 MA's), (49,
39410), (50, 39407), (58, 39341), (59, 39332), (61, 39314), (65, 39293), (68, 39260), (78, 39182), (81,
39170), (87, 39116), (111, 38945), (121, 38831), (126, 38768), (127, 38765), (138, 38660), (147,
38609), (152, 38594), (156, 38579), (169, 38483), (172, 38453), (180, 38372), (184, 38336), (186,
38321), (187, 38318), (195, 38225), (204, 38144), (205, 38135), (227, 37976), (232, 37928), (236,
37895), (244, 37835), (247, 37802), (249, 37772), (250, 37766), (258, 37736), (261, 37721), (263,
37706), (272, 37664), (273, 37661), (276, 37625), (279, 37610), (292, 37496), (310, 37361), (332,
37217), (333, 37205), (334, 37193), (338, 37169), (348, 37082), (356, 37040), (368, 36998), (410,
36842), (431, 36731), (462, 36554), (465, 36542), (468, 36521), (470, 36515), (478, 36443), (480,
36437), (481, 36431), (485, 36401), (487, 36386),

Gene: Scuba_68 Start: 48073, Stop: 44684, Start Num: 19
Candidate Starts for Scuba_68:
(11, 48124), (Start: 19 @48073 has 2 MA's), (22, 48055), (25, 48028), (Start: 33 @48004 has 100
MA's), (42, 47923), (Start: 43 @47908 has 7 MA's), (48, 47857), (62, 47755), (64, 47746), (77, 47641),
(82, 47623), (93, 47530), (104, 47464), (105, 47458), (106, 47446), (115, 47380), (118, 47326), (137,
47134), (141, 47107), (151, 47089), (165, 46972), (184, 46798), (186, 46783), (201, 46645), (226,
46447), (230, 46414), (233, 46390), (240, 46330), (246, 46279), (247, 46276), (248, 46270), (249,
46246), (252, 46228), (258, 46210), (265, 46165), (294, 45925), (299, 45880), (301, 45874), (305,
45856), (315, 45760), (318, 45742), (320, 45718), (321, 45706), (342, 45574), (344, 45553), (346,
45547), (350, 45517), (352, 45502), (380, 45340), (388, 45304), (398, 45253), (409, 45172), (415,
45151), (450, 44977), (480, 44764), (490, 44698),

Gene: ShakeNBake_51 Start: 38880, Stop: 35683, Start Num: 33
Candidate Starts for ShakeNBake_51:
(17, 38961), (27, 38901), (Start: 33 @38880 has 100 MA's), (34, 38871), (36, 38838), (Start: 43
@38784 has 7 MA's), (47, 38739), (49, 38730), (52, 38706), (58, 38661), (59, 38652), (60, 38643), (65,
38613), (68, 38580), (78, 38502), (81, 38490), (87, 38436), (88, 38433), (102, 38349), (117, 38193),
(121, 38151), (126, 38088), (127, 38085), (138, 37980), (139, 37971), (147, 37929), (152, 37914),
(156, 37899), (172, 37773), (180, 37692), (184, 37656), (186, 37641), (187, 37638), (195, 37545),
(205, 37455), (221, 37329), (232, 37248), (236, 37215), (242, 37164), (249, 37092), (250, 37086),
(258, 37056), (263, 37026), (276, 36945), (279, 36930), (292, 36816), (310, 36681), (332, 36537),

(333, 36525), (334, 36513), (337, 36495), (348, 36402), (372, 36297), (408, 36186), (410, 36162), (433, 36045), (462, 35874), (465, 35862), (468, 35841), (478, 35763), (480, 35757), (485, 35721), (487, 35706),

Gene: SirHarley_69 Start: 50202, Stop: 53504, Start Num: 14
Candidate Starts for SirHarley_69:
(Start: 14 @50202 has 20 MA's), (29 @50289 has 1 MA's), (30, 50295), (Start: 33 @50304 has 100 MA's), (Start: 43 @50400 has 7 MA's), (64, 50556), (74, 50643), (75, 50646), (83, 50697), (117, 50961), (120, 51000), (129, 51072), (131, 51081), (136, 51156), (146, 51222), (148, 51228), (160, 51282), (162, 51300), (167, 51351), (168, 51354), (171, 51384), (180, 51468), (181, 51477), (184, 51504), (186, 51519), (204, 51696), (205, 51705), (219, 51810), (230, 51891), (237, 51951), (246, 52026), (249, 52059), (250, 52065), (256, 52086), (258, 52095), (265, 52140), (277, 52209), (280, 52224), (288, 52293), (296, 52389), (297, 52392), (306, 52443), (314, 52518), (334, 52641), (337, 52659), (345, 52737), (346, 52740), (347, 52752), (354, 52797), (360, 52818), (363, 52830), (368, 52860), (372, 52881), (398, 52953), (413, 53010), (432, 53109), (445, 53175), (460, 53265), (463, 53295), (464, 53298), (469, 53328), (474, 53373), (480, 53415), (484, 53445), (486, 53457), (488, 53472), (490, 53481),

Gene: Skysand_61 Start: 49139, Stop: 45828, Start Num: 33
Candidate Starts for Skysand_61:
(1, 49391), (6, 49304), (10, 49277), (Start: 33 @49139 has 100 MA's), (41, 49067), (Start: 43 @49043 has 7 MA's), (62, 48890), (64, 48881), (82, 48758), (104, 48599), (105, 48593), (107, 48569), (118, 48461), (120, 48431), (151, 48224), (172, 48053), (177, 48011), (184, 47933), (186, 47918), (201, 47780), (226, 47582), (233, 47525), (238, 47480), (246, 47414), (252, 47363), (258, 47345), (265, 47300), (294, 47057), (298, 47015), (299, 47012), (301, 47006), (305, 46988), (315, 46892), (318, 46874), (321, 46838), (343, 46694), (346, 46685), (349, 46661), (353, 46634), (359, 46610), (380, 46481), (398, 46394), (400, 46385), (409, 46313), (415, 46292), (450, 46121), (485, 45872), (490, 45842),

Gene: StarStruck_61 Start: 48867, Stop: 45550, Start Num: 33
Candidate Starts for StarStruck_61:
(Start: 33 @48867 has 100 MA's), (38, 48810), (Start: 43 @48771 has 7 MA's), (62, 48618), (64, 48609), (82, 48486), (104, 48327), (105, 48321), (107, 48297), (118, 48189), (131, 48078), (151, 47952), (172, 47781), (177, 47739), (179, 47700), (184, 47661), (186, 47646), (201, 47508), (215, 47376), (226, 47310), (233, 47253), (240, 47193), (246, 47142), (258, 47073), (265, 47028), (294, 46785), (298, 46743), (299, 46740), (301, 46734), (305, 46716), (315, 46620), (321, 46566), (346, 46413), (353, 46362), (355, 46353), (380, 46209), (395, 46131), (398, 46116), (408, 46056), (409, 46035), (415, 46014), (423, 45966), (440, 45882), (442, 45870), (443, 45867), (459, 45774), (485, 45591), (490, 45561),

Gene: Stickynote_45 Start: 42219, Stop: 38926, Start Num: 33
Candidate Starts for Stickynote_45:
(Start: 33 @42219 has 100 MA's), (38, 42162), (42, 42138), (Start: 43 @42123 has 7 MA's), (44, 42114), (64, 41967), (97, 41685), (98, 41661), (104, 41607), (157, 41193), (167, 41091), (184, 40938), (186, 40923), (195, 40827), (223, 40608), (224, 40605), (225, 40590), (229, 40560), (232, 40530), (246, 40413), (249, 40380), (255, 40353), (260, 40329), (283, 40182), (288, 40128), (289, 40107), (297, 40032), (299, 40014), (321, 39837), (332, 39807), (335, 39780), (337, 39765), (355, 39636), (376, 39603), (393, 39516), (413, 39402), (415, 39396), (417, 39384), (447, 39234), (448, 39231), (449, 39225), (452, 39207), (453, 39198), (454, 39180), (471, 39078), (473, 39054), (476, 39018), (477, 39012),

Gene: Stormer_79 Start: 49993, Stop: 53334, Start Num: 33
Candidate Starts for Stormer_79:

(Start: 33 @49993 has 100 MA's), (Start: 39 @50053 has 1 MA's), (Start: 43 @50089 has 7 MA's), (47, 50134), (53, 50176), (89, 50437), (108, 50572), (117, 50668), (147, 50938), (149, 50947), (162, 51055), (166, 51100), (172, 51142), (179, 51220), (186, 51274), (187, 51277), (188, 51307), (199, 51397), (204, 51451), (216, 51550), (219, 51565), (225, 51607), (246, 51781), (249, 51814), (252, 51832), (258, 51850), (265, 51895), (266, 51898), (282, 51994), (287, 52036), (288, 52048), (291, 52084), (313, 52264), (318, 52306), (321, 52342), (333, 52384), (334, 52396), (337, 52414), (346, 52510), (347, 52522), (396, 52717), (413, 52801), (432, 52906), (435, 52921), (438, 52936), (441, 52957), (445, 52969), (446, 52975), (447, 52978), (452, 53005), (457, 53050), (473, 53158), (479, 53203), (483, 53227), (488, 53263),

Gene: Sukkupi_60 Start: 47229, Stop: 43978, Start Num: 33
Candidate Starts for Sukkupi_60:
(9, 47361), (12, 47331), (13, 47319), (Start: 33 @47229 has 100 MA's), (42, 47148), (Start: 43 @47133 has 7 MA's), (47, 47088), (62, 46980), (64, 46971), (86, 46806), (105, 46683), (111, 46632), (115, 46605), (118, 46551), (120, 46521), (151, 46314), (164, 46206), (174, 46128), (177, 46101), (184, 46023), (186, 46008), (201, 45870), (226, 45672), (227, 45666), (230, 45639), (246, 45504), (249, 45471), (258, 45435), (265, 45390), (269, 45378), (278, 45315), (294, 45150), (295, 45147), (298, 45108), (299, 45105), (301, 45099), (303, 45090), (305, 45081), (315, 44985), (318, 44967), (321, 44931), (345, 44781), (353, 44727), (380, 44631), (398, 44547), (400, 44538), (408, 44487), (423, 44397), (442, 44301), (443, 44298), (453, 44247), (472, 44115), (490, 43992),

Gene: SuperSonics_94 Start: 57430, Stop: 60567, Start Num: 43
Candidate Starts for SuperSonics_94:
(Start: 26 @57307 has 2 MA's), (Start: 33 @57334 has 100 MA's), (Start: 43 @57430 has 7 MA's), (64, 57595), (80, 57709), (86, 57754), (92, 57793), (101, 57844), (117, 58009), (182, 58507), (186, 58552), (189, 58591), (214, 58795), (230, 58936), (235, 58987), (246, 59083), (248, 59092), (249, 59116), (250, 59122), (258, 59152), (259, 59158), (277, 59290), (278, 59293), (279, 59302), (286, 59344), (287, 59362), (299, 59494), (337, 59740), (357, 59890), (374, 59947), (394, 59989), (401, 60013), (413, 60082), (445, 60250), (460, 60340), (468, 60412), (477, 60487),

Gene: SuperSulley_61 Start: 49019, Stop: 45717, Start Num: 33
Candidate Starts for SuperSulley_61:
(16, 49094), (Start: 33 @49019 has 100 MA's), (Start: 43 @48923 has 7 MA's), (62, 48770), (64, 48761), (82, 48638), (104, 48479), (105, 48473), (107, 48449), (118, 48341), (131, 48230), (151, 48104), (172, 47933), (177, 47891), (184, 47813), (186, 47798), (201, 47660), (215, 47528), (226, 47462), (233, 47405), (240, 47345), (246, 47294), (250, 47255), (258, 47225), (265, 47180), (294, 46937), (298, 46895), (299, 46892), (301, 46886), (305, 46868), (315, 46772), (321, 46718), (346, 46565), (355, 46505), (359, 46490), (380, 46361), (398, 46283), (408, 46223), (409, 46202), (410, 46199), (415, 46181), (430, 46097), (442, 46037), (449, 46010), (485, 45758), (490, 45728),

Gene: SuperheroCarly_68 Start: 49885, Stop: 53187, Start Num: 14
Candidate Starts for SuperheroCarly_68:
(Start: 14 @49885 has 20 MA's), (Start: 29 @49972 has 1 MA's), (30, 49978), (Start: 33 @49987 has 100 MA's), (Start: 43 @50083 has 7 MA's), (64, 50239), (74, 50326), (75, 50329), (83, 50380), (117, 50644), (120, 50683), (129, 50755), (131, 50764), (136, 50839), (146, 50905), (148, 50911), (160, 50965), (162, 50983), (167, 51034), (168, 51037), (171, 51067), (180, 51151), (181, 51160), (184, 51187), (186, 51202), (204, 51379), (205, 51388), (219, 51493), (230, 51574), (237, 51634), (246, 51709), (249, 51742), (250, 51748), (256, 51769), (258, 51778), (265, 51823), (277, 51892), (280, 51907), (288, 51976), (293, 52039), (296, 52072), (297, 52075), (306, 52126), (314, 52201), (334, 52324), (337, 52342), (345, 52420), (346, 52423), (347, 52435), (354, 52480), (360, 52501), (363, 52513), (368, 52543), (372, 52564), (398, 52636), (413, 52693), (432, 52792), (445, 52858), (460, 52948), (463, 52978), (464, 52981), (469, 53011), (474, 53056), (480, 53098), (484, 53128), (486, 53140), (488, 53155), (490, 53164),

Gene: Thoth_67 Start: 49791, Stop: 53093, Start Num: 14
Candidate Starts for Thoth_67:
(Start: 14 @49791 has 20 MA's), (Start: 29 @49878 has 1 MA's), (30, 49884), (Start: 33 @49893 has 100 MA's), (Start: 43 @49989 has 7 MA's), (64, 50145), (74, 50232), (75, 50235), (83, 50286), (117, 50550), (120, 50589), (129, 50661), (131, 50670), (136, 50745), (146, 50811), (148, 50817), (160, 50871), (162, 50889), (167, 50940), (168, 50943), (171, 50973), (180, 51057), (181, 51066), (184, 51093), (186, 51108), (204, 51285), (205, 51294), (219, 51399), (230, 51480), (237, 51540), (246, 51615), (249, 51648), (250, 51654), (256, 51675), (258, 51684), (265, 51729), (277, 51798), (280, 51813), (288, 51882), (293, 51945), (296, 51978), (297, 51981), (306, 52032), (314, 52107), (334, 52230), (337, 52248), (345, 52326), (346, 52329), (347, 52341), (354, 52386), (360, 52407), (363, 52419), (368, 52449), (372, 52470), (398, 52542), (413, 52599), (432, 52698), (445, 52764), (460, 52854), (463, 52884), (464, 52887), (469, 52917), (474, 52962), (480, 53004), (484, 53034), (486, 53046), (488, 53061), (490, 53070),

Gene: Thumb_78 Start: 55518, Stop: 58814, Start Num: 33
Candidate Starts for Thumb_78:
(Start: 26 @55491 has 2 MA's), (Start: 33 @55518 has 100 MA's), (41, 55590), (Start: 43 @55614 has 7 MA's), (46, 55647), (64, 55782), (76, 55875), (79, 55893), (86, 55941), (95, 56001), (117, 56193), (143, 56427), (156, 56484), (162, 56538), (166, 56583), (170, 56610), (174, 56640), (186, 56763), (189, 56802), (192, 56844), (202, 56922), (204, 56940), (206, 56958), (208, 56970), (217, 57045), (233, 57201), (242, 57285), (250, 57363), (255, 57384), (258, 57393), (259, 57399), (261, 57408), (270, 57480), (273, 57495), (277, 57534), (279, 57546), (289, 57639), (290, 57645), (295, 57693), (299, 57735), (319, 57885), (320, 57897), (337, 57981), (351, 58122), (394, 58227), (410, 58326), (412, 58335), (427, 58413), (434, 58452), (436, 58467), (447, 58515), (461, 58611), (464, 58629), (468, 58656), (475, 58704), (478, 58734), (479, 58737), (482, 58752), (486, 58782), (487, 58791), (488, 58797), (489, 58800),

Gene: Tillicus_72 Start: 51147, Stop: 54485, Start Num: 33
Candidate Starts for Tillicus_72:
(Start: 33 @51147 has 100 MA's), (Start: 39 @51207 has 1 MA's), (41, 51219), (Start: 43 @51243 has 7 MA's), (47, 51288), (53, 51330), (102, 51666), (115, 51777), (117, 51822), (130, 51945), (147, 52092), (149, 52101), (153, 52134), (158, 52170), (162, 52212), (166, 52257), (172, 52299), (186, 52431), (187, 52434), (188, 52464), (193, 52515), (197, 52536), (199, 52554), (205, 52617), (216, 52707), (219, 52722), (221, 52743), (243, 52902), (246, 52938), (249, 52971), (252, 52989), (265, 53052), (266, 53055), (276, 53118), (282, 53151), (287, 53193), (288, 53205), (291, 53241), (313, 53421), (316, 53448), (318, 53463), (321, 53499), (334, 53553), (337, 53571), (346, 53667), (347, 53679), (349, 53691), (416, 53967), (435, 54078), (441, 54114), (445, 54126), (446, 54132), (447, 54135), (452, 54162), (457, 54207), (473, 54315), (477, 54354), (479, 54360), (483, 54384), (488, 54420),

Gene: Tracker_60 Start: 47900, Stop: 44589, Start Num: 33
Candidate Starts for Tracker_60:
(Start: 33 @47900 has 100 MA's), (41, 47828), (Start: 43 @47804 has 7 MA's), (62, 47651), (64, 47642), (104, 47360), (105, 47354), (107, 47330), (118, 47222), (120, 47192), (151, 46985), (172, 46814), (177, 46772), (178, 46766), (184, 46694), (186, 46679), (201, 46541), (226, 46343), (233, 46286), (240, 46226), (246, 46175), (258, 46106), (265, 46061), (294, 45821), (299, 45776), (301, 45770), (305, 45752), (315, 45656), (321, 45602), (343, 45458), (346, 45449), (359, 45374), (375, 45299), (380, 45245), (398, 45155), (409, 45074), (415, 45053), (442, 44909), (443, 44906), (456, 44822), (472, 44723), (480, 44666), (490, 44600),

Gene: Troll4_66 Start: 49859, Stop: 53161, Start Num: 14
Candidate Starts for Troll4_66:

(Start: 14 @49859 has 20 MA's), (Start: 29 @49946 has 1 MA's), (30, 49952), (Start: 33 @49961 has 100 MA's), (Start: 43 @50057 has 7 MA's), (64, 50213), (74, 50300), (75, 50303), (83, 50354), (117, 50618), (120, 50657), (129, 50729), (131, 50738), (136, 50813), (146, 50879), (148, 50885), (160, 50939), (162, 50957), (167, 51008), (168, 51011), (171, 51041), (180, 51125), (181, 51134), (184, 51161), (186, 51176), (204, 51353), (205, 51362), (219, 51467), (230, 51548), (237, 51608), (246, 51683), (249, 51716), (250, 51722), (256, 51743), (258, 51752), (265, 51797), (277, 51866), (280, 51881), (288, 51950), (293, 52013), (296, 52046), (297, 52049), (306, 52100), (314, 52175), (334, 52298), (337, 52316), (345, 52394), (346, 52397), (347, 52409), (354, 52454), (360, 52475), (363, 52487), (368, 52517), (372, 52538), (398, 52610), (413, 52667), (432, 52766), (445, 52832), (460, 52922), (463, 52952), (464, 52955), (469, 52985), (474, 53030), (480, 53072), (484, 53102), (486, 53114), (488, 53129), (490, 53138),

Gene: Turuncu_63 Start: 49020, Stop: 45739, Start Num: 33
Candidate Starts for Turuncu_63:
(18, 49104), (Start: 33 @49020 has 100 MA's), (42, 48939), (Start: 43 @48924 has 7 MA's), (47, 48879), (62, 48768), (64, 48759), (71, 48693), (82, 48636), (101, 48510), (105, 48471), (107, 48447), (111, 48420), (115, 48393), (118, 48339), (140, 48126), (151, 48102), (184, 47808), (186, 47793), (223, 47475), (226, 47451), (232, 47397), (233, 47394), (246, 47283), (258, 47214), (261, 47199), (265, 47169), (290, 46980), (294, 46932), (298, 46890), (299, 46887), (301, 46881), (305, 46863), (315, 46767), (318, 46749), (321, 46713), (346, 46548), (350, 46518), (355, 46488), (375, 46449), (380, 46395), (387, 46371), (398, 46308), (408, 46248), (415, 46206), (437, 46089), (442, 46062), (443, 46059), (449, 46035), (480, 45819), (485, 45783), (490, 45753),

Gene: Virizion_56 Start: 39250, Stop: 36053, Start Num: 33
Candidate Starts for Virizion_56:
(27, 39271), (Start: 33 @39250 has 100 MA's), (36, 39208), (Start: 43 @39154 has 7 MA's), (49, 39100), (58, 39031), (59, 39022), (60, 39013), (65, 38983), (68, 38950), (71, 38914), (78, 38872), (81, 38860), (87, 38806), (100, 38737), (103, 38698), (109, 38656), (111, 38635), (117, 38563), (121, 38521), (126, 38458), (127, 38455), (136, 38365), (138, 38350), (139, 38341), (147, 38299), (152, 38284), (156, 38269), (169, 38173), (172, 38143), (180, 38062), (182, 38050), (184, 38026), (186, 38011), (187, 38008), (195, 37915), (203, 37843), (205, 37825), (210, 37783), (218, 37726), (221, 37699), (232, 37618), (234, 37612), (236, 37585), (242, 37534), (247, 37492), (249, 37462), (250, 37456), (258, 37426), (261, 37411), (263, 37396), (272, 37354), (273, 37351), (276, 37315), (279, 37300), (292, 37186), (332, 36907), (333, 36895), (334, 36883), (337, 36865), (348, 36772), (372, 36667), (408, 36556), (410, 36532), (433, 36415), (451, 36322), (462, 36244), (465, 36232), (468, 36211), (475, 36163), (480, 36127), (485, 36091), (487, 36076),

Gene: Visconti_68 Start: 49767, Stop: 53069, Start Num: 14
Candidate Starts for Visconti_68:
(Start: 14 @49767 has 20 MA's), (Start: 29 @49854 has 1 MA's), (30, 49860), (Start: 33 @49869 has 100 MA's), (Start: 43 @49965 has 7 MA's), (64, 50121), (74, 50208), (75, 50211), (83, 50262), (117, 50526), (120, 50565), (129, 50637), (131, 50646), (136, 50721), (146, 50787), (148, 50793), (160, 50847), (162, 50865), (167, 50916), (168, 50919), (171, 50949), (180, 51033), (181, 51042), (184, 51069), (186, 51084), (204, 51261), (205, 51270), (219, 51375), (230, 51456), (237, 51516), (246, 51591), (249, 51624), (250, 51630), (256, 51651), (258, 51660), (265, 51705), (277, 51774), (280, 51789), (288, 51858), (293, 51921), (296, 51954), (297, 51957), (306, 52008), (314, 52083), (334, 52206), (337, 52224), (345, 52302), (346, 52305), (347, 52317), (354, 52362), (360, 52383), (363, 52395), (368, 52425), (372, 52446), (398, 52518), (413, 52575), (432, 52674), (445, 52740), (460, 52830), (463, 52860), (464, 52863), (469, 52893), (474, 52938), (480, 52980), (484, 53010), (486, 53022), (488, 53037), (490, 53046),

Gene: WaldoWhy_69 Start: 49783, Stop: 53085, Start Num: 14
Candidate Starts for WaldoWhy_69:

(Start: 14 @49783 has 20 MA's), (Start: 29 @49870 has 1 MA's), (30, 49876), (Start: 33 @49885 has 100 MA's), (Start: 43 @49981 has 7 MA's), (64, 50137), (74, 50224), (75, 50227), (83, 50278), (117, 50542), (120, 50581), (129, 50653), (131, 50662), (136, 50737), (146, 50803), (148, 50809), (160, 50863), (162, 50881), (167, 50932), (168, 50935), (171, 50965), (180, 51049), (184, 51085), (186, 51100), (204, 51277), (219, 51391), (230, 51472), (246, 51607), (249, 51640), (250, 51646), (256, 51667), (258, 51676), (265, 51721), (277, 51790), (280, 51805), (284, 51826), (288, 51874), (293, 51937), (296, 51970), (297, 51973), (298, 51988), (306, 52024), (314, 52099), (334, 52222), (337, 52240), (345, 52318), (346, 52321), (347, 52333), (360, 52399), (363, 52411), (368, 52441), (372, 52462), (398, 52534), (413, 52591), (432, 52690), (445, 52756), (460, 52846), (463, 52876), (464, 52879), (469, 52909), (474, 52954), (480, 52996), (484, 53026), (486, 53038), (488, 53053), (490, 53062),

Gene: Wentworth_52 Start: 39280, Stop: 36083, Start Num: 33
Candidate Starts for Wentworth_52:
(27, 39301), (Start: 33 @39280 has 100 MA's), (34, 39271), (36, 39238), (Start: 43 @39184 has 7 MA's), (49, 39130), (58, 39061), (59, 39052), (63, 39025), (65, 39013), (68, 38980), (71, 38944), (78, 38902), (81, 38890), (87, 38836), (99, 38770), (100, 38767), (121, 38551), (137, 38389), (138, 38380), (147, 38329), (152, 38314), (156, 38299), (172, 38173), (180, 38092), (184, 38056), (186, 38041), (187, 38038), (195, 37945), (205, 37855), (207, 37840), (232, 37648), (234, 37642), (236, 37615), (241, 37570), (242, 37564), (244, 37555), (249, 37492), (250, 37486), (258, 37456), (263, 37426), (273, 37381), (276, 37345), (292, 37216), (322, 36964), (332, 36937), (333, 36925), (334, 36913), (341, 36841), (348, 36802), (372, 36697), (398, 36622), (410, 36562), (413, 36550), (431, 36451), (445, 36385), (462, 36274), (465, 36262), (468, 36241), (472, 36217), (478, 36163), (480, 36157), (481, 36151), (487, 36106),

Gene: Wheezy_60 Start: 48108, Stop: 44797, Start Num: 33
Candidate Starts for Wheezy_60:
(Start: 33 @48108 has 100 MA's), (41, 48036), (Start: 43 @48012 has 7 MA's), (47, 47967), (62, 47859), (64, 47850), (104, 47568), (105, 47562), (107, 47538), (118, 47430), (120, 47400), (151, 47193), (172, 47022), (177, 46980), (178, 46974), (184, 46902), (186, 46887), (201, 46749), (226, 46551), (232, 46497), (233, 46494), (240, 46434), (246, 46383), (258, 46314), (265, 46269), (294, 46029), (298, 45987), (299, 45984), (301, 45978), (305, 45960), (315, 45864), (321, 45810), (343, 45666), (346, 45657), (359, 45582), (375, 45507), (380, 45453), (390, 45411), (398, 45363), (409, 45282), (415, 45261), (432, 45171), (438, 45141), (442, 45117), (443, 45114), (472, 44931), (480, 44874), (490, 44808),

Gene: WhoseManz_60 Start: 45289, Stop: 42038, Start Num: 33
Candidate Starts for WhoseManz_60:
(4, 45517), (Start: 33 @45289 has 100 MA's), (42, 45208), (Start: 43 @45193 has 7 MA's), (47, 45148), (62, 45040), (64, 45031), (86, 44866), (105, 44743), (111, 44692), (115, 44665), (118, 44611), (120, 44581), (140, 44398), (151, 44374), (164, 44266), (174, 44188), (177, 44161), (184, 44083), (186, 44068), (201, 43930), (226, 43732), (227, 43726), (230, 43699), (237, 43639), (246, 43564), (249, 43531), (258, 43495), (269, 43438), (278, 43375), (294, 43210), (295, 43207), (298, 43168), (299, 43165), (301, 43159), (303, 43150), (305, 43141), (315, 43045), (318, 43027), (321, 42991), (345, 42841), (353, 42787), (380, 42691), (398, 42607), (400, 42598), (408, 42547), (423, 42457), (442, 42361), (443, 42358), (472, 42175), (490, 42052),

Gene: Wilkos_53 Start: 39157, Stop: 35936, Start Num: 27
Candidate Starts for Wilkos_53:
(27, 39157), (Start: 33 @39136 has 100 MA's), (36, 39094), (40, 39073), (Start: 43 @39040 has 7 MA's), (49, 38986), (53, 38953), (58, 38917), (59, 38908), (65, 38869), (68, 38836), (71, 38800), (78, 38758), (81, 38746), (87, 38692), (100, 38623), (111, 38521), (121, 38407), (136, 38251), (137, 38245), (138, 38236), (147, 38185), (152, 38170), (156, 38155), (172, 38029), (178, 37984), (180,

37948), (182, 37936), (184, 37912), (186, 37897), (187, 37894), (190, 37849), (195, 37801), (205, 37711), (207, 37696), (221, 37585), (236, 37471), (239, 37447), (242, 37420), (244, 37411), (249, 37348), (250, 37342), (258, 37312), (263, 37282), (273, 37237), (276, 37201), (292, 37072), (310, 36937), (322, 36820), (332, 36793), (333, 36781), (334, 36769), (335, 36766), (341, 36697), (348, 36658), (372, 36553), (394, 36496), (398, 36478), (408, 36442), (410, 36418), (413, 36406), (424, 36346), (431, 36307), (458, 36157), (462, 36130), (465, 36118), (468, 36097), (472, 36073), (478, 36019), (480, 36013), (481, 36007), (487, 35962),

Gene: Wojtek_72 Start: 51325, Stop: 55365, Start Num: 43
Candidate Starts for Wojtek_72:
(Start: 39 @51289 has 1 MA's), (Start: 43 @51325 has 7 MA's), (47, 51370), (53, 51412), (89, 51673), (102, 51748), (115, 51859), (117, 51904), (130, 52027), (147, 52174), (149, 52183), (153, 52216), (158, 52252), (162, 52294), (166, 52339), (172, 52381), (186, 52513), (187, 52516), (188, 52546), (199, 52636), (205, 52699), (216, 52789), (219, 52804), (221, 52825), (226, 52852), (246, 53020), (249, 53053), (252, 53071), (265, 53134), (266, 53137), (276, 53200), (282, 53233), (288, 53287), (291, 53323), (313, 53503), (316, 53530), (318, 53545), (321, 53581), (323, 53722), (324, 53764), (325, 53890), (326, 53917), (327, 53980), (328, 54151), (329, 54208), (330, 54214), (331, 54355), (334, 54433), (337, 54451), (346, 54547), (347, 54559), (349, 54571), (416, 54847), (435, 54958), (441, 54994), (445, 55006), (446, 55012), (447, 55015), (452, 55042), (457, 55087), (473, 55195), (477, 55234), (479, 55240), (483, 55264), (488, 55300),

Gene: Xenia2_80 Start: 51941, Stop: 55192, Start Num: 43
Candidate Starts for Xenia2_80:
(Start: 35 @51878 has 4 MA's), (42, 51926), (Start: 43 @51941 has 7 MA's), (44, 51950), (45, 51956), (55, 52049), (84, 52259), (89, 52289), (96, 52337), (108, 52424), (117, 52520), (133, 52685), (136, 52721), (147, 52790), (149, 52799), (162, 52910), (166, 52955), (172, 52997), (186, 53129), (187, 53132), (188, 53162), (205, 53315), (216, 53405), (219, 53420), (221, 53441), (246, 53636), (249, 53669), (252, 53687), (265, 53750), (266, 53753), (282, 53849), (288, 53903), (291, 53939), (306, 54053), (313, 54119), (318, 54161), (321, 54197), (334, 54251), (337, 54269), (346, 54365), (347, 54377), (349, 54389), (366, 54473), (416, 54668), (432, 54764), (435, 54779), (445, 54827), (446, 54833), (447, 54836), (452, 54863), (457, 54908), (477, 55055), (479, 55061), (483, 55085), (488, 55121),

Gene: Yara_46 Start: 37592, Stop: 34395, Start Num: 33
Candidate Starts for Yara_46:
(Start: 33 @37592 has 100 MA's), (36, 37550), (Start: 43 @37496 has 7 MA's), (47, 37451), (49, 37442), (51, 37424), (58, 37373), (59, 37364), (65, 37325), (68, 37292), (71, 37256), (87, 37148), (99, 37082), (100, 37079), (111, 36977), (117, 36905), (121, 36863), (126, 36800), (127, 36797), (138, 36692), (144, 36665), (147, 36641), (152, 36626), (156, 36611), (163, 36557), (169, 36515), (170, 36500), (172, 36485), (174, 36470), (184, 36368), (186, 36353), (187, 36350), (195, 36257), (198, 36239), (205, 36167), (216, 36077), (221, 36041), (232, 35960), (234, 35954), (236, 35927), (242, 35876), (249, 35804), (250, 35798), (256, 35777), (258, 35768), (261, 35753), (263, 35738), (272, 35696), (273, 35693), (276, 35657), (292, 35528), (310, 35393), (332, 35249), (333, 35237), (334, 35225), (348, 35114), (356, 35072), (372, 35009), (398, 34934), (410, 34874), (411, 34868), (413, 34862), (431, 34763), (444, 34703), (445, 34697), (462, 34586), (465, 34574), (468, 34553), (472, 34529), (480, 34469), (485, 34433), (487, 34418), (488, 34412),

Gene: Yikes_80 Start: 52791, Stop: 56132, Start Num: 33
Candidate Starts for Yikes_80:
(21, 52743), (Start: 33 @52791 has 100 MA's), (Start: 39 @52851 has 1 MA's), (Start: 43 @52887 has 7 MA's), (47, 52932), (53, 52974), (89, 53235), (104, 53337), (108, 53370), (117, 53466), (147, 53736), (149, 53745), (162, 53853), (166, 53898), (172, 53940), (186, 54072), (187, 54075), (188, 54105), (191, 54126), (199, 54195), (204, 54249), (216, 54348), (219, 54363), (225, 54405), (246, 54579),

(249, 54612), (252, 54630), (258, 54648), (265, 54693), (266, 54696), (282, 54792), (287, 54834), (288, 54846), (291, 54882), (313, 55062), (318, 55104), (321, 55140), (334, 55194), (337, 55212), (346, 55308), (347, 55320), (396, 55515), (413, 55599), (428, 55680), (432, 55704), (435, 55719), (441, 55755), (445, 55767), (446, 55773), (447, 55776), (452, 55803), (457, 55848), (473, 55956), (479, 56001), (483, 56025), (488, 56061),

Gene: Yndexa_60 Start: 47229, Stop: 43978, Start Num: 33
Candidate Starts for Yndexa_60:
(9, 47361), (12, 47331), (13, 47319), (Start: 33 @47229 has 100 MA's), (42, 47148), (Start: 43 @47133 has 7 MA's), (47, 47088), (62, 46980), (64, 46971), (86, 46806), (105, 46683), (111, 46632), (115, 46605), (118, 46551), (120, 46521), (151, 46314), (164, 46206), (174, 46128), (177, 46101), (184, 46023), (186, 46008), (201, 45870), (226, 45672), (227, 45666), (230, 45639), (246, 45504), (249, 45471), (258, 45435), (265, 45390), (269, 45378), (278, 45315), (294, 45150), (295, 45147), (298, 45108), (299, 45105), (301, 45099), (303, 45090), (305, 45081), (315, 44985), (318, 44967), (321, 44931), (345, 44781), (353, 44727), (380, 44631), (398, 44547), (400, 44538), (408, 44487), (423, 44397), (442, 44301), (443, 44298), (453, 44247), (472, 44115), (490, 43992),

Gene: Zany_76 Start: 52244, Stop: 55585, Start Num: 33
Candidate Starts for Zany_76:
(23, 52202), (Start: 33 @52244 has 100 MA's), (Start: 39 @52304 has 1 MA's), (Start: 43 @52340 has 7 MA's), (47, 52385), (53, 52427), (89, 52688), (104, 52790), (108, 52823), (117, 52919), (147, 53189), (149, 53198), (162, 53306), (166, 53351), (172, 53393), (186, 53525), (187, 53528), (188, 53558), (191, 53579), (199, 53648), (204, 53702), (216, 53801), (219, 53816), (225, 53858), (246, 54032), (249, 54065), (252, 54083), (258, 54101), (265, 54146), (266, 54149), (282, 54245), (287, 54287), (288, 54299), (291, 54335), (313, 54515), (318, 54557), (321, 54593), (334, 54647), (337, 54665), (346, 54761), (347, 54773), (394, 54962), (413, 55052), (432, 55157), (435, 55172), (441, 55208), (445, 55220), (446, 55226), (447, 55229), (452, 55256), (457, 55301), (473, 55409), (479, 55454), (483, 55478), (488, 55514),

Gene: Zion_46 Start: 42797, Stop: 39504, Start Num: 33
Candidate Starts for Zion_46:
(Start: 33 @42797 has 100 MA's), (38, 42740), (42, 42716), (Start: 43 @42701 has 7 MA's), (44, 42692), (64, 42545), (91, 42338), (97, 42263), (98, 42239), (104, 42185), (157, 41771), (167, 41669), (183, 41534), (184, 41516), (186, 41501), (195, 41405), (223, 41186), (224, 41183), (225, 41168), (229, 41138), (232, 41108), (246, 40991), (249, 40958), (255, 40931), (260, 40907), (283, 40760), (288, 40706), (289, 40685), (297, 40610), (299, 40592), (321, 40415), (332, 40385), (335, 40358), (337, 40343), (355, 40214), (376, 40181), (393, 40094), (413, 39980), (415, 39974), (417, 39962), (447, 39812), (448, 39809), (449, 39803), (452, 39785), (453, 39776), (454, 39758), (471, 39656), (473, 39632), (476, 39596), (477, 39590),