

1. Indulamin	109	133	147	189	200	220	252	268	271	290	301	304	384	427	510	536	566
2. Leopard_84 + 1																	
3. Aikoy	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
4. PHTOW	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
5. Para	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
6. Lizz	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
7. Rooney	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
8. Wilkos	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
9. Snake	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
10. Vinzio	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
11. Dryad	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
12. Sassy	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
13. Wena	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
14. Gred	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
15. GTE5	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
16. GRU	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
17. Turun	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
18. Dai	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
19. Flappe	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
20. Bonum	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
21. Outis	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
22. Comm	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
23. Kadum	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
24. Emian	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
25. MerCo	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
26. L'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
27. Am	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
28. Gugga	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
29. GTE8	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
30. Wheel	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
31. Tracker	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
32. Foxbor	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
33. Novum	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
34. NotB	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
35. Float	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
36. L'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
37. Enea	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
38. Sarsa	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
39. Pato	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
40. RedRat	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
41. W'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
42. Y'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
43. Pambel	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
44. IDy	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
45. Naline	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
46. H'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
47. Bire	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
48. S'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
49. F'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300
50. H'Alia	109	128	138	151	172	190	201	210	210	230	240	240	300	300	300	300	300

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 311214 Report

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

Pham number 311214 has 230 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_76
- Track 2 : Leopard_84, Onyinye_84
- Track 3 : Aikoy_85
- Track 4 : PHTown_51
- Track 5 : Yara_46
- Track 6 : Lizz_51
- Track 7 : Rooney_51
- Track 8 : Wilkos_53
- Track 9 : ShakeNBake_51
- Track 10 : Virizion_56, Gibson_51
- Track 11 : Dryad_56
- Track 12 : SassyC_56
- Track 13 : Wentworth_52
- Track 14 : Greenbelt_49
- Track 15 : GTE5_49
- Track 16 : GRU1_49
- Track 17 : Turuncu_63
- Track 18 : Dalilpop_64
- Track 19 : Flapper_64
- Track 20 : Bonum_63
- Track 21 : Outis_61, StarStruck_61
- Track 22 : Commandaria_61
- Track 23 : Kabluna_63
- Track 24 : Emianna_60, Jifall16_59, KidneyBean_60, Kurt_60, Phomeo_59
- Track 25 : MerCougar_61
- Track 26 : NosilaM_62
- Track 27 : Arti_59
- Track 28 : Buggaboo_61, SuperSulley_61
- Track 29 : GTE8_48
- Track 30 : Wheezy_60
- Track 31 : Tracker_60
- Track 32 : Foxboro_61
- Track 33 : NovumRegina_60, GrootJr_62
- Track 34 : NatB6_60
- Track 35 : Float294_60
- Track 36 : Lollipop1437_64
- Track 37 : Ennea_66

- Track 38 : Skysand_61
- Track 39 : Patio_62
- Track 40 : RedRaider_67
- Track 41 : WhoseManz_60, Marietta_61
- Track 42 : Yndexa_60, Sukkupi_60
- Track 43 : Pemberton_62
- Track 44 : IDyn_59
- Track 45 : NadineRae_59
- Track 46 : HubbaBubba_55
- Track 47 : BiPauneto_61
- Track 48 : Scuba_68
- Track 49 : Fury_67, Pleakley_67
- Track 50 : HomeFry_63
- Track 51 : Braxoaddie_59, Polyuyuki_59, Maselop_59, CoffeeBean_59
- Track 52 : Gagieri_58
- Track 53 : Apiary_59
- Track 54 : MacGully_67
- Track 55 : Prager_67, Visconti_68, SuperheroCarly_67, Delton_67, Nova_66, Penelope2018_67, Erk16_66, BigMama_65, Thoth_67, KandZ_65, Troll4_66, Giuseppe_68
- Track 56 : Adjutor_65
- Track 57 : Helpful_70, Mopey_68
- Track 58 : Gumball_66, SirHarley_69
- Track 59 : Butterscotch_65
- Track 60 : WaldoWhy_69, Chill_69
- Track 61 : PLOT_66
- Track 62 : Phalaborwa_70
- Track 63 : PBI1_63
- Track 64 : Hawkeye_75
- Track 65 : Beyoncage_66, BiteSize_66, Djokovic_66, Sienna_66, Terapin_67
- Track 66 : Madi_65
- Track 67 : Suzy_65
- Track 68 : LilyPad_66
- Track 69 : LittleFella_70
- Track 70 : RazorC_78, Avian_76
- Track 71 : GOATification_78, Fulcrum_78, BirthdayBoy_81
- Track 72 : LavAbarElk_78
- Track 73 : Alyssamiracle_81, Jamemuya19_76, Stormer_79, Astralis_78, Rumi_79
- Track 74 : GretelLyn_79, Mima20_77, Gibbin_81, Sadboi_79, MoiGyank_82, Yikes_80
- Track 75 : DoobyDoo_78
- Track 76 : Tillicus_72
- Track 77 : LuckyLeo_75, Apeppi_73
- Track 78 : DaviePasture_79
- Track 79 : Erutan_79
- Track 80 : Genamy16_81
- Track 81 : Ranch_80
- Track 82 : Rukungu_80
- Track 83 : Jalebi_78, Sampudon_80
- Track 84 : Patos_84, NorManre_84
- Track 85 : Zany_76
- Track 86 : Alephilan_80
- Track 87 : Pywacket_76

- Track 88 : Rota_76
- Track 89 : Xenia2_80
- Track 90 : Lambo_77
- Track 91 : Riduram_77
- Track 92 : ParvusTarda_77
- Track 93 : DumpTruck_80
- Track 94 : Charminar_77
- Track 95 : NovaSharks_80
- Track 96 : OtterstedtS21_79
- Track 97 : Lila22_79
- Track 98 : Kors_63, Sparcetus_63, RikSengupta_63
- Track 99 : Krampus_57, Artiphact_57, Pharpay_56, AnnaSerena_57, Gilda_57, Kate_57, NarutoRun_57, OhDear_57, Anakin_57, Rachella_57
- Track 100 : Karate_56
- Track 101 : JDawG_56, Aesir_56
- Track 102 : Snakehole_58, Hiddenleaf_58, Chivey_58
- Track 103 : JingleBells_57
- Track 104 : Bramble_63
- Track 105 : SilentWarrior_58
- Track 106 : CoolCookie_56, Cybele_57, Neptune_57, Tiggy93_56, Potty_56
- Track 107 : Crestdrop_57
- Track 108 : FountainFog_56
- Track 109 : Poultruss_56, FreddieHg_58, DannyDe_58
- Track 110 : Haunter_57
- Track 111 : MortySmith_55
- Track 112 : LordBart_63
- Track 113 : Hager_58
- Track 114 : Ajin_63
- Track 115 : Rie18_57
- Track 116 : Dauntless_56, Erudite_56
- Track 117 : Tedro_57
- Track 118 : PhunaPhoke_57
- Track 119 : OverHedge_56
- Track 120 : TinyMiny_63
- Track 121 : Tongui_57
- Track 122 : Annapurna_58
- Track 123 : Darwin_47
- Track 124 : PotatoChip_46, PeteyPab_45, Zion_46
- Track 125 : C3PO_43
- Track 126 : Kimchi1738_43
- Track 127 : Stickynote_45
- Track 128 : Cruella_43
- Track 129 : Oaker_77
- Track 130 : Damien_77
- Track 131 : Puissant_73
- Track 132 : Predator_76
- Track 133 : Megatron06_78
- Track 134 : Cborch11_78, Nish23_78
- Track 135 : Phreeze_76
- Track 136 : Beckerton_76
- Track 137 : Thumb_78
- Track 138 : BobtimousPrime_80
- Track 139 : Konstantine_80

- Track 140 : DrLupo_85
- Track 141 : Barnyard_80
- Track 142 : Nilo_76, Riparian_76, Weiss13_74
- Track 143 : Yelo_73
- Track 144 : Rope_74
- Track 145 : Zenon_76
- Track 146 : Send513_74
- Track 147 : Papyrus_74
- Track 148 : Candle_72
- Track 149 : MontyDev_76
- Track 150 : Madruga_89
- Track 151 : Patience_91
- Track 152 : Demikore_92
- Track 153 : Labelle_90
- Track 154 : SuperSonics_94
- Track 155 : Wollypog_59
- Track 156 : ChewyVIII_70

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

The start number called the most often in the published annotations is 36, it was called in 76 of the 209 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apiary_59, Arti_59, Barnyard_80, Beckerton_76, BiPauneto_61, BobtimousPrime_80, Bonum_63, Braxoaddie_59, Buggaboo_61, C3PO_43, Cborch11_78, CoffeeBean_59, Commandaria_61, Cruella_43, Dalilpop_64, Darwin_47, Dryad_56, Emianna_60, Ennea_66, Flapper_64, Float294_60, Foxboro_61, GTE5_49, GTE8_48, Gagieri_58, Gibson_51, Greenbelt_49, GrootJr_62, HomeFry_63, HubbaBubba_55, IDyn_59, Jifall16_59, Kabluna_63, KidneyBean_60, Kimchi1738_43, Konstantine_80, Kurt_60, Labelle_90, Lizz_51, Lollipop1437_64, Madruga_89, Marietta_61, Maselop_59, Megatron06_78, MerCougar_61, NadineRae_59, NatB6_60, Nish23_78, NosilaM_62, NovumRegina_60, Outis_61, PBI1_63, PHTowN_51, PLOT_66, Patience_91, Patio_62, Pemberton_62, PeteyPab_45, Phomeo_59, Phreeze_76, Polyuyuki_59, PotatoChip_46, Predator_76, RedRaider_67, Rooney_51, ShakeNBake_51, Skysand_61, StarStruck_61, Stickynote_45, Sukkupi_60, SuperSulley_61, Thumb_78, Tracker_60, Turuncu_63, Virizion_56, Wentworth_52, Wheezy_60, WhoseManz_60, Yara_46, Yndexa_60, 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, Giuseppe_68, Gumball_66, Hawkeye_75, Helpful_70, Indlulamithi_76, KandZ_65, Mopey_68, Nova_66, Oaker_77, Penelope2018_67, Phalaborwa_70, Pleakley_67, Prager_67, Puissant_73, SassyC_56, Scuba_68, SirHarley_69, SuperSonics_94, SuperheroCarly_67, Thoth_67, Troll4_66, Visconti_68, WaldoWhy_69, Wilkos_53,

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

- Aesir_56, Aikoy_85, Ajin_63, Alephilan_80, Alyssamiracle_81, Anakin_57, AnnaSerena_57, Annapurna_58, Apeppi_73, Artiphact_57, Astralis_78, Avian_76, Beyoncage_66, BirthdayBoy_81, BiteSize_66, Bramble_63, Candle_72, Charminar_77, ChewyVIII_70, Chivey_58, CoolCookie_56, Crestdrop_57, Cybele_57, DannyDe_58, Dauntless_56, DaviePasture_79, Djokovic_66, DoobyDoo_78, DumpTruck_80, Erudite_56, Erutan_79, FountainFog_56, FreddieHg_58, Fulcrum_78, GOATification_78, Genamy16_81, Gibbin_81, Gilda_57, GretelLyn_79, Hager_58, Haunter_57, Hiddenleaf_58, JDawG_56, Jalebi_78, Jamemuya19_76, JingleBells_57, Karate_56, Kate_57, Kors_63, Krampus_57, Lambo_77, LavAbarElk_78, Leopard_84, Lila22_79, LilyPad_66, LittleFella_70, LordBart_63, LuckyLeo_75, MacGully_67, Madi_65, Mima20_77, MoiGyank_82, MontyDev_76, MortySmith_55, NarutoRun_57, Neptune_57, Nilo_76, NorManre_84, NovaSharks_80, OhDear_57, Onyinye_84, OtterstedtS21_79, OverHedge_56, Papyrus_74, ParvusTarda_77, Patos_84, Pharpay_56, PhunaPhoke_57, Potty_56, Poultruss_56, Pywacket_76, Rachella_57, Ranch_80, RazorC_78, Riduram_77, Rie18_57, RikSengupta_63, Riparian_76, Rope_74, Rota_76, Rukungu_80, Rumi_79, Sadboi_79, Sampudon_80, Send513_74, Sienna_66, SilentWarrior_58, Snakehole_58, Sparcetus_63, Stormer_79, Suzy_65, Tedro_57, Terapin_67, Tiggy93_56, Tillicus_72, TinyMiny_63, Tongui_57, Weiss13_74, Wollypog_59, Xenia2_80, Yelo_73, Yikes_80, Zany_76, Zenon_76,

Summary by start number:

Start 14:

- Found in 24 of 230 (10.4%) of genes in pham
- Manual Annotations of this start: 21 of 209
- 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_67 (D1), Thoth_67 (D1), Troll4_66 (D1), Visconti_68 (D1), WaldoWhy_69 (D1),

Start 20:

- Found in 4 of 230 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 209
- 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 19 of 230 (8.3%) of genes in pham
- Manual Annotations of this start: 3 of 209
- Called 21.1% of time when present
- Phage (with cluster) where this start called: Demikore_92 (U), DrLupo_85 (H2), Oaker_77 (H1), Puissant_73 (H1),

Start 29:

- Found in 11 of 230 (4.8%) 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 30:

- Found in 23 of 230 (10.0%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Indlulamithi_76 (AC),

Start 33:

- Found in 3 of 230 (1.3%) of genes in pham
- Manual Annotations of this start: 3 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apeppi_73 (DV), LuckyLeo_75 (DV), Tillicus_72 (DV),

Start 35:

- Found in 30 of 230 (13.0%) of genes in pham
- Manual Annotations of this start: 25 of 209
- Called 96.7% of time when present
- Phage (with cluster) where this start called: Alyssamiracle_81 (DV), Astralis_78 (DV), Avian_76 (DV), BirthdayBoy_81 (DV), Charminar_77 (DV), DaviePasture_79 (DV), DumpTruck_80 (DV), Fulcrum_78 (DV), GOATification_78 (DV), Gibbin_81 (DV), Gretellyn_79 (DV), Jalebi_78 (DV), Jamemuya19_76 (DV), Lambo_77 (DV), LavAbarElk_78 (DV), Lila22_79 (DV), Mima20_77 (DV), MoiGyank_82 (DV), ParvusTarda_77 (DV), Pywacket_76 (DV), RazorC_78 (DV), Riduram_77 (DV), Rukungu_80 (DV), Rumi_79 (DV), Sadboi_79 (DV), Sampudon_80 (DV), Stormer_79 (DV), Yikes_80 (DV), Zany_76 (DV),

Start 36:

- Found in 116 of 230 (50.4%) of genes in pham
- Manual Annotations of this start: 76 of 209
- Called 69.8% of time when present
- Phage (with cluster) where this start called: Apiary_59 (CR6), Arti_59 (CR2), Barnyard_80 (H2), Beckerton_76 (H1), BiPauneto_61 (CR4), BobtimousPrime_80 (H1), Bonum_63 (CR2), Braxoaddie_59 (CR6), Buggaboo_61 (CR2), C3PO_43 (EN), Cborch11_78 (H1), CoffeeBean_59 (CR6), Commandaria_61 (CR2), Cruella_43 (EN), Dalilpop_64 (CR1), Darwin_47 (EN), Dryad_56 (BN), Emianna_60 (CR2), Ennea_66 (CR3), Flapper_64 (CR1), Float294_60 (CR3), Foxboro_61 (CR2), GTE5_49 (CR1), GTE8_48 (CR2), Gagieri_58 (CR6), Gibson_51 (BN), Greenbelt_49 (BN), GrootJr_62 (CR2), HomeFry_63 (CR5), HubbaBubba_55 (CR4), IDyn_59 (CR4), Jifall16_59 (CR2), Kabluna_63 (CR2), KidneyBean_60 (CR2), Kimchi1738_43 (EN), Konstantine_80 (H1), Kurt_60 (CR2), Labelle_90 (U), Lizz_51 (BN), Lollipop1437_64 (CR3), Madruga_89 (U), Marietta_61 (CR4), Maselop_59 (CR6), Megatron06_78 (H1), MerCougar_61 (CR2), NadineRae_59 (CR4), NatB6_60 (CR2), Nish23_78 (H1), NosilaM_62 (CR2), NovumRegina_60 (CR2), Outis_61 (CR2), PBI1_63 (D1), PHTowN_51 (BN), PLot_66 (D1), 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), RedRaider_67 (CR3), Rooney_51 (BN), ShakeNBake_51 (BN), Skysand_61 (CR3), StarStruck_61 (CR2), Stickynote_45 (EN), Sukkupi_60 (CR4), SuperSulley_61 (CR2), Thumb_78 (H1), Tracker_60 (CR2), Turuncu_63 (CR1), Virizion_56 (BN), Wentworth_52 (BN), Wheezy_60 (CR2), WhoseManz_60 (CR4), Yara_46 (BN), Yndexa_60 (CR4), Zion_46 (EN),

Start 38:

- Found in 6 of 230 (2.6%) of genes in pham
- Manual Annotations of this start: 4 of 209
- 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 42:

- Found in 39 of 230 (17.0%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 5.1% of time when present
- Phage (with cluster) where this start called: Alephilan_80 (DV), Rota_76 (DV),

Start 46:

- Found in 159 of 230 (69.1%) of genes in pham
- Manual Annotations of this start: 6 of 209
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Damien_77 (H1), DoobyDoo_78 (DV), GRU1_49 (CR1), Genamy16_81 (DV), NovaSharks_80 (DV), OtterstedtS21_79 (DV), SuperSonics_94 (U), Xenia2_80 (DV),

Start 155:

- Found in 37 of 230 (16.1%) of genes in pham
- Manual Annotations of this start: 33 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aesir_56 (EF), Anakin_57 (EF), AnnaSerena_57 (EF), Annapurna_58 (EF), Artiphact_57 (EF), Chivey_58 (EF), CoolCookie_56 (EF), Crestdrop_57 (EF), Cybele_57 (EF), DannyDe_58 (EF), Dauntless_56 (EF), Erudite_56 (EF), FountainFog_56 (EF), FreddieHg_58 (EF), Gilda_57 (EF), Haunter_57 (EF), Hiddenleaf_58 (EF), JDawG_56 (EF), JingleBells_57 (EF), Karate_56 (EF), Kate_57 (EF), Krampus_57 (EF), MortySmith_55 (EF), NarutoRun_57 (EF), Neptune_57 (EF), OhDear_57 (EF), OverHedge_56 (EF), Pharpay_56 (EF), PhunaPhoke_57 (EF), Potty_56 (EF), Poultruss_56 (EF), Rachella_57 (EF), SilentWarrior_58 (EF), Snakehole_58 (EF), Tedro_57 (EF), Tiggy93_56 (EF), Tongui_57 (EF),

Start 156:

- Found in 3 of 230 (1.3%) of genes in pham
- Manual Annotations of this start: 3 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aikoy_85 (AE), Leopard_84 (AE), Onyinye_84 (AE),

Start 158:

- Found in 56 of 230 (24.3%) of genes in pham
- Manual Annotations of this start: 9 of 209
- Called 16.1% of time when present
- Phage (with cluster) where this start called: Ajin_63 (EF), Bramble_63 (EF), Hager_58 (EF), Kors_63 (EF), LordBart_63 (EF), Rie18_57 (EF), RikSengupta_63 (EF), Sparcetus_63 (EF), TinyMiny_63 (EF),

Start 162:

- Found in 10 of 230 (4.3%) of genes in pham

- Manual Annotations of this start: 10 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle_72 (R), MontyDev_76 (R), Nilo_76 (R), Papyrus_74 (R), Riparian_76 (R), Rope_74 (R), Send513_74 (R), Weiss13_74 (R), Yelo_73 (R), Zenon_76 (R),

Start 168:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleFella_70 (DG2),

Start 173:

- Found in 8 of 230 (3.5%) of genes in pham
- Manual Annotations of this start: 8 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_66 (DG1), BiteSize_66 (DG1), Djokovic_66 (DG1), LilyPad_66 (DG1), Madi_65 (DG1), Sienna_66 (DG1), Suzy_65 (DG1), Terapin_67 (DG1),

Start 174:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacGully_67 (CR7),

Start 176:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_70 (singleton),

Start 183:

- Found in 14 of 230 (6.1%) of genes in pham
- Manual Annotations of this start: 1 of 209
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Wollypog_59 (singleton),

Summary by clusters:

There are 22 clusters represented in this pham: singleton, BN, DV, AC, EN, AE, EF, DG2, R, U, CR2, CR3, CR1, CR6, CR7, CR4, CR5, H2, H1, DG1, D2, D1,

Info for manual annotations of cluster AC:

- Start number 30 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AE:

- Start number 156 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster BN:

- Start number 36 was manually annotated 9 times for cluster BN.

Info for manual annotations of cluster CR1:

- Start number 36 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 36 was manually annotated 21 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 36 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 36 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 20 was manually annotated 2 times for cluster CR5.
- Start number 36 was manually annotated 1 time for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 36 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 174 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster D1:

- Start number 14 was manually annotated 20 times for cluster D1.
- Start number 36 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 DG1:

- Start number 173 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 168 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:

- Start number 33 was manually annotated 3 times for cluster DV.
- Start number 35 was manually annotated 25 times for cluster DV.
- Start number 38 was manually annotated 4 times for cluster DV.
- Start number 42 was manually annotated 1 time for cluster DV.
- Start number 46 was manually annotated 5 times for cluster DV.

Info for manual annotations of cluster EF:

- Start number 155 was manually annotated 33 times for cluster EF.
- Start number 158 was manually annotated 9 times for cluster EF.

Info for manual annotations of cluster EN:

- Start number 36 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster H1:

- Start number 26 was manually annotated 2 times for cluster H1.
- Start number 36 was manually annotated 8 times for cluster H1.
- Start number 46 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 36 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster R:

- Start number 162 was manually annotated 10 times for cluster R.

Info for manual annotations of cluster U:

- Start number 36 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 21 MA's), (Start: 30 @49786 has 1 MA's), (31, 49792), (Start: 36 @49801 has 76 MA's), (Start: 46 @49897 has 6 MA's), (68, 50053), (81, 50140), (82, 50143), (89, 50194), (125, 50458), (128, 50497), (139, 50569), (142, 50578), (153, 50653), (175, 50719), (179, 50725), (190, 50779), (193, 50797), (202, 50848), (203, 50851), (206, 50881), (218, 50965), (219, 50974), (223, 51001), (225, 51016), (245, 51193), (246, 51202), (261, 51307), (274, 51388), (283, 51448), (295, 51523), (298, 51556), (301, 51562), (309, 51583), (311, 51592), (318, 51637), (332, 51706), (335, 51721), (345, 51790), (352, 51853), (355, 51886), (356, 51889), (365, 51940), (375, 52015), (389, 52138), (392, 52156), (404, 52234), (405, 52237), (407, 52249), (416, 52294), (422, 52315), (425, 52327), (431, 52357), (436, 52378), (472, 52450), (490, 52507), (510, 52606), (529, 52672), (544, 52762), (548, 52795), (553, 52825), (559, 52870), (568, 52912), (573, 52942), (576, 52954), (579, 52969), (581, 52978),

Gene: Aesir_56 Start: 40899, Stop: 43199, Start Num: 155

Candidate Starts for Aesir_56:

(140, 40809), (Start: 155 @40899 has 33 MA's), (Start: 158 @40905 has 9 MA's), (186, 40980), (199, 41052), (203, 41073), (207, 41106), (208, 41109), (209, 41118), (212, 41139), (213, 41145), (222, 41214), (225, 41238), (228, 41277), (236, 41334), (245, 41415), (261, 41529), (262, 41541), (268, 41571), (276, 41616), (278, 41634), (290, 41712), (291, 41718), (293, 41727), (296, 41760), (298, 41790), (301, 41796), (309, 41817), (311, 41826), (317, 41856), (330, 41931), (332, 41940), (339, 41970), (342, 41985), (352, 42087), (363, 42159), (367, 42183), (378, 42267), (388, 42357), (389, 42369), (392, 42387), (402, 42471), (405, 42480), (409, 42513), (428, 42585), (497, 42765), (503, 42795), (519, 42858), (535, 42930), (555, 43053), (559, 43086), (570, 43131), (577, 43176), (579, 43182),

Gene: Aikoy_85 Start: 57850, Stop: 60138, Start Num: 156

Candidate Starts for Aikoy_85:

(Start: 156 @57850 has 3 MA's), (171, 57883), (172, 57889), (194, 57979), (199, 58012), (204, 58036), (206, 58063), (218, 58147), (219, 58156), (220, 58159), (225, 58198), (226, 58201), (230, 58252), (241, 58330), (242, 58342), (274, 58570), (277, 58591), (288, 58654), (291, 58666), (298, 58738), (301, 58744), (310, 58768), (311, 58774), (314, 58789), (317, 58804), (319, 58822), (325, 58846), (332, 58888), (341, 58927), (344, 58960), (365, 59122), (367, 59131), (384, 59266), (386, 59293), (392, 59338), (409, 59452), (425, 59512), (502, 59728), (526, 59815), (527, 59818), (536, 59860), (560, 60025), (565, 60055), (575, 60103), (577, 60115), (581, 60130),

Gene: Ajin_63 Start: 42544, Stop: 44799, Start Num: 158

Candidate Starts for Ajin_63:

(154, 42535), (Start: 158 @42544 has 9 MA's), (203, 42679), (207, 42712), (210, 42727), (223, 42829), (225, 42844), (236, 42940), (245, 43021), (246, 43030), (261, 43135), (276, 43222), (278, 43240), (285, 43291), (287, 43303), (290, 43318), (293, 43333), (296, 43366), (298, 43396), (301, 43402), (309, 43423), (311, 43432), (317, 43462), (331, 43543), (334, 43558), (339, 43576), (342, 43591), (351, 43690), (384, 43921), (389, 43975), (392, 43993), (394, 44005), (402, 44077), (405, 44086), (470, 44275), (472, 44278), (484, 44296), (489, 44329), (498, 44374), (512, 44437), (519, 44461), (526, 44491), (544, 44581), (555, 44653), (559, 44686), (570, 44731), (576, 44767), (577, 44776), (579, 44782),

Gene: Alephilan_80 Start: 52529, Stop: 55810, Start Num: 42

Candidate Starts for Alephilan_80:

(Start: 42 @52529 has 1 MA's), (Start: 46 @52565 has 6 MA's), (51, 52610), (57, 52652), (95, 52913), (111, 53015), (115, 53048), (125, 53144), (170, 53414), (172, 53423), (193, 53531), (201, 53576), (207, 53618), (225, 53750), (226, 53753), (227, 53783), (240, 53873), (245, 53927), (258, 54026), (261, 54041), (268, 54083), (295, 54257), (298, 54290), (306, 54308), (311, 54326), (318, 54371), (319, 54374), (339, 54470), (344, 54512), (345, 54524), (349, 54560), (374, 54740), (380, 54782), (384, 54818), (389, 54872), (392, 54890), (405, 54986), (407, 54998), (471, 55187), (490, 55277), (511, 55382), (515, 55397), (520, 55412), (525, 55433), (529, 55445), (530, 55451), (531, 55454), (536, 55481), (542, 55526), (557, 55634), (567, 55679), (572, 55703), (579, 55739),

Gene: Alyssamiracle_81 Start: 50715, Stop: 54056, Start Num: 35

Candidate Starts for Alyssamiracle_81:

(Start: 35 @50715 has 25 MA's), (Start: 42 @50775 has 1 MA's), (Start: 46 @50811 has 6 MA's), (51, 50856), (57, 50898), (95, 51159), (115, 51294), (125, 51390), (170, 51660), (172, 51669), (193, 51777), (201, 51822), (207, 51864), (217, 51942), (225, 51996), (226, 51999), (227, 52029), (240, 52119), (245, 52173), (258, 52272), (261, 52287), (268, 52329), (295, 52503), (298, 52536), (306, 52554), (311, 52572), (318, 52617), (319, 52620), (339, 52716), (344, 52758), (345, 52770), (349, 52806), (374, 52986), (380, 53028), (384, 53064), (388, 53106), (389, 53118), (392, 53136), (405, 53232), (407, 53244), (473, 53439), (490, 53523), (511, 53628), (515, 53643), (520, 53658), (525, 53679), (529, 53691), (530, 53697), (531, 53700), (536, 53727), (542, 53772), (557, 53880), (567, 53925), (572, 53949), (579, 53985),

Gene: Anakin_57 Start: 41234, Stop: 43537, Start Num: 155

Candidate Starts for Anakin_57:

(Start: 155 @41234 has 33 MA's), (Start: 158 @41240 has 9 MA's), (186, 41318), (199, 41390), (203, 41411), (207, 41444), (209, 41456), (210, 41459), (212, 41477), (222, 41552), (225, 41576), (228, 41615), (233, 41660), (236, 41672), (245, 41753), (261, 41867), (262, 41879), (276, 41954), (278, 41972), (290, 42050), (291, 42056), (293, 42065), (296, 42098), (298, 42128), (301, 42134), (309, 42155), (311, 42164), (317, 42194), (330, 42269), (332, 42278), (338, 42302), (339, 42308), (342, 42323), (344, 42350), (352, 42425), (363, 42497), (367, 42521), (378, 42605), (388, 42695), (389, 42707), (392, 42725), (401, 42803), (402, 42809), (405, 42818), (409, 42851), (428, 42923), (497, 43103), (503, 43133), (519, 43196), (535, 43268), (555, 43391), (559, 43424), (570, 43469), (577, 43514), (579, 43520),

Gene: AnnaSerena_57 Start: 41268, Stop: 43571, Start Num: 155

Candidate Starts for AnnaSerena_57:

(Start: 155 @41268 has 33 MA's), (Start: 158 @41274 has 9 MA's), (186, 41352), (199, 41424), (203, 41445), (207, 41478), (209, 41490), (210, 41493), (212, 41511), (222, 41586), (225, 41610), (228, 41649), (233, 41694), (236, 41706), (245, 41787), (261, 41901), (262, 41913), (276, 41988), (278, 42006), (290, 42084), (291, 42090), (293, 42099), (296, 42132), (298, 42162), (301, 42168), (309, 42189), (311, 42198), (317, 42228), (330, 42303), (332, 42312), (338, 42336), (339, 42342), (342, 42357), (344, 42384), (352, 42459), (363, 42531), (367, 42555), (378, 42639), (388, 42729), (389, 42741), (392, 42759), (401, 42837), (402, 42843), (405, 42852), (409, 42885), (428, 42957), (497,

43137), (503, 43167), (519, 43230), (535, 43302), (555, 43425), (559, 43458), (570, 43503), (577, 43548), (579, 43554),

Gene: Annapurna_58 Start: 40745, Stop: 43048, Start Num: 155

Candidate Starts for Annapurna_58:

(Start: 155 @40745 has 33 MA's), (Start: 158 @40751 has 9 MA's), (186, 40829), (199, 40901), (203, 40922), (207, 40955), (209, 40967), (210, 40970), (212, 40988), (213, 40994), (222, 41063), (225, 41087), (228, 41126), (233, 41171), (236, 41183), (245, 41264), (261, 41378), (262, 41390), (276, 41465), (278, 41483), (290, 41561), (291, 41567), (293, 41576), (296, 41609), (298, 41639), (301, 41645), (309, 41666), (311, 41675), (317, 41705), (330, 41780), (332, 41789), (338, 41813), (339, 41819), (342, 41834), (352, 41936), (363, 42008), (367, 42032), (378, 42116), (388, 42206), (389, 42218), (392, 42236), (401, 42314), (402, 42320), (405, 42329), (409, 42362), (428, 42434), (497, 42614), (503, 42644), (519, 42707), (535, 42779), (555, 42902), (559, 42935), (570, 42980), (577, 43025), (579, 43031),

Gene: Apeppi_73 Start: 51198, Stop: 54536, Start Num: 33

Candidate Starts for Apeppi_73:

(Start: 33 @51198 has 3 MA's), (Start: 42 @51258 has 1 MA's), (44, 51270), (Start: 46 @51294 has 6 MA's), (57, 51381), (115, 51777), (125, 51873), (141, 51996), (170, 52143), (172, 52152), (182, 52185), (187, 52221), (193, 52263), (201, 52308), (207, 52350), (225, 52482), (226, 52485), (227, 52515), (233, 52566), (238, 52587), (240, 52605), (246, 52668), (258, 52758), (261, 52773), (263, 52794), (295, 52989), (298, 53022), (306, 53040), (318, 53103), (319, 53106), (331, 53169), (339, 53202), (344, 53244), (345, 53256), (349, 53292), (365, 53406), (374, 53472), (378, 53499), (380, 53514), (384, 53550), (389, 53604), (392, 53622), (405, 53718), (408, 53742), (429, 53814), (493, 54018), (515, 54129), (520, 54144), (525, 54165), (529, 54177), (530, 54183), (531, 54186), (536, 54213), (542, 54258), (557, 54366), (565, 54405), (567, 54411), (572, 54435), (574, 54450), (576, 54456), (579, 54471),

Gene: Apiary_59 Start: 45761, Stop: 42345, Start Num: 36

Candidate Starts for Apiary_59:

(Start: 36 @45761 has 76 MA's), (45, 45680), (Start: 46 @45665 has 6 MA's), (59, 45557), (60, 45551), (68, 45503), (77, 45422), (86, 45380), (117, 45170), (119, 45155), (120, 45146), (124, 45122), (125, 45092), (128, 45053), (142, 44972), (147, 44930), (185, 44795), (202, 44681), (210, 44630), (212, 44612), (214, 44603), (223, 44525), (225, 44510), (228, 44471), (233, 44432), (245, 44339), (251, 44288), (253, 44282), (257, 44243), (276, 44138), (277, 44123), (278, 44120), (295, 44006), (296, 44003), (298, 43973), (306, 43955), (308, 43952), (309, 43946), (310, 43943), (316, 43910), (318, 43889), (345, 43721), (354, 43643), (357, 43604), (358, 43601), (360, 43595), (364, 43577), (377, 43481), (380, 43463), (384, 43427), (392, 43355), (405, 43262), (407, 43250), (421, 43187), (434, 43130), (455, 43001), (462, 42971), (477, 42911), (478, 42908), (483, 42866), (484, 42854), (500, 42764), (507, 42728), (523, 42683), (526, 42668), (535, 42626), (541, 42581), (550, 42527), (551, 42518), (553, 42506), (554, 42500), (556, 42482), (565, 42431), (566, 42428), (574, 42386),

Gene: Arti_59 Start: 47894, Stop: 44583, Start Num: 36

Candidate Starts for Arti_59:

(1, 48146), (7, 48059), (12, 48032), (Start: 36 @47894 has 76 MA's), (44, 47822), (Start: 46 @47798 has 6 MA's), (66, 47645), (68, 47636), (111, 47354), (112, 47348), (114, 47324), (126, 47216), (128, 47186), (177, 46979), (207, 46808), (214, 46766), (223, 46688), (225, 46673), (242, 46535), (269, 46337), (278, 46280), (288, 46220), (295, 46169), (311, 46100), (318, 46055), (353, 45815), (358, 45770), (360, 45764), (364, 45746), (377, 45650), (384, 45596), (402, 45452), (405, 45443), (423, 45368), (440, 45293), (448, 45239), (474, 45149), (486, 45068), (492, 45047), (526, 44903), (527, 44900), (556, 44717), (568, 44660), (581, 44594),

Gene: Artiphact_57 Start: 41258, Stop: 43561, Start Num: 155

Candidate Starts for Artiphact_57:

(Start: 155 @41258 has 33 MA's), (Start: 158 @41264 has 9 MA's), (186, 41342), (199, 41414), (203, 41435), (207, 41468), (209, 41480), (210, 41483), (212, 41501), (222, 41576), (225, 41600), (228, 41639), (233, 41684), (236, 41696), (245, 41777), (261, 41891), (262, 41903), (276, 41978), (278, 41996), (290, 42074), (291, 42080), (293, 42089), (296, 42122), (298, 42152), (301, 42158), (309, 42179), (311, 42188), (317, 42218), (330, 42293), (332, 42302), (338, 42326), (339, 42332), (342, 42347), (344, 42374), (352, 42449), (363, 42521), (367, 42545), (378, 42629), (388, 42719), (389, 42731), (392, 42749), (401, 42827), (402, 42833), (405, 42842), (409, 42875), (428, 42947), (497, 43127), (503, 43157), (519, 43220), (535, 43292), (555, 43415), (559, 43448), (570, 43493), (577, 43538), (579, 43544),

Gene: Astralis_78 Start: 50294, Stop: 53635, Start Num: 35

Candidate Starts for Astralis_78:

(Start: 35 @50294 has 25 MA's), (Start: 42 @50354 has 1 MA's), (Start: 46 @50390 has 6 MA's), (51, 50435), (57, 50477), (95, 50738), (115, 50873), (125, 50969), (170, 51239), (172, 51248), (193, 51356), (201, 51401), (207, 51443), (217, 51521), (225, 51575), (226, 51578), (227, 51608), (240, 51698), (245, 51752), (258, 51851), (261, 51866), (268, 51908), (295, 52082), (298, 52115), (306, 52133), (311, 52151), (318, 52196), (319, 52199), (339, 52295), (344, 52337), (345, 52349), (349, 52385), (374, 52565), (380, 52607), (384, 52643), (388, 52685), (389, 52697), (392, 52715), (405, 52811), (407, 52823), (473, 53018), (490, 53102), (511, 53207), (515, 53222), (520, 53237), (525, 53258), (529, 53270), (530, 53276), (531, 53279), (536, 53306), (542, 53351), (557, 53459), (567, 53504), (572, 53528), (579, 53564),

Gene: Avian_76 Start: 50443, Stop: 53784, Start Num: 35

Candidate Starts for Avian_76:

(Start: 35 @50443 has 25 MA's), (Start: 46 @50539 has 6 MA's), (51, 50584), (57, 50626), (95, 50887), (115, 51022), (125, 51118), (170, 51388), (172, 51397), (193, 51505), (201, 51550), (207, 51592), (217, 51670), (225, 51724), (226, 51727), (227, 51757), (240, 51847), (245, 51901), (258, 52000), (261, 52015), (268, 52057), (295, 52231), (298, 52264), (306, 52282), (311, 52300), (318, 52345), (319, 52348), (339, 52444), (344, 52486), (345, 52498), (349, 52534), (374, 52714), (380, 52756), (384, 52792), (388, 52834), (389, 52846), (392, 52864), (405, 52960), (407, 52972), (473, 53167), (490, 53251), (511, 53356), (515, 53371), (520, 53386), (525, 53407), (529, 53419), (530, 53425), (531, 53428), (536, 53455), (542, 53500), (557, 53608), (567, 53653), (572, 53677), (579, 53713),

Gene: Barnyard_80 Start: 54919, Stop: 58254, Start Num: 36

Candidate Starts for Barnyard_80:

(Start: 26 @54892 has 3 MA's), (Start: 36 @54919 has 76 MA's), (40, 54970), (41, 54976), (Start: 46 @55015 has 6 MA's), (49, 55048), (61, 55132), (68, 55183), (78, 55273), (100, 55393), (109, 55453), (142, 55711), (192, 55906), (210, 56008), (217, 56071), (220, 56086), (225, 56131), (226, 56134), (254, 56368), (268, 56476), (269, 56482), (291, 56638), (295, 56677), (297, 56686), (298, 56710), (301, 56725), (302, 56728), (305, 56746), (308, 56752), (316, 56803), (328, 56908), (332, 56938), (334, 56950), (337, 56959), (340, 56974), (347, 57043), (354, 57100), (358, 57142), (363, 57160), (392, 57391), (394, 57403), (433, 57604), (443, 57658), (473, 57715), (474, 57718), (495, 57808), (513, 57892), (530, 57952), (540, 58021), (556, 58120), (568, 58180), (580, 58240),

Gene: Beckerton_76 Start: 56006, Stop: 59302, Start Num: 36

Candidate Starts for Beckerton_76:

(Start: 26 @55979 has 3 MA's), (Start: 36 @56006 has 76 MA's), (44, 56078), (Start: 46 @56102 has 6 MA's), (47, 56111), (49, 56135), (68, 56270), (79, 56363), (84, 56381), (101, 56489), (125, 56681), (164, 56915), (184, 56972), (192, 57026), (201, 57071), (205, 57098), (210, 57128), (225, 57251), (228, 57290), (232, 57332), (243, 57410), (245, 57428), (247, 57446), (249, 57458), (259, 57533), (278, 57689), (291, 57773), (299, 57851), (304, 57872), (305, 57881), (308, 57887), (310, 57896), (323, 57968), (326, 57983), (332, 58022), (334, 58034), (347, 58127), (348, 58133), (354, 58181),

(358, 58223), (381, 58373), (383, 58385), (392, 58469), (411, 58610), (443, 58715), (487, 58814), (489, 58823), (504, 58901), (514, 58940), (518, 58955), (531, 59003), (545, 59099), (548, 59117), (552, 59144), (560, 59192), (566, 59222), (567, 59225), (571, 59240), (576, 59270), (577, 59279), (579, 59285), (580, 59288),

Gene: Beyoncage_66 Start: 47716, Stop: 50151, Start Num: 173

Candidate Starts for Beyoncage_66:

(Start: 173 @47716 has 8 MA's), (181, 47734), (208, 47914), (223, 48028), (225, 48043), (261, 48334), (276, 48421), (294, 48550), (298, 48589), (301, 48595), (309, 48616), (311, 48625), (345, 48823), (346, 48838), (347, 48844), (352, 48886), (361, 48949), (365, 48973), (372, 49030), (376, 49054), (381, 49093), (388, 49159), (389, 49171), (392, 49189), (404, 49282), (407, 49297), (413, 49333), (439, 49435), (492, 49627), (493, 49630), (506, 49705), (508, 49711), (521, 49768), (527, 49795), (530, 49807), (544, 49891), (547, 49921), (557, 49990), (562, 50014), (565, 50029), (576, 50080), (578, 50092), (579, 50095), (583, 50110), (585, 50146),

Gene: BiPauneto_61 Start: 47338, Stop: 44087, Start Num: 36

Candidate Starts for BiPauneto_61:

(11, 47470), (13, 47440), (15, 47428), (Start: 36 @47338 has 76 MA's), (45, 47257), (Start: 46 @47242 has 6 MA's), (51, 47197), (66, 47089), (68, 47080), (112, 46792), (118, 46741), (123, 46714), (126, 46660), (128, 46630), (177, 46423), (198, 46315), (210, 46237), (214, 46210), (223, 46132), (225, 46117), (242, 45979), (269, 45781), (270, 45775), (274, 45748), (295, 45613), (298, 45580), (311, 45544), (318, 45499), (322, 45487), (332, 45424), (353, 45259), (354, 45256), (357, 45217), (358, 45214), (360, 45208), (362, 45199), (364, 45190), (377, 45094), (380, 45076), (384, 45040), (404, 44890), (414, 44836), (448, 44740), (474, 44656), (476, 44647), (484, 44596), (500, 44506), (526, 44410), (527, 44407), (537, 44356), (556, 44224), (581, 44101),

Gene: BigMama_65 Start: 49772, Stop: 53074, Start Num: 14

Candidate Starts for BigMama_65:

(Start: 14 @49772 has 21 MA's), (Start: 30 @49859 has 1 MA's), (31, 49865), (Start: 36 @49874 has 76 MA's), (Start: 46 @49970 has 6 MA's), (68, 50126), (81, 50213), (82, 50216), (89, 50267), (125, 50531), (128, 50570), (139, 50642), (142, 50651), (153, 50726), (175, 50792), (179, 50798), (190, 50852), (193, 50870), (202, 50921), (203, 50924), (206, 50954), (218, 51038), (219, 51047), (223, 51074), (225, 51089), (245, 51266), (246, 51275), (261, 51380), (274, 51461), (283, 51521), (295, 51596), (298, 51629), (301, 51635), (309, 51656), (311, 51665), (318, 51710), (332, 51779), (335, 51794), (345, 51863), (352, 51926), (355, 51959), (356, 51962), (365, 52013), (375, 52088), (389, 52211), (392, 52229), (404, 52307), (405, 52310), (407, 52322), (416, 52367), (422, 52388), (425, 52400), (431, 52430), (436, 52451), (472, 52523), (490, 52580), (510, 52679), (529, 52745), (544, 52835), (547, 52865), (548, 52868), (553, 52898), (559, 52943), (568, 52985), (573, 53015), (576, 53027), (579, 53042), (581, 53051),

Gene: BirthdayBoy_81 Start: 52357, Stop: 55698, Start Num: 35

Candidate Starts for BirthdayBoy_81:

(22, 52309), (Start: 35 @52357 has 25 MA's), (Start: 42 @52417 has 1 MA's), (Start: 46 @52453 has 6 MA's), (51, 52498), (57, 52540), (95, 52801), (111, 52903), (115, 52936), (125, 53032), (170, 53302), (172, 53311), (193, 53419), (201, 53464), (207, 53506), (225, 53638), (226, 53641), (227, 53671), (240, 53761), (245, 53815), (258, 53914), (261, 53929), (268, 53971), (295, 54145), (298, 54178), (306, 54196), (311, 54214), (318, 54259), (319, 54262), (339, 54358), (344, 54400), (345, 54412), (349, 54448), (374, 54628), (380, 54670), (384, 54706), (389, 54760), (392, 54778), (405, 54874), (407, 54886), (473, 55081), (490, 55165), (511, 55270), (515, 55285), (525, 55321), (529, 55333), (530, 55339), (531, 55342), (536, 55369), (542, 55414), (557, 55522), (567, 55567), (572, 55591), (579, 55627),

Gene: BiteSize_66 Start: 47802, Stop: 50237, Start Num: 173

Candidate Starts for BiteSize_66:

(Start: 173 @47802 has 8 MA's), (181, 47820), (208, 48000), (223, 48114), (225, 48129), (261, 48420), (276, 48507), (294, 48636), (298, 48675), (301, 48681), (309, 48702), (311, 48711), (345, 48909), (346, 48924), (347, 48930), (352, 48972), (361, 49035), (365, 49059), (372, 49116), (376, 49140), (381, 49179), (388, 49245), (389, 49257), (392, 49275), (404, 49368), (407, 49383), (413, 49419), (439, 49521), (492, 49713), (493, 49716), (506, 49791), (508, 49797), (521, 49854), (527, 49881), (530, 49893), (544, 49977), (547, 50007), (557, 50076), (562, 50100), (565, 50115), (576, 50166), (578, 50178), (579, 50181), (583, 50196), (585, 50232),

Gene: BobtimousPrime_80 Start: 56307, Stop: 59603, Start Num: 36

Candidate Starts for BobtimousPrime_80:

(Start: 26 @56280 has 3 MA's), (Start: 36 @56307 has 76 MA's), (44, 56379), (Start: 46 @56403 has 6 MA's), (47, 56412), (49, 56436), (68, 56571), (79, 56664), (84, 56682), (90, 56730), (101, 56790), (125, 56982), (164, 57216), (184, 57273), (192, 57327), (201, 57372), (205, 57399), (210, 57429), (225, 57552), (228, 57591), (232, 57633), (243, 57711), (245, 57729), (247, 57747), (259, 57834), (278, 57990), (291, 58074), (299, 58152), (304, 58173), (305, 58182), (308, 58188), (310, 58197), (323, 58269), (326, 58284), (332, 58323), (334, 58335), (347, 58428), (348, 58434), (354, 58482), (358, 58524), (381, 58674), (383, 58686), (392, 58770), (411, 58911), (443, 59016), (487, 59115), (489, 59124), (504, 59202), (514, 59241), (518, 59256), (531, 59304), (545, 59400), (548, 59418), (552, 59445), (560, 59493), (566, 59523), (567, 59526), (571, 59541), (576, 59571), (577, 59580), (579, 59586), (580, 59589),

Gene: Bonum_63 Start: 48540, Stop: 45238, Start Num: 36

Candidate Starts for Bonum_63:

(Start: 36 @48540 has 76 MA's), (37, 48531), (Start: 46 @48444 has 6 MA's), (66, 48291), (68, 48282), (86, 48159), (111, 48000), (112, 47994), (114, 47970), (126, 47862), (142, 47751), (177, 47625), (207, 47454), (214, 47412), (223, 47334), (225, 47319), (242, 47181), (257, 47049), (269, 46983), (278, 46926), (288, 46866), (295, 46815), (311, 46746), (318, 46701), (353, 46458), (357, 46416), (358, 46413), (360, 46407), (364, 46389), (377, 46293), (384, 46239), (405, 46086), (417, 46026), (423, 46011), (448, 45882), (474, 45804), (484, 45744), (486, 45723), (487, 45720), (492, 45702), (507, 45618), (526, 45558), (533, 45531), (534, 45528), (543, 45462), (574, 45279), (581, 45249),

Gene: Bramble_63 Start: 42556, Stop: 44811, Start Num: 158

Candidate Starts for Bramble_63:

(154, 42547), (Start: 158 @42556 has 9 MA's), (203, 42691), (207, 42724), (210, 42739), (223, 42841), (225, 42856), (236, 42952), (245, 43033), (246, 43042), (260, 43141), (261, 43147), (276, 43234), (278, 43252), (282, 43282), (285, 43303), (287, 43315), (290, 43330), (293, 43345), (296, 43378), (298, 43408), (301, 43414), (309, 43435), (311, 43444), (317, 43474), (331, 43555), (334, 43570), (339, 43588), (342, 43603), (351, 43702), (384, 43933), (385, 43936), (389, 43987), (392, 44005), (394, 44017), (398, 44059), (402, 44089), (405, 44098), (425, 44188), (472, 44290), (489, 44341), (498, 44386), (512, 44449), (519, 44473), (526, 44503), (528, 44509), (550, 44632), (559, 44698), (570, 44743), (577, 44788), (579, 44794),

Gene: Braxoaddie_59 Start: 45750, Stop: 42334, Start Num: 36

Candidate Starts for Braxoaddie_59:

(Start: 36 @45750 has 76 MA's), (45, 45669), (Start: 46 @45654 has 6 MA's), (59, 45546), (60, 45540), (68, 45492), (77, 45411), (86, 45369), (117, 45159), (119, 45144), (120, 45135), (124, 45111), (125, 45081), (128, 45042), (142, 44961), (147, 44919), (185, 44784), (202, 44670), (210, 44619), (212, 44601), (214, 44592), (223, 44514), (225, 44499), (228, 44460), (233, 44421), (245, 44328), (251, 44277), (253, 44271), (257, 44232), (276, 44127), (277, 44112), (278, 44109), (295, 43995), (296, 43992), (298, 43962), (306, 43944), (308, 43941), (309, 43935), (310, 43932), (316, 43899), (318, 43878), (345, 43710), (354, 43632), (357, 43593), (358, 43590), (360, 43584), (364, 43566), (377, 43470), (380, 43452), (384, 43416), (392, 43344), (405, 43251), (407, 43239), (421, 43176), (434,

43119), (455, 42990), (462, 42960), (477, 42900), (478, 42897), (484, 42843), (500, 42753), (507, 42717), (523, 42672), (526, 42657), (535, 42615), (541, 42570), (550, 42516), (551, 42507), (553, 42495), (554, 42489), (556, 42471), (565, 42420), (566, 42417), (574, 42375),

Gene: Buggaboo_61 Start: 49019, Stop: 45717, Start Num: 36

Candidate Starts for Buggaboo_61:

(17, 49094), (Start: 36 @49019 has 76 MA's), (Start: 46 @48923 has 6 MA's), (66, 48770), (68, 48761), (86, 48638), (111, 48479), (112, 48473), (114, 48449), (126, 48341), (142, 48230), (177, 48104), (207, 47933), (214, 47891), (223, 47813), (225, 47798), (242, 47660), (257, 47528), (269, 47462), (278, 47405), (288, 47345), (295, 47294), (301, 47255), (311, 47225), (318, 47180), (353, 46937), (357, 46895), (358, 46892), (360, 46886), (364, 46868), (377, 46772), (384, 46718), (405, 46565), (417, 46505), (423, 46490), (448, 46361), (474, 46283), (484, 46223), (486, 46202), (487, 46199), (492, 46181), (507, 46097), (526, 46037), (533, 46010), (574, 45758), (581, 45728),

Gene: Butterscotch_65 Start: 49750, Stop: 53052, Start Num: 14

Candidate Starts for Butterscotch_65:

(Start: 14 @49750 has 21 MA's), (Start: 30 @49837 has 1 MA's), (31, 49843), (Start: 36 @49852 has 76 MA's), (Start: 46 @49948 has 6 MA's), (68, 50104), (81, 50191), (82, 50194), (89, 50245), (125, 50509), (128, 50548), (139, 50620), (142, 50629), (153, 50704), (175, 50770), (179, 50776), (190, 50830), (193, 50848), (202, 50899), (203, 50902), (206, 50932), (218, 51016), (219, 51025), (223, 51052), (225, 51067), (245, 51244), (246, 51253), (261, 51358), (274, 51439), (283, 51499), (295, 51574), (298, 51607), (301, 51613), (309, 51634), (311, 51643), (318, 51688), (332, 51757), (335, 51772), (345, 51841), (352, 51904), (355, 51937), (356, 51940), (365, 51991), (375, 52066), (389, 52189), (392, 52207), (404, 52285), (405, 52288), (407, 52300), (416, 52345), (422, 52366), (425, 52378), (431, 52408), (436, 52429), (472, 52501), (490, 52558), (510, 52657), (529, 52723), (544, 52813), (547, 52843), (548, 52846), (559, 52921), (568, 52963), (573, 52993), (576, 53005), (579, 53020), (581, 53029),

Gene: C3PO_43 Start: 41952, Stop: 38659, Start Num: 36

Candidate Starts for C3PO_43:

(Start: 36 @41952 has 76 MA's), (41, 41895), (45, 41871), (Start: 46 @41856 has 6 MA's), (47, 41847), (68, 41700), (102, 41418), (111, 41340), (119, 41274), (151, 41031), (188, 40926), (202, 40824), (209, 40776), (223, 40671), (225, 40656), (236, 40560), (264, 40341), (265, 40338), (268, 40323), (273, 40293), (277, 40263), (295, 40146), (298, 40113), (309, 40086), (313, 40062), (339, 39915), (340, 39909), (344, 39873), (345, 39861), (347, 39840), (356, 39765), (358, 39747), (384, 39570), (387, 39540), (390, 39513), (392, 39498), (415, 39369), (442, 39336), (464, 39249), (490, 39135), (492, 39129), (494, 39117), (531, 38967), (532, 38964), (533, 38958), (536, 38940), (537, 38931), (538, 38913), (555, 38811), (557, 38787), (564, 38751), (565, 38745),

Gene: Candle_72 Start: 55921, Stop: 58233, Start Num: 162

Candidate Starts for Candle_72:

(Start: 162 @55921 has 10 MA's), (193, 56017), (200, 56056), (207, 56107), (208, 56110), (209, 56119), (210, 56122), (216, 56152), (220, 56200), (225, 56236), (253, 56470), (256, 56503), (257, 56509), (268, 56569), (278, 56647), (280, 56665), (307, 56830), (311, 56848), (325, 56920), (326, 56923), (329, 56947), (332, 56962), (339, 56992), (376, 57265), (382, 57307), (383, 57313), (384, 57325), (388, 57367), (392, 57397), (394, 57409), (400, 57469), (406, 57493), (420, 57562), (430, 57598), (488, 57721), (489, 57724), (496, 57760), (522, 57859), (529, 57886), (530, 57892), (536, 57922), (554, 58051), (555, 58057), (564, 58114), (568, 58129), (571, 58141), (573, 58159),

Gene: Cborch11_78 Start: 55192, Stop: 58488, Start Num: 36

Candidate Starts for Cborch11_78:

(Start: 26 @55162 has 3 MA's), (31, 55183), (Start: 36 @55192 has 76 MA's), (44, 55264), (Start: 46 @55288 has 6 MA's), (49, 55321), (68, 55456), (78, 55546), (79, 55549), (84, 55567), (101, 55675),

(125, 55867), (164, 56101), (184, 56158), (201, 56257), (205, 56284), (209, 56311), (210, 56314), (225, 56437), (228, 56476), (232, 56518), (243, 56596), (245, 56614), (247, 56632), (249, 56644), (259, 56719), (278, 56875), (291, 56959), (299, 57037), (304, 57058), (305, 57067), (308, 57073), (310, 57082), (323, 57154), (326, 57169), (332, 57208), (334, 57220), (347, 57313), (348, 57319), (354, 57367), (358, 57409), (381, 57559), (383, 57571), (392, 57655), (411, 57796), (443, 57901), (487, 58000), (489, 58009), (504, 58087), (514, 58126), (518, 58141), (531, 58189), (545, 58285), (548, 58303), (552, 58330), (560, 58378), (566, 58408), (567, 58411), (571, 58426), (576, 58456), (577, 58465), (579, 58471), (580, 58474),

Gene: Charminar_77 Start: 49951, Stop: 53292, Start Num: 35

Candidate Starts for Charminar_77:

(Start: 35 @49951 has 25 MA's), (Start: 42 @50011 has 1 MA's), (Start: 46 @50047 has 6 MA's), (51, 50092), (57, 50134), (95, 50395), (115, 50530), (125, 50626), (170, 50896), (172, 50905), (193, 51013), (201, 51058), (207, 51100), (217, 51178), (225, 51232), (226, 51235), (227, 51265), (240, 51355), (245, 51409), (258, 51508), (261, 51523), (268, 51565), (295, 51739), (298, 51772), (306, 51790), (311, 51808), (318, 51853), (319, 51856), (339, 51952), (344, 51994), (345, 52006), (349, 52042), (374, 52222), (380, 52264), (384, 52300), (389, 52354), (390, 52357), (392, 52372), (405, 52468), (407, 52480), (473, 52675), (490, 52759), (511, 52864), (515, 52879), (520, 52894), (525, 52915), (529, 52927), (530, 52933), (531, 52936), (536, 52963), (542, 53008), (557, 53116), (567, 53161), (572, 53185), (579, 53221),

Gene: ChewyVIII_70 Start: 52283, Stop: 49815, Start Num: 176

Candidate Starts for ChewyVIII_70:

(Start: 176 @52283 has 1 MA's), (200, 52151), (207, 52103), (223, 51977), (225, 51962), (231, 51902), (237, 51863), (245, 51785), (251, 51734), (271, 51611), (289, 51497), (298, 51419), (311, 51380), (314, 51365), (336, 51233), (345, 51152), (358, 51035), (363, 51017), (378, 50909), (379, 50903), (380, 50894), (384, 50858), (387, 50828), (388, 50816), (391, 50789), (392, 50786), (405, 50693), (407, 50681), (409, 50663), (431, 50576), (441, 50534), (451, 50477), (456, 50462), (466, 50408), (479, 50366), (480, 50354), (501, 50234), (502, 50231), (517, 50168), (577, 49844),

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

Candidate Starts for Chill_69:

(Start: 14 @49783 has 21 MA's), (Start: 30 @49870 has 1 MA's), (31, 49876), (Start: 36 @49885 has 76 MA's), (Start: 46 @49981 has 6 MA's), (68, 50137), (81, 50224), (82, 50227), (89, 50278), (125, 50542), (128, 50581), (139, 50653), (142, 50662), (153, 50737), (175, 50803), (179, 50809), (190, 50863), (193, 50881), (202, 50932), (203, 50935), (206, 50965), (218, 51049), (223, 51085), (225, 51100), (245, 51277), (261, 51391), (274, 51472), (295, 51607), (298, 51640), (301, 51646), (309, 51667), (311, 51676), (318, 51721), (332, 51790), (335, 51805), (340, 51826), (345, 51874), (352, 51937), (355, 51970), (356, 51973), (357, 51988), (365, 52024), (375, 52099), (389, 52222), (392, 52240), (404, 52318), (405, 52321), (407, 52333), (422, 52399), (425, 52411), (431, 52441), (436, 52462), (472, 52534), (490, 52591), (510, 52690), (529, 52756), (544, 52846), (547, 52876), (548, 52879), (553, 52909), (559, 52954), (568, 52996), (573, 53026), (576, 53038), (579, 53053), (581, 53062),

Gene: Chivey_58 Start: 40699, Stop: 43002, Start Num: 155

Candidate Starts for Chivey_58:

(Start: 155 @40699 has 33 MA's), (Start: 158 @40705 has 9 MA's), (186, 40783), (199, 40855), (203, 40876), (207, 40909), (209, 40921), (210, 40924), (212, 40942), (213, 40948), (222, 41017), (225, 41041), (228, 41080), (233, 41125), (236, 41137), (245, 41218), (261, 41332), (262, 41344), (276, 41419), (278, 41437), (290, 41515), (291, 41521), (293, 41530), (296, 41563), (298, 41593), (301, 41599), (309, 41620), (311, 41629), (317, 41659), (330, 41734), (332, 41743), (334, 41755), (339, 41773), (342, 41788), (352, 41890), (363, 41962), (367, 41986), (378, 42070), (388, 42160), (389, 42172), (392, 42190), (401, 42268), (402, 42274), (405, 42283), (409, 42316), (428, 42388), (497,

42568), (503, 42598), (519, 42661), (535, 42733), (555, 42856), (559, 42889), (570, 42934), (577, 42979), (579, 42985),

Gene: CoffeeBean_59 Start: 45708, Stop: 42292, Start Num: 36

Candidate Starts for CoffeeBean_59:

(Start: 36 @45708 has 76 MA's), (45, 45627), (Start: 46 @45612 has 6 MA's), (59, 45504), (60, 45498), (68, 45450), (77, 45369), (86, 45327), (117, 45117), (119, 45102), (120, 45093), (124, 45069), (125, 45039), (128, 45000), (142, 44919), (147, 44877), (185, 44742), (202, 44628), (210, 44577), (212, 44559), (214, 44550), (223, 44472), (225, 44457), (228, 44418), (233, 44379), (245, 44286), (251, 44235), (253, 44229), (257, 44190), (276, 44085), (277, 44070), (278, 44067), (295, 43953), (296, 43950), (298, 43920), (306, 43902), (308, 43899), (309, 43893), (310, 43890), (316, 43857), (318, 43836), (345, 43668), (354, 43590), (357, 43551), (358, 43548), (360, 43542), (364, 43524), (377, 43428), (380, 43410), (384, 43374), (392, 43302), (405, 43209), (407, 43197), (421, 43134), (434, 43077), (455, 42948), (462, 42918), (477, 42858), (478, 42855), (484, 42801), (500, 42711), (507, 42675), (523, 42630), (526, 42615), (535, 42573), (541, 42528), (550, 42474), (551, 42465), (553, 42453), (554, 42447), (556, 42429), (565, 42378), (566, 42375), (574, 42333),

Gene: Commandaria_61 Start: 49218, Stop: 45910, Start Num: 36

Candidate Starts for Commandaria_61:

(Start: 36 @49218 has 76 MA's), (44, 49146), (45, 49137), (Start: 46 @49122 has 6 MA's), (51, 49077), (66, 48969), (68, 48960), (86, 48837), (111, 48678), (112, 48672), (114, 48648), (124, 48579), (126, 48540), (142, 48429), (177, 48303), (207, 48132), (212, 48099), (214, 48090), (223, 48012), (225, 47997), (233, 47919), (242, 47859), (244, 47835), (245, 47826), (269, 47661), (295, 47493), (298, 47460), (301, 47454), (306, 47442), (311, 47424), (318, 47379), (353, 47139), (358, 47094), (360, 47088), (364, 47070), (377, 46974), (380, 46956), (384, 46920), (423, 46692), (426, 46680), (437, 46635), (448, 46560), (474, 46476), (492, 46374), (500, 46326), (526, 46230), (527, 46227), (533, 46203), (553, 46068), (555, 46056), (568, 45987), (574, 45951),

Gene: CoolCookie_56 Start: 41279, Stop: 43582, Start Num: 155

Candidate Starts for CoolCookie_56:

(Start: 155 @41279 has 33 MA's), (Start: 158 @41285 has 9 MA's), (186, 41363), (199, 41435), (203, 41456), (207, 41489), (209, 41501), (210, 41504), (212, 41522), (222, 41597), (225, 41621), (228, 41660), (233, 41705), (236, 41717), (245, 41798), (261, 41912), (262, 41924), (276, 41999), (278, 42017), (290, 42095), (291, 42101), (293, 42110), (296, 42143), (298, 42173), (301, 42179), (309, 42200), (311, 42209), (317, 42239), (330, 42314), (332, 42323), (338, 42347), (339, 42353), (340, 42359), (342, 42368), (352, 42470), (363, 42542), (367, 42566), (378, 42650), (388, 42740), (389, 42752), (392, 42770), (401, 42848), (402, 42854), (405, 42863), (409, 42896), (428, 42968), (497, 43148), (503, 43178), (519, 43241), (535, 43313), (555, 43436), (559, 43469), (570, 43514), (577, 43559), (579, 43565),

Gene: Crestdrop_57 Start: 40973, Stop: 43273, Start Num: 155

Candidate Starts for Crestdrop_57:

(Start: 155 @40973 has 33 MA's), (Start: 158 @40979 has 9 MA's), (186, 41054), (199, 41126), (203, 41147), (207, 41180), (209, 41192), (212, 41213), (213, 41219), (222, 41288), (225, 41312), (228, 41351), (236, 41408), (245, 41489), (261, 41603), (262, 41615), (276, 41690), (278, 41708), (290, 41786), (291, 41792), (293, 41801), (296, 41834), (298, 41864), (301, 41870), (309, 41891), (311, 41900), (317, 41930), (330, 42005), (332, 42014), (338, 42038), (339, 42044), (342, 42059), (352, 42161), (363, 42233), (367, 42257), (378, 42341), (388, 42431), (389, 42443), (392, 42461), (401, 42539), (402, 42545), (405, 42554), (409, 42587), (428, 42659), (497, 42839), (503, 42869), (519, 42932), (535, 43004), (555, 43127), (559, 43160), (570, 43205), (577, 43250), (579, 43256),

Gene: Cruella_43 Start: 41952, Stop: 38659, Start Num: 36

Candidate Starts for Cruella_43:

(Start: 36 @41952 has 76 MA's), (41, 41895), (45, 41871), (Start: 46 @41856 has 6 MA's), (47, 41847), (68, 41700), (102, 41418), (111, 41340), (119, 41274), (151, 41031), (188, 40926), (202, 40824), (209, 40776), (223, 40671), (225, 40656), (236, 40560), (264, 40341), (265, 40338), (268, 40323), (273, 40293), (277, 40263), (295, 40146), (298, 40113), (309, 40086), (313, 40062), (339, 39915), (340, 39909), (344, 39873), (345, 39861), (347, 39840), (356, 39765), (358, 39747), (384, 39570), (387, 39540), (390, 39513), (392, 39498), (415, 39369), (442, 39336), (464, 39249), (490, 39135), (492, 39129), (494, 39117), (531, 38967), (532, 38964), (533, 38958), (536, 38940), (537, 38931), (555, 38811), (557, 38787), (564, 38751), (565, 38745),

Gene: Cybele_57 Start: 41252, Stop: 43555, Start Num: 155

Candidate Starts for Cybele_57:

(Start: 155 @41252 has 33 MA's), (Start: 158 @41258 has 9 MA's), (186, 41336), (199, 41408), (203, 41429), (207, 41462), (209, 41474), (210, 41477), (212, 41495), (222, 41570), (225, 41594), (228, 41633), (233, 41678), (236, 41690), (245, 41771), (261, 41885), (262, 41897), (276, 41972), (278, 41990), (290, 42068), (291, 42074), (293, 42083), (296, 42116), (298, 42146), (301, 42152), (309, 42173), (311, 42182), (317, 42212), (330, 42287), (332, 42296), (338, 42320), (339, 42326), (340, 42332), (342, 42341), (352, 42443), (363, 42515), (367, 42539), (378, 42623), (388, 42713), (389, 42725), (392, 42743), (401, 42821), (402, 42827), (405, 42836), (409, 42869), (428, 42941), (497, 43121), (503, 43151), (519, 43214), (535, 43286), (555, 43409), (559, 43442), (570, 43487), (577, 43532), (579, 43538),

Gene: Dalilpop_64 Start: 50147, Stop: 46866, Start Num: 36

Candidate Starts for Dalilpop_64:

(6, 50339), (32, 50153), (Start: 36 @50147 has 76 MA's), (45, 50066), (Start: 46 @50051 has 6 MA's), (51, 50006), (66, 49895), (68, 49886), (75, 49820), (86, 49763), (107, 49637), (112, 49598), (114, 49574), (118, 49547), (120, 49529), (123, 49520), (126, 49466), (161, 49253), (177, 49229), (223, 48935), (225, 48920), (264, 48602), (269, 48578), (278, 48521), (295, 48410), (296, 48407), (311, 48341), (314, 48326), (348, 48107), (353, 48059), (357, 48017), (358, 48014), (360, 48008), (364, 47990), (377, 47894), (380, 47876), (384, 47840), (405, 47675), (409, 47645), (417, 47615), (447, 47528), (448, 47522), (474, 47435), (484, 47375), (492, 47333), (526, 47189), (527, 47186), (533, 47162), (568, 46946), (574, 46910), (581, 46880),

Gene: Damien_77 Start: 55598, Stop: 58798, Start Num: 46

Candidate Starts for Damien_77:

(Start: 26 @55472 has 3 MA's), (31, 55493), (Start: 36 @55502 has 76 MA's), (44, 55574), (Start: 46 @55598 has 6 MA's), (49, 55631), (68, 55766), (78, 55856), (79, 55859), (84, 55877), (101, 55985), (125, 56177), (164, 56411), (184, 56468), (201, 56567), (205, 56594), (209, 56621), (210, 56624), (220, 56702), (225, 56747), (228, 56786), (232, 56828), (243, 56906), (245, 56924), (247, 56942), (249, 56954), (259, 57029), (278, 57185), (291, 57269), (299, 57347), (304, 57368), (305, 57377), (308, 57383), (310, 57392), (323, 57464), (326, 57479), (332, 57518), (334, 57530), (347, 57623), (348, 57629), (354, 57677), (358, 57719), (381, 57869), (383, 57881), (392, 57965), (411, 58106), (443, 58211), (487, 58310), (489, 58319), (504, 58397), (514, 58436), (518, 58451), (531, 58499), (545, 58595), (548, 58613), (552, 58640), (560, 58688), (566, 58718), (567, 58721), (571, 58736), (576, 58766), (577, 58775), (579, 58781), (580, 58784),

Gene: DannyDe_58 Start: 40700, Stop: 43003, Start Num: 155

Candidate Starts for DannyDe_58:

(Start: 155 @40700 has 33 MA's), (Start: 158 @40706 has 9 MA's), (186, 40784), (199, 40856), (203, 40877), (207, 40910), (209, 40922), (210, 40925), (212, 40943), (213, 40949), (222, 41018), (225, 41042), (228, 41081), (233, 41126), (236, 41138), (245, 41219), (261, 41333), (262, 41345), (276, 41420), (278, 41438), (290, 41516), (291, 41522), (293, 41531), (296, 41564), (298, 41594), (301, 41600), (309, 41621), (311, 41630), (317, 41660), (330, 41735), (332, 41744), (338, 41768), (339, 41774), (340, 41780), (342, 41789), (352, 41891), (363, 41963), (367, 41987), (378, 42071), (388,

42161), (389, 42173), (392, 42191), (401, 42269), (402, 42275), (405, 42284), (409, 42317), (428, 42389), (497, 42569), (503, 42599), (519, 42662), (535, 42734), (555, 42857), (559, 42890), (570, 42935), (577, 42980), (579, 42986),

Gene: Darwin_47 Start: 41830, Stop: 38537, Start Num: 36

Candidate Starts for Darwin_47:

(Start: 36 @41830 has 76 MA's), (41, 41773), (45, 41749), (Start: 46 @41734 has 6 MA's), (47, 41725), (68, 41578), (84, 41458), (102, 41296), (111, 41218), (151, 40909), (188, 40804), (202, 40702), (209, 40654), (225, 40534), (236, 40438), (264, 40219), (265, 40216), (268, 40201), (273, 40171), (277, 40141), (295, 40024), (298, 39991), (309, 39964), (313, 39940), (332, 39835), (339, 39793), (345, 39739), (347, 39718), (356, 39643), (358, 39625), (379, 39493), (384, 39448), (387, 39418), (390, 39391), (392, 39376), (415, 39247), (442, 39214), (464, 39127), (475, 39100), (490, 39013), (492, 39007), (494, 38995), (531, 38845), (532, 38842), (533, 38836), (536, 38818), (537, 38809), (538, 38791), (555, 38689), (557, 38665), (564, 38629), (565, 38623), (574, 38578),

Gene: Dauntless_56 Start: 40834, Stop: 43134, Start Num: 155

Candidate Starts for Dauntless_56:

(Start: 155 @40834 has 33 MA's), (Start: 158 @40840 has 9 MA's), (186, 40915), (199, 40987), (203, 41008), (207, 41041), (209, 41053), (210, 41056), (212, 41074), (213, 41080), (222, 41149), (225, 41173), (228, 41212), (236, 41269), (245, 41350), (261, 41464), (262, 41476), (276, 41551), (278, 41569), (290, 41647), (291, 41653), (293, 41662), (296, 41695), (298, 41725), (301, 41731), (309, 41752), (311, 41761), (317, 41791), (330, 41866), (332, 41875), (338, 41899), (339, 41905), (342, 41920), (352, 42022), (363, 42094), (367, 42118), (378, 42202), (388, 42292), (389, 42304), (392, 42322), (401, 42400), (402, 42406), (405, 42415), (409, 42448), (428, 42520), (497, 42700), (503, 42730), (519, 42793), (535, 42865), (549, 42949), (555, 42988), (559, 43021), (570, 43066), (577, 43111), (579, 43117),

Gene: DaviePasture_79 Start: 51941, Stop: 55282, Start Num: 35

Candidate Starts for DaviePasture_79:

(22, 51893), (Start: 35 @51941 has 25 MA's), (Start: 42 @52001 has 1 MA's), (Start: 46 @52037 has 6 MA's), (51, 52082), (57, 52124), (95, 52385), (111, 52487), (115, 52520), (125, 52616), (170, 52886), (172, 52895), (193, 53003), (201, 53048), (207, 53090), (225, 53222), (226, 53225), (227, 53255), (240, 53345), (245, 53399), (258, 53498), (261, 53513), (268, 53555), (295, 53729), (298, 53762), (306, 53780), (308, 53783), (311, 53798), (318, 53843), (319, 53846), (339, 53942), (344, 53984), (345, 53996), (349, 54032), (374, 54212), (380, 54254), (384, 54290), (389, 54344), (392, 54362), (405, 54458), (407, 54470), (471, 54659), (490, 54749), (511, 54854), (515, 54869), (525, 54905), (529, 54917), (530, 54923), (531, 54926), (536, 54953), (542, 54998), (557, 55106), (567, 55151), (572, 55175), (579, 55211),

Gene: Delton_67 Start: 50148, Stop: 53450, Start Num: 14

Candidate Starts for Delton_67:

(Start: 14 @50148 has 21 MA's), (Start: 30 @50235 has 1 MA's), (31, 50241), (Start: 36 @50250 has 76 MA's), (Start: 46 @50346 has 6 MA's), (68, 50502), (81, 50589), (82, 50592), (89, 50643), (125, 50907), (128, 50946), (139, 51018), (142, 51027), (153, 51102), (175, 51168), (179, 51174), (190, 51228), (193, 51246), (202, 51297), (203, 51300), (206, 51330), (218, 51414), (219, 51423), (223, 51450), (225, 51465), (245, 51642), (246, 51651), (261, 51756), (274, 51837), (283, 51897), (295, 51972), (298, 52005), (301, 52011), (309, 52032), (311, 52041), (318, 52086), (332, 52155), (335, 52170), (345, 52239), (352, 52302), (355, 52335), (356, 52338), (365, 52389), (375, 52464), (389, 52587), (392, 52605), (404, 52683), (405, 52686), (407, 52698), (416, 52743), (422, 52764), (425, 52776), (431, 52806), (436, 52827), (472, 52899), (490, 52956), (510, 53055), (529, 53121), (544, 53211), (547, 53241), (548, 53244), (553, 53274), (559, 53319), (568, 53361), (573, 53391), (576, 53403), (579, 53418), (581, 53427),

Gene: Demikore_92 Start: 57551, Stop: 60811, Start Num: 26

Candidate Starts for Demikore_92:

(Start: 26 @57551 has 3 MA's), (Start: 36 @57578 has 76 MA's), (Start: 46 @57674 has 6 MA's), (68, 57839), (85, 57953), (90, 57998), (97, 58037), (107, 58088), (125, 58253), (220, 58751), (225, 58796), (228, 58835), (255, 59039), (275, 59180), (281, 59231), (295, 59327), (297, 59336), (298, 59360), (299, 59366), (305, 59396), (308, 59402), (310, 59411), (332, 59534), (333, 59537), (334, 59546), (343, 59588), (344, 59606), (358, 59738), (392, 59984), (418, 60134), (435, 60191), (443, 60233), (463, 60257), (490, 60326), (529, 60494), (544, 60584), (552, 60656), (565, 60731),

Gene: Djokovic_66 Start: 47715, Stop: 50150, Start Num: 173

Candidate Starts for Djokovic_66:

(Start: 173 @47715 has 8 MA's), (181, 47733), (208, 47913), (223, 48027), (225, 48042), (261, 48333), (276, 48420), (294, 48549), (298, 48588), (301, 48594), (309, 48615), (311, 48624), (345, 48822), (346, 48837), (347, 48843), (352, 48885), (361, 48948), (365, 48972), (372, 49029), (376, 49053), (381, 49092), (388, 49158), (389, 49170), (392, 49188), (404, 49281), (407, 49296), (413, 49332), (439, 49434), (492, 49626), (493, 49629), (506, 49704), (508, 49710), (521, 49767), (527, 49794), (530, 49806), (544, 49890), (547, 49920), (557, 49989), (562, 50013), (565, 50028), (576, 50079), (578, 50091), (579, 50094), (583, 50109), (585, 50145),

Gene: DoobyDoo_78 Start: 50921, Stop: 54166, Start Num: 46

Candidate Starts for DoobyDoo_78:

(Start: 42 @50885 has 1 MA's), (Start: 46 @50921 has 6 MA's), (51, 50966), (57, 51008), (95, 51269), (111, 51371), (115, 51404), (125, 51500), (170, 51770), (172, 51779), (193, 51887), (201, 51932), (207, 51974), (225, 52106), (226, 52109), (227, 52139), (230, 52160), (240, 52229), (245, 52283), (258, 52382), (261, 52397), (268, 52439), (295, 52613), (298, 52646), (306, 52664), (311, 52682), (318, 52727), (319, 52730), (339, 52826), (344, 52868), (345, 52880), (349, 52916), (374, 53096), (380, 53138), (384, 53174), (389, 53228), (392, 53246), (405, 53342), (407, 53354), (473, 53549), (490, 53633), (505, 53714), (511, 53738), (515, 53753), (525, 53789), (529, 53801), (530, 53807), (531, 53810), (536, 53837), (542, 53882), (557, 53990), (567, 54035), (572, 54059), (579, 54095),

Gene: DrLupo_85 Start: 55971, Stop: 59333, Start Num: 26

Candidate Starts for DrLupo_85:

(Start: 26 @55971 has 3 MA's), (Start: 36 @55998 has 76 MA's), (41, 56055), (Start: 46 @56094 has 6 MA's), (68, 56262), (71, 56298), (73, 56313), (86, 56379), (89, 56418), (90, 56421), (100, 56472), (107, 56505), (111, 56538), (116, 56574), (120, 56613), (126, 56676), (127, 56679), (135, 56760), (142, 56790), (178, 56913), (192, 56985), (199, 57018), (217, 57150), (225, 57210), (226, 57213), (240, 57333), (241, 57342), (254, 57447), (268, 57555), (269, 57561), (291, 57717), (294, 57750), (295, 57756), (297, 57765), (298, 57789), (301, 57804), (302, 57807), (305, 57825), (308, 57831), (316, 57882), (320, 57921), (321, 57951), (328, 57987), (332, 58017), (340, 58053), (354, 58179), (358, 58221), (363, 58239), (367, 58263), (370, 58296), (392, 58470), (424, 58650), (425, 58656), (431, 58677), (443, 58737), (473, 58794), (495, 58887), (530, 59031), (540, 59100), (545, 59130), (568, 59259), (580, 59319),

Gene: Dryad_56 Start: 40017, Stop: 36817, Start Num: 36

Candidate Starts for Dryad_56:

(29, 40038), (Start: 36 @40017 has 76 MA's), (37, 40008), (39, 39975), (Start: 46 @39921 has 6 MA's), (53, 39867), (57, 39834), (62, 39798), (63, 39789), (64, 39780), (69, 39750), (72, 39717), (74, 39693), (84, 39639), (87, 39627), (93, 39573), (106, 39504), (116, 39423), (129, 39288), (136, 39225), (137, 39222), (Start: 158 @39117 has 9 MA's), (180, 39066), (Start: 183 @39051 has 1 MA's), (187, 39036), (204, 38940), (207, 38910), (216, 38865), (218, 38829), (223, 38793), (225, 38778), (226, 38775), (236, 38682), (246, 38592), (248, 38577), (263, 38466), (277, 38385), (279, 38379), (282, 38352), (291, 38301), (298, 38229), (301, 38223), (311, 38193), (317, 38163), (326, 38118), (331, 38082), (350, 37953), (366, 37842), (369, 37818), (387, 37674), (388, 37662), (389, 37650), (402, 37539),

(445, 37359), (487, 37299), (490, 37287), (496, 37254), (510, 37188), (528, 37122), (547, 37011), (550, 36999), (553, 36978), (556, 36954), (568, 36894), (574, 36858), (577, 36843),

Gene: DumpTruck_80 Start: 51478, Stop: 54825, Start Num: 35

Candidate Starts for DumpTruck_80:

(Start: 35 @51478 has 25 MA's), (45, 51559), (Start: 46 @51574 has 6 MA's), (47, 51583), (48, 51589), (59, 51682), (90, 51892), (95, 51922), (103, 51970), (115, 52057), (125, 52153), (153, 52354), (170, 52423), (172, 52432), (193, 52543), (201, 52588), (207, 52630), (225, 52762), (226, 52765), (227, 52795), (246, 52948), (258, 53038), (261, 53053), (263, 53074), (295, 53269), (298, 53302), (306, 53320), (317, 53368), (318, 53383), (319, 53386), (339, 53482), (345, 53536), (349, 53572), (365, 53686), (374, 53752), (380, 53794), (384, 53830), (389, 53884), (392, 53902), (405, 53998), (407, 54010), (408, 54022), (432, 54106), (493, 54301), (511, 54397), (515, 54412), (529, 54460), (530, 54466), (531, 54469), (536, 54496), (542, 54541), (565, 54688), (567, 54694), (572, 54718), (579, 54754),

Gene: Emianna_60 Start: 49104, Stop: 45793, Start Num: 36

Candidate Starts for Emianna_60:

(4, 49347), (Start: 36 @49104 has 76 MA's), (44, 49032), (Start: 46 @49008 has 6 MA's), (66, 48855), (68, 48846), (86, 48723), (111, 48564), (112, 48558), (114, 48534), (126, 48426), (128, 48396), (138, 48327), (177, 48189), (184, 48171), (207, 48018), (214, 47976), (223, 47898), (225, 47883), (242, 47745), (269, 47547), (277, 47493), (278, 47490), (288, 47430), (295, 47379), (311, 47310), (318, 47265), (353, 47025), (357, 46983), (358, 46980), (360, 46974), (364, 46956), (377, 46860), (384, 46806), (402, 46662), (405, 46653), (423, 46578), (440, 46503), (448, 46449), (460, 46407), (474, 46359), (486, 46278), (492, 46257), (509, 46167), (517, 46137), (526, 46113), (527, 46110), (556, 45927), (568, 45870),

Gene: Ennea_66 Start: 49878, Stop: 46564, Start Num: 36

Candidate Starts for Ennea_66:

(3, 50130), (9, 50043), (12, 50016), (Start: 36 @49878 has 76 MA's), (Start: 46 @49782 has 6 MA's), (66, 49629), (68, 49620), (86, 49497), (111, 49338), (112, 49332), (114, 49308), (123, 49254), (126, 49200), (128, 49170), (134, 49131), (142, 49089), (154, 49008), (177, 48963), (207, 48792), (214, 48750), (223, 48672), (225, 48657), (242, 48519), (269, 48321), (284, 48219), (295, 48153), (306, 48102), (311, 48084), (318, 48039), (353, 47796), (357, 47754), (358, 47751), (360, 47745), (364, 47727), (377, 47631), (380, 47613), (384, 47577), (402, 47433), (405, 47424), (408, 47400), (423, 47349), (448, 47220), (474, 47130), (476, 47121), (486, 47049), (492, 47028), (530, 46872), (534, 46857), (574, 46608),

Gene: Erk16_66 Start: 49865, Stop: 53167, Start Num: 14

Candidate Starts for Erk16_66:

(Start: 14 @49865 has 21 MA's), (Start: 30 @49952 has 1 MA's), (31, 49958), (Start: 36 @49967 has 76 MA's), (Start: 46 @50063 has 6 MA's), (68, 50219), (81, 50306), (82, 50309), (89, 50360), (125, 50624), (128, 50663), (139, 50735), (142, 50744), (153, 50819), (175, 50885), (179, 50891), (190, 50945), (193, 50963), (202, 51014), (203, 51017), (206, 51047), (218, 51131), (219, 51140), (223, 51167), (225, 51182), (245, 51359), (246, 51368), (261, 51473), (274, 51554), (283, 51614), (295, 51689), (298, 51722), (301, 51728), (309, 51749), (311, 51758), (318, 51803), (332, 51872), (335, 51887), (345, 51956), (352, 52019), (355, 52052), (356, 52055), (365, 52106), (375, 52181), (389, 52304), (392, 52322), (404, 52400), (405, 52403), (407, 52415), (416, 52460), (422, 52481), (425, 52493), (431, 52523), (436, 52544), (472, 52616), (490, 52673), (510, 52772), (529, 52838), (544, 52928), (547, 52958), (548, 52961), (553, 52991), (559, 53036), (568, 53078), (573, 53108), (576, 53120), (579, 53135), (581, 53144),

Gene: Erudite_56 Start: 40834, Stop: 43134, Start Num: 155

Candidate Starts for Erudite_56:

(Start: 155 @40834 has 33 MA's), (Start: 158 @40840 has 9 MA's), (186, 40915), (199, 40987), (203, 41008), (207, 41041), (209, 41053), (210, 41056), (212, 41074), (213, 41080), (222, 41149), (225, 41173), (228, 41212), (236, 41269), (245, 41350), (261, 41464), (262, 41476), (276, 41551), (278, 41569), (290, 41647), (291, 41653), (293, 41662), (296, 41695), (298, 41725), (301, 41731), (309, 41752), (311, 41761), (317, 41791), (330, 41866), (332, 41875), (338, 41899), (339, 41905), (342, 41920), (352, 42022), (363, 42094), (367, 42118), (378, 42202), (388, 42292), (389, 42304), (392, 42322), (401, 42400), (402, 42406), (405, 42415), (409, 42448), (428, 42520), (497, 42700), (503, 42730), (519, 42793), (535, 42865), (549, 42949), (555, 42988), (559, 43021), (570, 43066), (577, 43111), (579, 43117),

Gene: Erutan_79 Start: 51975, Stop: 55283, Start Num: 38

Candidate Starts for Erutan_79:

(Start: 38 @51975 has 4 MA's), (Start: 42 @52002 has 1 MA's), (44, 52014), (Start: 46 @52038 has 6 MA's), (51, 52083), (57, 52125), (95, 52386), (111, 52488), (115, 52521), (125, 52617), (170, 52887), (172, 52896), (193, 53004), (201, 53049), (207, 53091), (225, 53223), (226, 53226), (227, 53256), (230, 53277), (240, 53346), (245, 53400), (258, 53499), (261, 53514), (268, 53556), (295, 53730), (298, 53763), (306, 53781), (311, 53799), (318, 53844), (319, 53847), (339, 53943), (344, 53985), (345, 53997), (349, 54033), (374, 54213), (380, 54255), (384, 54291), (389, 54345), (392, 54363), (405, 54459), (407, 54471), (473, 54666), (490, 54750), (505, 54831), (511, 54855), (515, 54870), (525, 54906), (529, 54918), (530, 54924), (531, 54927), (536, 54954), (542, 54999), (557, 55107), (567, 55152), (572, 55176), (579, 55212),

Gene: Flapper_64 Start: 49579, Stop: 46298, Start Num: 36

Candidate Starts for Flapper_64:

(16, 49672), (34, 49582), (Start: 36 @49579 has 76 MA's), (37, 49570), (45, 49498), (Start: 46 @49483 has 6 MA's), (51, 49438), (66, 49327), (68, 49318), (75, 49252), (86, 49195), (107, 49069), (112, 49030), (114, 49006), (118, 48979), (120, 48961), (123, 48952), (126, 48898), (161, 48685), (177, 48661), (202, 48526), (223, 48367), (225, 48352), (264, 48034), (269, 48010), (278, 47953), (295, 47842), (311, 47773), (314, 47758), (318, 47728), (348, 47539), (353, 47491), (357, 47449), (358, 47446), (360, 47440), (364, 47422), (377, 47326), (380, 47308), (384, 47272), (405, 47107), (409, 47077), (417, 47047), (440, 47008), (448, 46954), (458, 46930), (474, 46867), (484, 46807), (492, 46765), (526, 46621), (527, 46618), (533, 46594), (568, 46378), (574, 46342), (581, 46312),

Gene: Float294_60 Start: 49099, Stop: 45785, Start Num: 36

Candidate Starts for Float294_60:

(2, 49324), (10, 49240), (Start: 36 @49099 has 76 MA's), (Start: 46 @49003 has 6 MA's), (66, 48850), (68, 48841), (86, 48718), (111, 48559), (112, 48553), (126, 48421), (128, 48391), (142, 48310), (154, 48229), (177, 48184), (207, 48013), (214, 47971), (223, 47893), (225, 47878), (242, 47740), (250, 47662), (269, 47542), (284, 47440), (295, 47374), (306, 47323), (311, 47305), (318, 47260), (353, 47017), (357, 46975), (358, 46972), (360, 46966), (364, 46948), (377, 46852), (380, 46834), (384, 46798), (402, 46654), (405, 46645), (408, 46621), (423, 46570), (448, 46441), (474, 46351), (476, 46342), (484, 46291), (486, 46270), (492, 46249), (530, 46093), (534, 46078), (574, 45829),

Gene: FountainFog_56 Start: 40481, Stop: 42781, Start Num: 155

Candidate Starts for FountainFog_56:

(137, 40382), (140, 40391), (144, 40412), (Start: 155 @40481 has 33 MA's), (159, 40487), (186, 40562), (203, 40655), (207, 40688), (209, 40700), (210, 40703), (212, 40721), (222, 40796), (225, 40820), (228, 40859), (233, 40904), (236, 40916), (245, 40997), (261, 41111), (278, 41216), (288, 41282), (290, 41294), (291, 41300), (293, 41309), (296, 41342), (298, 41372), (301, 41378), (309, 41399), (311, 41408), (317, 41438), (330, 41513), (332, 41522), (339, 41552), (363, 41741), (367, 41765), (388, 41939), (389, 41951), (392, 41969), (393, 41975), (402, 42053), (405, 42062), (409, 42095), (422, 42140), (428, 42167), (438, 42209), (497, 42347), (503, 42377), (510, 42410), (519, 42440), (531, 42488), (535, 42512), (555, 42635), (559, 42668), (570, 42713), (577, 42758), (579,

42764),

Gene: Foxboro_61 Start: 49613, Stop: 46299, Start Num: 36

Candidate Starts for Foxboro_61:

(4, 49856), (Start: 36 @49613 has 76 MA's), (44, 49541), (Start: 46 @49517 has 6 MA's), (51, 49472), (66, 49364), (68, 49355), (86, 49232), (111, 49073), (112, 49067), (114, 49043), (126, 48935), (128, 48905), (138, 48836), (177, 48698), (184, 48680), (207, 48527), (214, 48485), (217, 48446), (223, 48407), (225, 48392), (242, 48254), (269, 48056), (278, 47999), (288, 47939), (295, 47888), (311, 47819), (318, 47774), (357, 47489), (358, 47486), (360, 47480), (364, 47462), (377, 47366), (384, 47312), (391, 47243), (405, 47159), (414, 47108), (417, 47099), (440, 47009), (448, 46955), (460, 46913), (474, 46865), (486, 46784), (492, 46763), (509, 46673), (517, 46643), (526, 46619), (527, 46616), (556, 46433), (568, 46376),

Gene: FreddieHg_58 Start: 40716, Stop: 43019, Start Num: 155

Candidate Starts for FreddieHg_58:

(Start: 155 @40716 has 33 MA's), (Start: 158 @40722 has 9 MA's), (186, 40800), (199, 40872), (203, 40893), (207, 40926), (209, 40938), (210, 40941), (212, 40959), (213, 40965), (222, 41034), (225, 41058), (228, 41097), (233, 41142), (236, 41154), (245, 41235), (261, 41349), (262, 41361), (276, 41436), (278, 41454), (290, 41532), (291, 41538), (293, 41547), (296, 41580), (298, 41610), (301, 41616), (309, 41637), (311, 41646), (317, 41676), (330, 41751), (332, 41760), (338, 41784), (339, 41790), (340, 41796), (342, 41805), (352, 41907), (363, 41979), (367, 42003), (378, 42087), (388, 42177), (389, 42189), (392, 42207), (401, 42285), (402, 42291), (405, 42300), (409, 42333), (428, 42405), (497, 42585), (503, 42615), (519, 42678), (535, 42750), (555, 42873), (559, 42906), (570, 42951), (577, 42996), (579, 43002),

Gene: Fulcrum_78 Start: 51710, Stop: 55051, Start Num: 35

Candidate Starts for Fulcrum_78:

(22, 51662), (Start: 35 @51710 has 25 MA's), (Start: 42 @51770 has 1 MA's), (Start: 46 @51806 has 6 MA's), (51, 51851), (57, 51893), (95, 52154), (111, 52256), (115, 52289), (125, 52385), (170, 52655), (172, 52664), (193, 52772), (201, 52817), (207, 52859), (225, 52991), (226, 52994), (227, 53024), (240, 53114), (245, 53168), (258, 53267), (261, 53282), (268, 53324), (295, 53498), (298, 53531), (306, 53549), (311, 53567), (318, 53612), (319, 53615), (339, 53711), (344, 53753), (345, 53765), (349, 53801), (374, 53981), (380, 54023), (384, 54059), (389, 54113), (392, 54131), (405, 54227), (407, 54239), (473, 54434), (490, 54518), (511, 54623), (515, 54638), (525, 54674), (529, 54686), (530, 54692), (531, 54695), (536, 54722), (542, 54767), (557, 54875), (567, 54920), (572, 54944), (579, 54980),

Gene: Fury_67 Start: 47998, Stop: 44609, Start Num: 20

Candidate Starts for Fury_67:

(13, 48049), (Start: 20 @47998 has 2 MA's), (24, 47980), (27, 47953), (Start: 36 @47929 has 76 MA's), (45, 47848), (Start: 46 @47833 has 6 MA's), (52, 47782), (66, 47680), (68, 47671), (80, 47566), (86, 47548), (99, 47455), (111, 47389), (112, 47383), (113, 47371), (123, 47305), (126, 47251), (142, 47140), (145, 47119), (154, 47059), (164, 47032), (177, 47014), (199, 46897), (223, 46723), (225, 46708), (242, 46570), (253, 46477), (257, 46438), (269, 46372), (274, 46339), (278, 46315), (288, 46255), (295, 46204), (296, 46201), (297, 46195), (298, 46171), (306, 46153), (311, 46135), (318, 46090), (353, 45850), (356, 45823), (358, 45805), (360, 45799), (364, 45781), (377, 45685), (380, 45667), (383, 45643), (384, 45631), (399, 45499), (403, 45478), (405, 45472), (409, 45442), (448, 45265), (459, 45229), (474, 45178), (484, 45118), (486, 45097), (492, 45076), (534, 44902), (568, 44689), (581, 44623),

Gene: GOATification_78 Start: 51710, Stop: 55051, Start Num: 35

Candidate Starts for GOATification_78:

(22, 51662), (Start: 35 @51710 has 25 MA's), (Start: 42 @51770 has 1 MA's), (Start: 46 @51806 has 6 MA's), (51, 51851), (57, 51893), (95, 52154), (111, 52256), (115, 52289), (125, 52385), (170, 52655), (172, 52664), (193, 52772), (201, 52817), (207, 52859), (225, 52991), (226, 52994), (227, 53024), (240, 53114), (245, 53168), (258, 53267), (261, 53282), (268, 53324), (295, 53498), (298, 53531), (306, 53549), (311, 53567), (318, 53612), (319, 53615), (339, 53711), (344, 53753), (345, 53765), (349, 53801), (374, 53981), (380, 54023), (384, 54059), (389, 54113), (392, 54131), (405, 54227), (407, 54239), (473, 54434), (490, 54518), (511, 54623), (515, 54638), (525, 54674), (529, 54686), (530, 54692), (531, 54695), (536, 54722), (542, 54767), (557, 54875), (567, 54920), (572, 54944), (579, 54980),

Gene: GRU1_49 Start: 41041, Stop: 37856, Start Num: 46

Candidate Starts for GRU1_49:

(Start: 36 @41137 has 76 MA's), (45, 41056), (Start: 46 @41041 has 6 MA's), (51, 40996), (66, 40885), (68, 40876), (75, 40810), (86, 40753), (107, 40627), (112, 40588), (114, 40564), (118, 40537), (123, 40510), (126, 40456), (161, 40243), (177, 40219), (223, 39925), (225, 39910), (264, 39592), (269, 39568), (278, 39511), (288, 39451), (295, 39400), (311, 39331), (314, 39316), (348, 39097), (353, 39049), (357, 39007), (358, 39004), (360, 38998), (364, 38980), (377, 38884), (380, 38866), (384, 38830), (405, 38665), (409, 38635), (417, 38605), (447, 38518), (448, 38512), (474, 38425), (484, 38365), (492, 38323), (526, 38179), (533, 38152), (568, 37936), (574, 37900), (581, 37870), (583, 37861),

Gene: GTE5_49 Start: 42214, Stop: 38933, Start Num: 36

Candidate Starts for GTE5_49:

(32, 42220), (Start: 36 @42214 has 76 MA's), (37, 42205), (45, 42133), (Start: 46 @42118 has 6 MA's), (66, 41962), (68, 41953), (86, 41830), (112, 41665), (114, 41641), (122, 41590), (126, 41533), (142, 41422), (161, 41320), (177, 41296), (223, 41002), (225, 40987), (264, 40669), (269, 40645), (278, 40588), (295, 40477), (296, 40474), (311, 40408), (314, 40393), (348, 40174), (353, 40126), (357, 40084), (358, 40081), (360, 40075), (364, 40057), (377, 39961), (380, 39943), (384, 39907), (405, 39742), (409, 39712), (417, 39682), (447, 39595), (448, 39589), (474, 39502), (484, 39442), (492, 39400), (526, 39256), (527, 39253), (533, 39229), (568, 39013), (574, 38977), (581, 38947),

Gene: GTE8_48 Start: 42138, Stop: 38830, Start Num: 36

Candidate Starts for GTE8_48:

(1, 42387), (6, 42309), (8, 42282), (Start: 36 @42138 has 76 MA's), (45, 42057), (Start: 46 @42042 has 6 MA's), (66, 41889), (68, 41880), (86, 41757), (111, 41598), (112, 41592), (114, 41568), (126, 41460), (128, 41430), (177, 41223), (202, 41088), (214, 41010), (223, 40932), (225, 40917), (269, 40581), (278, 40524), (288, 40464), (295, 40413), (311, 40344), (324, 40278), (357, 40014), (358, 40011), (360, 40005), (364, 39987), (368, 39963), (377, 39891), (384, 39837), (402, 39693), (405, 39684), (423, 39609), (448, 39480), (474, 39396), (486, 39315), (492, 39294), (526, 39150), (527, 39147), (533, 39123), (534, 39120), (548, 39018), (581, 38841),

Gene: Gagieri_58 Start: 45944, Stop: 42528, Start Num: 36

Candidate Starts for Gagieri_58:

(Start: 36 @45944 has 76 MA's), (45, 45863), (Start: 46 @45848 has 6 MA's), (59, 45740), (60, 45734), (68, 45686), (86, 45563), (117, 45353), (119, 45338), (120, 45329), (124, 45305), (125, 45275), (128, 45236), (190, 44942), (210, 44810), (211, 44807), (212, 44792), (214, 44783), (223, 44705), (225, 44690), (228, 44651), (233, 44612), (245, 44519), (251, 44468), (253, 44462), (257, 44423), (276, 44318), (277, 44303), (278, 44300), (295, 44186), (296, 44183), (298, 44153), (306, 44135), (308, 44132), (309, 44126), (310, 44123), (316, 44090), (318, 44069), (345, 43901), (352, 43835), (354, 43823), (358, 43781), (360, 43775), (364, 43757), (377, 43661), (380, 43643), (384, 43607), (388, 43565), (392, 43535), (396, 43499), (405, 43442), (407, 43430), (421, 43367), (434, 43310), (444, 43241), (453, 43193), (455, 43184), (461, 43157), (462, 43154), (477, 43094), (500, 42947), (523, 42866), (526, 42851), (527, 42848), (535, 42809), (550, 42710), (551, 42701), (553, 42689), (554,

42683), (555, 42677), (556, 42665), (565, 42614), (566, 42611), (574, 42569),

Gene: Genamy16_81 Start: 50797, Stop: 54042, Start Num: 46

Candidate Starts for Genamy16_81:

(Start: 35 @50701 has 25 MA's), (Start: 42 @50761 has 1 MA's), (Start: 46 @50797 has 6 MA's), (51, 50842), (57, 50884), (95, 51145), (115, 51280), (125, 51376), (170, 51646), (172, 51655), (193, 51763), (201, 51808), (207, 51850), (217, 51928), (225, 51982), (226, 51985), (227, 52015), (240, 52105), (245, 52159), (258, 52258), (261, 52273), (268, 52315), (295, 52489), (298, 52522), (306, 52540), (311, 52558), (318, 52603), (319, 52606), (339, 52702), (344, 52744), (345, 52756), (349, 52792), (374, 52972), (380, 53014), (384, 53050), (388, 53092), (389, 53104), (392, 53122), (405, 53218), (407, 53230), (473, 53425), (490, 53509), (511, 53614), (515, 53629), (520, 53644), (525, 53665), (529, 53677), (530, 53683), (531, 53686), (536, 53713), (542, 53758), (557, 53866), (567, 53911), (572, 53935), (579, 53971),

Gene: Gibbin_81 Start: 52515, Stop: 55856, Start Num: 35

Candidate Starts for Gibbin_81:

(22, 52467), (Start: 35 @52515 has 25 MA's), (Start: 42 @52575 has 1 MA's), (Start: 46 @52611 has 6 MA's), (51, 52656), (57, 52698), (95, 52959), (111, 53061), (115, 53094), (125, 53190), (170, 53460), (172, 53469), (193, 53577), (201, 53622), (207, 53664), (225, 53796), (226, 53799), (227, 53829), (230, 53850), (240, 53919), (245, 53973), (258, 54072), (261, 54087), (268, 54129), (295, 54303), (298, 54336), (306, 54354), (311, 54372), (318, 54417), (319, 54420), (339, 54516), (344, 54558), (345, 54570), (349, 54606), (374, 54786), (380, 54828), (384, 54864), (389, 54918), (392, 54936), (405, 55032), (407, 55044), (473, 55239), (490, 55323), (505, 55404), (511, 55428), (515, 55443), (525, 55479), (529, 55491), (530, 55497), (531, 55500), (536, 55527), (542, 55572), (557, 55680), (567, 55725), (572, 55749), (579, 55785),

Gene: Gibson_51 Start: 39054, Stop: 35857, Start Num: 36

Candidate Starts for Gibson_51:

(29, 39075), (Start: 36 @39054 has 76 MA's), (39, 39012), (Start: 46 @38958 has 6 MA's), (53, 38904), (62, 38835), (63, 38826), (64, 38817), (69, 38787), (72, 38754), (76, 38718), (84, 38676), (87, 38664), (93, 38610), (106, 38541), (109, 38502), (116, 38460), (118, 38439), (125, 38367), (129, 38325), (136, 38262), (137, 38259), (153, 38169), (Start: 158 @38154 has 9 MA's), (160, 38145), (180, 38103), (Start: 183 @38088 has 1 MA's), (187, 38073), (204, 37977), (207, 37947), (218, 37866), (220, 37854), (223, 37830), (225, 37815), (226, 37812), (236, 37719), (244, 37647), (246, 37629), (251, 37587), (260, 37530), (263, 37503), (277, 37422), (279, 37416), (282, 37389), (291, 37338), (296, 37296), (298, 37266), (301, 37260), (311, 37230), (314, 37215), (317, 37200), (325, 37158), (326, 37155), (331, 37119), (334, 37104), (350, 36990), (387, 36711), (388, 36699), (389, 36687), (392, 36669), (402, 36576), (425, 36471), (484, 36360), (487, 36336), (511, 36219), (535, 36126), (547, 36048), (550, 36036), (553, 36015), (560, 35967), (568, 35931), (574, 35895), (577, 35880),

Gene: Gilda_57 Start: 41255, Stop: 43558, Start Num: 155

Candidate Starts for Gilda_57:

(Start: 155 @41255 has 33 MA's), (Start: 158 @41261 has 9 MA's), (186, 41339), (199, 41411), (203, 41432), (207, 41465), (209, 41477), (210, 41480), (212, 41498), (222, 41573), (225, 41597), (228, 41636), (233, 41681), (236, 41693), (245, 41774), (261, 41888), (262, 41900), (276, 41975), (278, 41993), (290, 42071), (291, 42077), (293, 42086), (296, 42119), (298, 42149), (301, 42155), (309, 42176), (311, 42185), (317, 42215), (330, 42290), (332, 42299), (338, 42323), (339, 42329), (342, 42344), (344, 42371), (352, 42446), (363, 42518), (367, 42542), (378, 42626), (388, 42716), (389, 42728), (392, 42746), (401, 42824), (402, 42830), (405, 42839), (409, 42872), (428, 42944), (497, 43124), (503, 43154), (519, 43217), (535, 43289), (555, 43412), (559, 43445), (570, 43490), (577, 43535), (579, 43541),

Gene: Giuseppe_68 Start: 49677, Stop: 52979, Start Num: 14

Candidate Starts for Giuseppe_68:

(Start: 14 @49677 has 21 MA's), (Start: 30 @49764 has 1 MA's), (31, 49770), (Start: 36 @49779 has 76 MA's), (Start: 46 @49875 has 6 MA's), (68, 50031), (81, 50118), (82, 50121), (89, 50172), (125, 50436), (128, 50475), (139, 50547), (142, 50556), (153, 50631), (175, 50697), (179, 50703), (190, 50757), (193, 50775), (202, 50826), (203, 50829), (206, 50859), (218, 50943), (219, 50952), (223, 50979), (225, 50994), (245, 51171), (246, 51180), (261, 51285), (274, 51366), (283, 51426), (295, 51501), (298, 51534), (301, 51540), (309, 51561), (311, 51570), (318, 51615), (332, 51684), (335, 51699), (345, 51768), (352, 51831), (355, 51864), (356, 51867), (365, 51918), (375, 51993), (389, 52116), (392, 52134), (404, 52212), (405, 52215), (407, 52227), (416, 52272), (422, 52293), (425, 52305), (431, 52335), (436, 52356), (472, 52428), (490, 52485), (510, 52584), (529, 52650), (544, 52740), (547, 52770), (548, 52773), (553, 52803), (559, 52848), (568, 52890), (573, 52920), (576, 52932), (579, 52947), (581, 52956),

Gene: Greenbelt_49 Start: 35561, Stop: 32364, Start Num: 36

Candidate Starts for Greenbelt_49:

(19, 35642), (29, 35579), (Start: 36 @35561 has 76 MA's), (39, 35519), (Start: 46 @35465 has 6 MA's), (53, 35411), (62, 35342), (63, 35333), (69, 35294), (72, 35261), (87, 35171), (93, 35117), (106, 35048), (129, 34832), (Start: 158 @34661 has 9 MA's), (180, 34610), (Start: 183 @34595 has 1 MA's), (191, 34544), (204, 34484), (207, 34454), (218, 34373), (223, 34337), (224, 34334), (225, 34322), (226, 34319), (236, 34226), (246, 34136), (260, 34037), (263, 34010), (277, 33929), (279, 33923), (282, 33896), (298, 33773), (301, 33767), (311, 33737), (317, 33707), (331, 33626), (332, 33623), (387, 33218), (388, 33206), (389, 33194), (402, 33083), (409, 33041), (487, 32843), (488, 32837), (490, 32831), (503, 32765), (526, 32672), (528, 32666), (547, 32555), (550, 32543), (553, 32522), (556, 32498), (566, 32444), (568, 32438), (574, 32402), (577, 32387),

Gene: Gretellyn_79 Start: 52344, Stop: 55685, Start Num: 35

Candidate Starts for Gretellyn_79:

(22, 52296), (Start: 35 @52344 has 25 MA's), (Start: 42 @52404 has 1 MA's), (Start: 46 @52440 has 6 MA's), (51, 52485), (57, 52527), (95, 52788), (111, 52890), (115, 52923), (125, 53019), (170, 53289), (172, 53298), (193, 53406), (201, 53451), (207, 53493), (225, 53625), (226, 53628), (227, 53658), (230, 53679), (240, 53748), (245, 53802), (258, 53901), (261, 53916), (268, 53958), (295, 54132), (298, 54165), (306, 54183), (311, 54201), (318, 54246), (319, 54249), (339, 54345), (344, 54387), (345, 54399), (349, 54435), (374, 54615), (380, 54657), (384, 54693), (389, 54747), (392, 54765), (405, 54861), (407, 54873), (473, 55068), (490, 55152), (505, 55233), (511, 55257), (515, 55272), (525, 55308), (529, 55320), (530, 55326), (531, 55329), (536, 55356), (542, 55401), (557, 55509), (567, 55554), (572, 55578), (579, 55614),

Gene: GrootJr_62 Start: 48486, Stop: 45175, Start Num: 36

Candidate Starts for GrootJr_62:

(4, 48729), (Start: 36 @48486 has 76 MA's), (44, 48414), (Start: 46 @48390 has 6 MA's), (51, 48345), (66, 48237), (68, 48228), (86, 48105), (111, 47946), (112, 47940), (114, 47916), (126, 47808), (128, 47778), (138, 47709), (177, 47571), (184, 47553), (207, 47400), (214, 47358), (223, 47280), (225, 47265), (242, 47127), (269, 46929), (277, 46875), (278, 46872), (288, 46812), (295, 46761), (311, 46692), (318, 46647), (353, 46407), (357, 46365), (358, 46362), (360, 46356), (364, 46338), (377, 46242), (384, 46188), (402, 46044), (405, 46035), (423, 45960), (440, 45885), (448, 45831), (460, 45789), (474, 45741), (486, 45660), (492, 45639), (509, 45549), (517, 45519), (526, 45495), (527, 45492), (556, 45309), (568, 45252),

Gene: Gumball_66 Start: 50219, Stop: 53521, Start Num: 14

Candidate Starts for Gumball_66:

(Start: 14 @50219 has 21 MA's), (Start: 30 @50306 has 1 MA's), (31, 50312), (Start: 36 @50321 has 76 MA's), (Start: 46 @50417 has 6 MA's), (68, 50573), (81, 50660), (82, 50663), (89, 50714), (125, 50978), (128, 51017), (139, 51089), (142, 51098), (153, 51173), (175, 51239), (179, 51245), (190,

51299), (193, 51317), (202, 51368), (203, 51371), (206, 51401), (218, 51485), (219, 51494), (223, 51521), (225, 51536), (245, 51713), (246, 51722), (261, 51827), (274, 51908), (283, 51968), (295, 52043), (298, 52076), (301, 52082), (309, 52103), (311, 52112), (318, 52157), (332, 52226), (335, 52241), (345, 52310), (355, 52406), (356, 52409), (365, 52460), (375, 52535), (389, 52658), (392, 52676), (404, 52754), (405, 52757), (407, 52769), (416, 52814), (422, 52835), (425, 52847), (431, 52877), (436, 52898), (472, 52970), (490, 53027), (510, 53126), (529, 53192), (544, 53282), (547, 53312), (548, 53315), (553, 53345), (559, 53390), (568, 53432), (573, 53462), (576, 53474), (579, 53489), (581, 53498),

Gene: Hager_58 Start: 40653, Stop: 42950, Start Num: 158

Candidate Starts for Hager_58:

(Start: 158 @40653 has 9 MA's), (186, 40731), (203, 40824), (207, 40857), (209, 40869), (212, 40890), (213, 40896), (222, 40965), (225, 40989), (228, 41028), (236, 41085), (245, 41166), (261, 41280), (262, 41292), (278, 41385), (288, 41451), (290, 41463), (291, 41469), (296, 41511), (298, 41541), (301, 41547), (309, 41568), (311, 41577), (317, 41607), (325, 41649), (330, 41682), (332, 41691), (339, 41721), (363, 41910), (367, 41934), (388, 42108), (389, 42120), (392, 42138), (402, 42222), (405, 42231), (409, 42264), (422, 42309), (438, 42378), (497, 42516), (503, 42546), (510, 42579), (519, 42609), (535, 42681), (555, 42804), (559, 42837), (570, 42882), (577, 42927), (579, 42933),

Gene: Haunter_57 Start: 40472, Stop: 42772, Start Num: 155

Candidate Starts for Haunter_57:

(Start: 155 @40472 has 33 MA's), (Start: 158 @40478 has 9 MA's), (186, 40553), (199, 40625), (203, 40646), (207, 40679), (209, 40691), (210, 40694), (212, 40712), (213, 40718), (222, 40787), (225, 40811), (226, 40814), (228, 40850), (233, 40895), (236, 40907), (245, 40988), (261, 41102), (262, 41114), (276, 41189), (278, 41207), (290, 41285), (291, 41291), (293, 41300), (296, 41333), (298, 41363), (301, 41369), (309, 41390), (311, 41399), (317, 41429), (330, 41504), (332, 41513), (338, 41537), (339, 41543), (340, 41549), (342, 41558), (352, 41660), (363, 41732), (367, 41756), (378, 41840), (388, 41930), (389, 41942), (392, 41960), (401, 42038), (402, 42044), (405, 42053), (409, 42086), (428, 42158), (497, 42338), (503, 42368), (519, 42431), (535, 42503), (549, 42587), (553, 42614), (555, 42626), (559, 42659), (570, 42704), (577, 42749), (579, 42755),

Gene: Hawkeye_75 Start: 50526, Stop: 53972, Start Num: 14

Candidate Starts for Hawkeye_75:

(Start: 14 @50526 has 21 MA's), (21, 50559), (25, 50589), (Start: 36 @50625 has 76 MA's), (37, 50634), (44, 50697), (Start: 46 @50721 has 6 MA's), (47, 50730), (58, 50823), (66, 50868), (68, 50877), (78, 50952), (82, 50967), (91, 51033), (125, 51282), (128, 51321), (163, 51513), (193, 51621), (202, 51672), (203, 51675), (207, 51708), (223, 51825), (225, 51840), (261, 52131), (274, 52212), (283, 52272), (295, 52347), (298, 52380), (301, 52386), (311, 52416), (335, 52545), (343, 52584), (345, 52614), (355, 52710), (356, 52713), (357, 52728), (365, 52764), (375, 52839), (389, 52962), (390, 52965), (392, 52980), (404, 53058), (405, 53061), (407, 53073), (449, 53280), (450, 53283), (465, 53364), (490, 53478), (502, 53541), (511, 53583), (529, 53643), (544, 53733), (548, 53766), (553, 53796), (559, 53841), (565, 53874), (566, 53877), (576, 53925), (584, 53967),

Gene: Helpful_70 Start: 50059, Stop: 53361, Start Num: 14

Candidate Starts for Helpful_70:

(Start: 14 @50059 has 21 MA's), (Start: 30 @50146 has 1 MA's), (31, 50152), (Start: 36 @50161 has 76 MA's), (Start: 46 @50257 has 6 MA's), (68, 50413), (81, 50500), (82, 50503), (89, 50554), (125, 50818), (128, 50857), (139, 50929), (142, 50938), (153, 51013), (175, 51079), (179, 51085), (190, 51139), (193, 51157), (202, 51208), (203, 51211), (206, 51241), (218, 51325), (219, 51334), (223, 51361), (225, 51376), (245, 51553), (246, 51562), (248, 51577), (261, 51667), (274, 51748), (283, 51808), (295, 51883), (298, 51916), (301, 51922), (309, 51943), (311, 51952), (318, 51997), (332, 52066), (335, 52081), (345, 52150), (352, 52213), (355, 52246), (356, 52249), (365, 52300), (375, 52375), (389, 52498), (392, 52516), (404, 52594), (405, 52597), (407, 52609), (416, 52654), (422,

52675), (425, 52687), (431, 52717), (436, 52738), (472, 52810), (490, 52867), (510, 52966), (529, 53032), (544, 53122), (547, 53152), (548, 53155), (553, 53185), (559, 53230), (568, 53272), (573, 53302), (576, 53314), (579, 53329), (581, 53338),

Gene: Hiddenleaf_58 Start: 40699, Stop: 43002, Start Num: 155

Candidate Starts for Hiddenleaf_58:

(Start: 155 @40699 has 33 MA's), (Start: 158 @40705 has 9 MA's), (186, 40783), (199, 40855), (203, 40876), (207, 40909), (209, 40921), (210, 40924), (212, 40942), (213, 40948), (222, 41017), (225, 41041), (228, 41080), (233, 41125), (236, 41137), (245, 41218), (261, 41332), (262, 41344), (276, 41419), (278, 41437), (290, 41515), (291, 41521), (293, 41530), (296, 41563), (298, 41593), (301, 41599), (309, 41620), (311, 41629), (317, 41659), (330, 41734), (332, 41743), (334, 41755), (339, 41773), (342, 41788), (352, 41890), (363, 41962), (367, 41986), (378, 42070), (388, 42160), (389, 42172), (392, 42190), (401, 42268), (402, 42274), (405, 42283), (409, 42316), (428, 42388), (497, 42568), (503, 42598), (519, 42661), (535, 42733), (555, 42856), (559, 42889), (570, 42934), (577, 42979), (579, 42985),

Gene: HomeFry_63 Start: 46539, Stop: 43219, Start Num: 36

Candidate Starts for HomeFry_63:

(13, 46644), (Start: 20 @46611 has 2 MA's), (24, 46593), (Start: 36 @46539 has 76 MA's), (45, 46458), (Start: 46 @46443 has 6 MA's), (52, 46392), (66, 46290), (68, 46281), (75, 46215), (80, 46176), (86, 46158), (111, 45999), (112, 45993), (113, 45981), (114, 45969), (123, 45915), (126, 45861), (133, 45798), (142, 45750), (161, 45648), (177, 45624), (199, 45507), (214, 45411), (223, 45333), (225, 45318), (242, 45180), (257, 45048), (264, 45006), (269, 44982), (274, 44949), (278, 44925), (295, 44814), (296, 44811), (297, 44805), (298, 44781), (306, 44763), (311, 44745), (314, 44730), (318, 44700), (347, 44514), (353, 44460), (357, 44418), (358, 44415), (360, 44409), (362, 44400), (364, 44391), (377, 44295), (380, 44277), (383, 44253), (384, 44241), (399, 44109), (403, 44088), (405, 44082), (409, 44052), (417, 44022), (436, 43953), (448, 43875), (474, 43788), (484, 43728), (486, 43707), (492, 43686), (500, 43638), (534, 43512), (537, 43488), (568, 43299), (581, 43233),

Gene: HubbaBubba_55 Start: 44123, Stop: 40872, Start Num: 36

Candidate Starts for HubbaBubba_55:

(5, 44351), (Start: 36 @44123 has 76 MA's), (45, 44042), (Start: 46 @44027 has 6 MA's), (51, 43982), (66, 43874), (68, 43865), (90, 43700), (112, 43577), (118, 43526), (123, 43499), (126, 43445), (127, 43442), (128, 43415), (161, 43232), (177, 43208), (198, 43100), (210, 43022), (214, 42995), (223, 42917), (225, 42902), (242, 42764), (269, 42566), (270, 42560), (274, 42533), (295, 42398), (298, 42365), (311, 42329), (318, 42284), (322, 42272), (332, 42209), (353, 42044), (354, 42041), (357, 42002), (358, 41999), (360, 41993), (362, 41984), (364, 41975), (377, 41879), (380, 41861), (384, 41825), (414, 41621), (448, 41525), (474, 41441), (476, 41432), (500, 41291), (526, 41195), (527, 41192), (556, 41009),

Gene: IDyn_59 Start: 45555, Stop: 42304, Start Num: 36

Candidate Starts for IDyn_59:

(5, 45774), (Start: 36 @45555 has 76 MA's), (45, 45474), (Start: 46 @45459 has 6 MA's), (51, 45414), (66, 45306), (68, 45297), (112, 45009), (118, 44958), (123, 44931), (126, 44877), (128, 44847), (161, 44664), (177, 44640), (210, 44454), (214, 44427), (223, 44349), (225, 44334), (242, 44196), (253, 44103), (269, 43998), (270, 43992), (274, 43965), (295, 43830), (298, 43797), (311, 43761), (318, 43716), (322, 43704), (332, 43641), (353, 43476), (354, 43473), (357, 43434), (358, 43431), (360, 43425), (362, 43416), (364, 43407), (377, 43311), (380, 43293), (384, 43257), (404, 43107), (414, 43053), (448, 42957), (474, 42873), (476, 42864), (484, 42813), (500, 42723), (526, 42627), (527, 42624), (556, 42441), (581, 42318),

Gene: Indlulamithi_76 Start: 52921, Stop: 56100, Start Num: 30

Candidate Starts for Indlulamithi_76:

(Start: 30 @52921 has 1 MA's), (Start: 36 @52936 has 76 MA's), (44, 53008), (Start: 46 @53032 has 6 MA's), (52, 53083), (56, 53110), (65, 53173), (68, 53188), (70, 53203), (82, 53278), (83, 53281), (91, 53344), (92, 53347), (98, 53377), (109, 53458), (142, 53713), (147, 53755), (189, 53905), (193, 53923), (199, 53956), (217, 54091), (218, 54094), (219, 54103), (223, 54130), (225, 54142), (252, 54373), (253, 54376), (263, 54454), (268, 54475), (277, 54535), (281, 54565), (295, 54649), (298, 54682), (309, 54709), (311, 54718), (312, 54724), (314, 54733), (317, 54748), (326, 54793), (329, 54817), (334, 54844), (339, 54862), (342, 54877), (359, 55033), (363, 55048), (368, 55081), (370, 55105), (384, 55204), (427, 55477), (488, 55609), (493, 55624), (496, 55648), (499, 55666), (500, 55669), (510, 55714), (545, 55888), (548, 55906), (553, 55936), (565, 56011), (566, 56014),

Gene: JDawG_56 Start: 40894, Stop: 43194, Start Num: 155

Candidate Starts for JDawG_56:

(140, 40804), (Start: 155 @40894 has 33 MA's), (Start: 158 @40900 has 9 MA's), (186, 40975), (199, 41047), (203, 41068), (207, 41101), (208, 41104), (209, 41113), (212, 41134), (213, 41140), (222, 41209), (225, 41233), (228, 41272), (236, 41329), (245, 41410), (261, 41524), (262, 41536), (268, 41566), (276, 41611), (278, 41629), (290, 41707), (291, 41713), (293, 41722), (296, 41755), (298, 41785), (301, 41791), (309, 41812), (311, 41821), (317, 41851), (330, 41926), (332, 41935), (339, 41965), (342, 41980), (352, 42082), (363, 42154), (367, 42178), (378, 42262), (388, 42352), (389, 42364), (392, 42382), (402, 42466), (405, 42475), (409, 42508), (428, 42580), (497, 42760), (503, 42790), (519, 42853), (535, 42925), (555, 43048), (559, 43081), (570, 43126), (577, 43171), (579, 43177),

Gene: Jalebi_78 Start: 52937, Stop: 56278, Start Num: 35

Candidate Starts for Jalebi_78:

(22, 52889), (Start: 35 @52937 has 25 MA's), (Start: 42 @52997 has 1 MA's), (Start: 46 @53033 has 6 MA's), (51, 53078), (57, 53120), (95, 53381), (111, 53483), (115, 53516), (125, 53612), (170, 53882), (172, 53891), (193, 53999), (201, 54044), (207, 54086), (225, 54218), (226, 54221), (227, 54251), (230, 54272), (240, 54341), (245, 54395), (258, 54494), (261, 54509), (295, 54725), (298, 54758), (306, 54776), (311, 54794), (318, 54839), (319, 54842), (339, 54938), (344, 54980), (345, 54992), (349, 55028), (363, 55127), (374, 55208), (380, 55250), (384, 55286), (389, 55340), (392, 55358), (405, 55454), (407, 55466), (473, 55661), (490, 55745), (505, 55826), (511, 55850), (515, 55865), (525, 55901), (529, 55913), (530, 55919), (531, 55922), (536, 55949), (542, 55994), (557, 56102), (567, 56147), (572, 56171), (579, 56207),

Gene: Jamemuya19_76 Start: 50306, Stop: 53647, Start Num: 35

Candidate Starts for Jamemuya19_76:

(Start: 35 @50306 has 25 MA's), (Start: 42 @50366 has 1 MA's), (Start: 46 @50402 has 6 MA's), (51, 50447), (57, 50489), (95, 50750), (115, 50885), (125, 50981), (170, 51251), (172, 51260), (193, 51368), (201, 51413), (207, 51455), (217, 51533), (225, 51587), (226, 51590), (227, 51620), (240, 51710), (245, 51764), (258, 51863), (261, 51878), (268, 51920), (295, 52094), (298, 52127), (306, 52145), (311, 52163), (318, 52208), (319, 52211), (339, 52307), (344, 52349), (345, 52361), (349, 52397), (374, 52577), (380, 52619), (384, 52655), (388, 52697), (389, 52709), (392, 52727), (405, 52823), (407, 52835), (473, 53030), (490, 53114), (511, 53219), (515, 53234), (520, 53249), (525, 53270), (529, 53282), (530, 53288), (531, 53291), (536, 53318), (542, 53363), (557, 53471), (567, 53516), (572, 53540), (579, 53576),

Gene: Jifall16_59 Start: 48758, Stop: 45447, Start Num: 36

Candidate Starts for Jifall16_59:

(4, 49001), (Start: 36 @48758 has 76 MA's), (44, 48686), (Start: 46 @48662 has 6 MA's), (66, 48509), (68, 48500), (86, 48377), (111, 48218), (112, 48212), (114, 48188), (126, 48080), (128, 48050), (138, 47981), (177, 47843), (184, 47825), (207, 47672), (214, 47630), (223, 47552), (225, 47537), (242, 47399), (269, 47201), (277, 47147), (278, 47144), (288, 47084), (295, 47033), (311, 46964), (318, 46919), (353, 46679), (357, 46637), (358, 46634), (360, 46628), (364, 46610), (377, 46514), (384,

46460), (402, 46316), (405, 46307), (423, 46232), (440, 46157), (448, 46103), (460, 46061), (474, 46013), (486, 45932), (492, 45911), (509, 45821), (517, 45791), (526, 45767), (527, 45764), (556, 45581), (568, 45524),

Gene: JingleBells_57 Start: 40808, Stop: 43108, Start Num: 155

Candidate Starts for JingleBells_57:

(Start: 155 @40808 has 33 MA's), (Start: 158 @40814 has 9 MA's), (186, 40889), (199, 40961), (203, 40982), (207, 41015), (209, 41027), (210, 41030), (212, 41048), (213, 41054), (222, 41123), (225, 41147), (228, 41186), (236, 41243), (245, 41324), (261, 41438), (262, 41450), (276, 41525), (278, 41543), (290, 41621), (291, 41627), (296, 41669), (298, 41699), (301, 41705), (309, 41726), (311, 41735), (317, 41765), (330, 41840), (332, 41849), (338, 41873), (339, 41879), (340, 41885), (342, 41894), (352, 41996), (363, 42068), (367, 42092), (378, 42176), (388, 42266), (389, 42278), (392, 42296), (401, 42374), (402, 42380), (405, 42389), (409, 42422), (428, 42494), (497, 42674), (503, 42704), (519, 42767), (535, 42839), (555, 42962), (559, 42995), (570, 43040), (577, 43085), (579, 43091),

Gene: Kabluna_63 Start: 47955, Stop: 44653, Start Num: 36

Candidate Starts for Kabluna_63:

(Start: 36 @47955 has 76 MA's), (Start: 46 @47859 has 6 MA's), (66, 47706), (68, 47697), (86, 47574), (111, 47415), (112, 47409), (114, 47385), (126, 47277), (142, 47166), (177, 47040), (207, 46869), (214, 46827), (223, 46749), (225, 46734), (242, 46596), (257, 46464), (269, 46398), (278, 46341), (288, 46281), (295, 46230), (311, 46161), (318, 46116), (353, 45873), (357, 45831), (358, 45828), (360, 45822), (364, 45804), (377, 45708), (384, 45654), (405, 45501), (417, 45441), (423, 45426), (448, 45297), (474, 45219), (484, 45159), (486, 45138), (487, 45135), (492, 45117), (507, 45033), (526, 44973), (533, 44946), (534, 44943), (543, 44877), (574, 44694), (581, 44664),

Gene: KandZ_65 Start: 49894, Stop: 53196, Start Num: 14

Candidate Starts for KandZ_65:

(Start: 14 @49894 has 21 MA's), (Start: 30 @49981 has 1 MA's), (31, 49987), (Start: 36 @49996 has 76 MA's), (Start: 46 @50092 has 6 MA's), (68, 50248), (81, 50335), (82, 50338), (89, 50389), (125, 50653), (128, 50692), (139, 50764), (142, 50773), (153, 50848), (175, 50914), (179, 50920), (190, 50974), (193, 50992), (202, 51043), (203, 51046), (206, 51076), (218, 51160), (219, 51169), (223, 51196), (225, 51211), (245, 51388), (246, 51397), (261, 51502), (274, 51583), (283, 51643), (295, 51718), (298, 51751), (301, 51757), (309, 51778), (311, 51787), (318, 51832), (332, 51901), (335, 51916), (345, 51985), (352, 52048), (355, 52081), (356, 52084), (365, 52135), (375, 52210), (389, 52333), (392, 52351), (404, 52429), (405, 52432), (407, 52444), (416, 52489), (422, 52510), (425, 52522), (431, 52552), (436, 52573), (472, 52645), (490, 52702), (510, 52801), (529, 52867), (544, 52957), (547, 52987), (548, 52990), (553, 53020), (559, 53065), (568, 53107), (573, 53137), (576, 53149), (579, 53164), (581, 53173),

Gene: Karate_56 Start: 41072, Stop: 43375, Start Num: 155

Candidate Starts for Karate_56:

(Start: 155 @41072 has 33 MA's), (Start: 158 @41078 has 9 MA's), (186, 41156), (199, 41228), (203, 41249), (207, 41282), (209, 41294), (210, 41297), (212, 41315), (222, 41390), (225, 41414), (228, 41453), (236, 41510), (245, 41591), (261, 41705), (262, 41717), (276, 41792), (278, 41810), (290, 41888), (291, 41894), (293, 41903), (296, 41936), (298, 41966), (301, 41972), (309, 41993), (311, 42002), (317, 42032), (330, 42107), (338, 42140), (339, 42146), (342, 42161), (352, 42263), (363, 42335), (367, 42359), (378, 42443), (388, 42533), (389, 42545), (392, 42563), (401, 42641), (402, 42647), (405, 42656), (409, 42689), (428, 42761), (497, 42941), (503, 42971), (519, 43034), (535, 43106), (555, 43229), (559, 43262), (570, 43307), (577, 43352), (579, 43358),

Gene: Kate_57 Start: 41173, Stop: 43476, Start Num: 155

Candidate Starts for Kate_57:

(Start: 155 @41173 has 33 MA's), (Start: 158 @41179 has 9 MA's), (186, 41257), (199, 41329), (203, 41350), (207, 41383), (209, 41395), (210, 41398), (212, 41416), (222, 41491), (225, 41515), (228, 41554), (233, 41599), (236, 41611), (245, 41692), (261, 41806), (262, 41818), (276, 41893), (278, 41911), (290, 41989), (291, 41995), (293, 42004), (296, 42037), (298, 42067), (301, 42073), (309, 42094), (311, 42103), (317, 42133), (330, 42208), (332, 42217), (338, 42241), (339, 42247), (342, 42262), (344, 42289), (352, 42364), (363, 42436), (367, 42460), (378, 42544), (388, 42634), (389, 42646), (392, 42664), (401, 42742), (402, 42748), (405, 42757), (409, 42790), (428, 42862), (497, 43042), (503, 43072), (519, 43135), (535, 43207), (555, 43330), (559, 43363), (570, 43408), (577, 43453), (579, 43459),

Gene: KidneyBean_60 Start: 48882, Stop: 45571, Start Num: 36

Candidate Starts for KidneyBean_60:

(4, 49125), (Start: 36 @48882 has 76 MA's), (44, 48810), (Start: 46 @48786 has 6 MA's), (66, 48633), (68, 48624), (86, 48501), (111, 48342), (112, 48336), (114, 48312), (126, 48204), (128, 48174), (138, 48105), (177, 47967), (184, 47949), (207, 47796), (214, 47754), (223, 47676), (225, 47661), (242, 47523), (269, 47325), (277, 47271), (278, 47268), (288, 47208), (295, 47157), (311, 47088), (318, 47043), (353, 46803), (357, 46761), (358, 46758), (360, 46752), (364, 46734), (377, 46638), (384, 46584), (402, 46440), (405, 46431), (423, 46356), (440, 46281), (448, 46227), (460, 46185), (474, 46137), (486, 46056), (492, 46035), (509, 45945), (517, 45915), (526, 45891), (527, 45888), (556, 45705), (568, 45648),

Gene: Kimchi1738_43 Start: 41039, Stop: 37746, Start Num: 36

Candidate Starts for Kimchi1738_43:

(Start: 36 @41039 has 76 MA's), (41, 40982), (45, 40958), (Start: 46 @40943 has 6 MA's), (47, 40934), (68, 40787), (102, 40505), (111, 40427), (151, 40118), (188, 40013), (202, 39911), (221, 39776), (223, 39758), (225, 39743), (236, 39647), (264, 39428), (265, 39425), (268, 39410), (273, 39380), (277, 39350), (295, 39233), (298, 39200), (309, 39173), (313, 39149), (339, 39002), (345, 38948), (347, 38927), (356, 38852), (358, 38834), (384, 38657), (387, 38627), (390, 38600), (392, 38585), (415, 38456), (442, 38423), (464, 38336), (490, 38222), (492, 38216), (494, 38204), (531, 38054), (532, 38051), (533, 38045), (536, 38027), (537, 38018), (538, 38000), (557, 37874), (564, 37838), (565, 37832),

Gene: Konstantine_80 Start: 55996, Stop: 59292, Start Num: 36

Candidate Starts for Konstantine_80:

(Start: 26 @55969 has 3 MA's), (Start: 36 @55996 has 76 MA's), (44, 56068), (Start: 46 @56092 has 6 MA's), (49, 56125), (68, 56260), (79, 56353), (84, 56371), (90, 56419), (101, 56479), (125, 56671), (164, 56905), (184, 56962), (192, 57016), (201, 57061), (205, 57088), (209, 57115), (210, 57118), (220, 57196), (225, 57241), (228, 57280), (232, 57322), (243, 57400), (245, 57418), (247, 57436), (249, 57448), (259, 57523), (278, 57679), (291, 57763), (299, 57841), (304, 57862), (305, 57871), (308, 57877), (310, 57886), (323, 57958), (326, 57973), (332, 58012), (334, 58024), (347, 58117), (348, 58123), (354, 58171), (358, 58213), (381, 58363), (383, 58375), (392, 58459), (411, 58600), (443, 58705), (487, 58804), (489, 58813), (504, 58891), (514, 58930), (518, 58945), (531, 58993), (545, 59089), (548, 59107), (552, 59134), (560, 59182), (566, 59212), (567, 59215), (571, 59230), (576, 59260), (577, 59269), (579, 59275), (580, 59278),

Gene: Kors_63 Start: 42629, Stop: 44884, Start Num: 158

Candidate Starts for Kors_63:

(154, 42620), (Start: 158 @42629 has 9 MA's), (203, 42764), (207, 42797), (210, 42812), (223, 42914), (225, 42929), (236, 43025), (245, 43106), (246, 43115), (260, 43214), (261, 43220), (276, 43307), (278, 43325), (282, 43355), (285, 43376), (287, 43388), (290, 43403), (293, 43418), (296, 43451), (298, 43481), (301, 43487), (309, 43508), (311, 43517), (317, 43547), (331, 43628), (334, 43643), (339, 43661), (342, 43676), (351, 43775), (384, 44006), (385, 44009), (389, 44060), (392, 44078), (394, 44090), (398, 44132), (402, 44162), (405, 44171), (425, 44261), (472, 44363), (489, 44414),

(498, 44459), (512, 44522), (519, 44546), (526, 44576), (528, 44582), (559, 44771), (570, 44816), (577, 44861), (579, 44867),

Gene: Krampus_57 Start: 41269, Stop: 43572, Start Num: 155

Candidate Starts for Krampus_57:

(Start: 155 @41269 has 33 MA's), (Start: 158 @41275 has 9 MA's), (186, 41353), (199, 41425), (203, 41446), (207, 41479), (209, 41491), (210, 41494), (212, 41512), (222, 41587), (225, 41611), (228, 41650), (233, 41695), (236, 41707), (245, 41788), (261, 41902), (262, 41914), (276, 41989), (278, 42007), (290, 42085), (291, 42091), (293, 42100), (296, 42133), (298, 42163), (301, 42169), (309, 42190), (311, 42199), (317, 42229), (330, 42304), (332, 42313), (338, 42337), (339, 42343), (342, 42358), (344, 42385), (352, 42460), (363, 42532), (367, 42556), (378, 42640), (388, 42730), (389, 42742), (392, 42760), (401, 42838), (402, 42844), (405, 42853), (409, 42886), (428, 42958), (497, 43138), (503, 43168), (519, 43231), (535, 43303), (555, 43426), (559, 43459), (570, 43504), (577, 43549), (579, 43555),

Gene: Kurt_60 Start: 49119, Stop: 45808, Start Num: 36

Candidate Starts for Kurt_60:

(4, 49362), (Start: 36 @49119 has 76 MA's), (44, 49047), (Start: 46 @49023 has 6 MA's), (66, 48870), (68, 48861), (86, 48738), (111, 48579), (112, 48573), (114, 48549), (126, 48441), (128, 48411), (138, 48342), (177, 48204), (184, 48186), (207, 48033), (214, 47991), (223, 47913), (225, 47898), (242, 47760), (269, 47562), (277, 47508), (278, 47505), (288, 47445), (295, 47394), (311, 47325), (318, 47280), (353, 47040), (357, 46998), (358, 46995), (360, 46989), (364, 46971), (377, 46875), (384, 46821), (402, 46677), (405, 46668), (423, 46593), (440, 46518), (448, 46464), (460, 46422), (474, 46374), (486, 46293), (492, 46272), (509, 46182), (517, 46152), (526, 46128), (527, 46125), (556, 45942), (568, 45885),

Gene: Labelle_90 Start: 57766, Stop: 60999, Start Num: 36

Candidate Starts for Labelle_90:

(Start: 26 @57739 has 3 MA's), (Start: 36 @57766 has 76 MA's), (Start: 46 @57862 has 6 MA's), (68, 58027), (85, 58141), (90, 58186), (97, 58225), (107, 58276), (125, 58441), (220, 58939), (225, 58984), (228, 59023), (255, 59227), (264, 59308), (275, 59368), (281, 59419), (295, 59515), (297, 59524), (298, 59548), (299, 59554), (305, 59584), (308, 59590), (310, 59599), (332, 59722), (333, 59725), (334, 59734), (343, 59776), (344, 59794), (358, 59926), (392, 60172), (418, 60322), (435, 60379), (443, 60421), (463, 60445), (490, 60514), (529, 60682), (544, 60772), (552, 60844), (565, 60919),

Gene: Lambo_77 Start: 51507, Stop: 54848, Start Num: 35

Candidate Starts for Lambo_77:

(22, 51459), (Start: 35 @51507 has 25 MA's), (Start: 42 @51567 has 1 MA's), (Start: 46 @51603 has 6 MA's), (51, 51648), (57, 51690), (95, 51951), (111, 52053), (115, 52086), (125, 52182), (170, 52452), (172, 52461), (193, 52569), (201, 52614), (207, 52656), (225, 52788), (226, 52791), (227, 52821), (230, 52842), (240, 52911), (246, 52974), (258, 53064), (261, 53079), (268, 53121), (295, 53295), (298, 53328), (306, 53346), (311, 53364), (318, 53409), (319, 53412), (339, 53508), (344, 53550), (345, 53562), (349, 53598), (374, 53778), (380, 53820), (384, 53856), (389, 53910), (392, 53928), (405, 54024), (407, 54036), (473, 54231), (490, 54315), (505, 54396), (511, 54420), (515, 54435), (525, 54471), (529, 54483), (530, 54489), (531, 54492), (536, 54519), (542, 54564), (557, 54672), (567, 54717), (572, 54741), (579, 54777),

Gene: LavAbarElk_78 Start: 51143, Stop: 54484, Start Num: 35

Candidate Starts for LavAbarElk_78:

(23, 51101), (Start: 35 @51143 has 25 MA's), (Start: 42 @51203 has 1 MA's), (Start: 46 @51239 has 6 MA's), (51, 51284), (57, 51326), (95, 51587), (111, 51689), (115, 51722), (125, 51818), (170, 52088), (172, 52097), (193, 52205), (201, 52250), (207, 52292), (225, 52424), (226, 52427), (227, 52457), (230, 52478), (240, 52547), (245, 52601), (258, 52700), (261, 52715), (268, 52757), (295, 52931),

(298, 52964), (306, 52982), (311, 53000), (318, 53045), (319, 53048), (339, 53144), (344, 53186), (345, 53198), (349, 53234), (374, 53414), (380, 53456), (384, 53492), (389, 53546), (392, 53564), (405, 53660), (407, 53672), (473, 53867), (490, 53951), (511, 54056), (515, 54071), (525, 54107), (529, 54119), (530, 54125), (531, 54128), (536, 54155), (542, 54200), (557, 54308), (567, 54353), (572, 54377), (579, 54413),

Gene: Leopard_84 Start: 58148, Stop: 60436, Start Num: 156

Candidate Starts for Leopard_84:

(133, 58025), (Start: 156 @58148 has 3 MA's), (171, 58181), (172, 58187), (194, 58277), (199, 58310), (204, 58334), (206, 58361), (218, 58445), (219, 58454), (220, 58457), (225, 58496), (226, 58499), (230, 58550), (241, 58628), (242, 58640), (274, 58868), (277, 58889), (288, 58952), (291, 58964), (298, 59036), (301, 59042), (310, 59066), (311, 59072), (314, 59087), (317, 59102), (319, 59120), (325, 59144), (332, 59186), (341, 59225), (344, 59258), (365, 59420), (367, 59429), (384, 59564), (386, 59591), (392, 59636), (409, 59750), (425, 59810), (502, 60026), (526, 60113), (527, 60116), (536, 60158), (560, 60323), (565, 60353), (575, 60401), (577, 60413), (581, 60428),

Gene: Lila22_79 Start: 52415, Stop: 55756, Start Num: 35

Candidate Starts for Lila22_79:

(22, 52367), (Start: 35 @52415 has 25 MA's), (Start: 42 @52475 has 1 MA's), (Start: 46 @52511 has 6 MA's), (51, 52556), (57, 52598), (95, 52859), (111, 52961), (115, 52994), (125, 53090), (170, 53360), (172, 53369), (193, 53477), (201, 53522), (207, 53564), (225, 53696), (226, 53699), (227, 53729), (230, 53750), (240, 53819), (245, 53873), (258, 53972), (261, 53987), (268, 54029), (295, 54203), (298, 54236), (306, 54254), (311, 54272), (318, 54317), (319, 54320), (339, 54416), (344, 54458), (345, 54470), (349, 54506), (374, 54686), (380, 54728), (384, 54764), (389, 54818), (392, 54836), (405, 54932), (407, 54944), (473, 55139), (490, 55223), (511, 55328), (515, 55343), (525, 55379), (529, 55391), (530, 55397), (531, 55400), (536, 55427), (542, 55472), (557, 55580), (567, 55625), (572, 55649), (579, 55685),

Gene: LilyPad_66 Start: 48330, Stop: 50759, Start Num: 173

Candidate Starts for LilyPad_66:

(Start: 173 @48330 has 8 MA's), (181, 48348), (Start: 183 @48381 has 1 MA's), (223, 48642), (225, 48657), (240, 48780), (261, 48948), (298, 49203), (301, 49209), (309, 49230), (311, 49239), (326, 49314), (327, 49320), (345, 49437), (346, 49452), (347, 49458), (351, 49497), (357, 49551), (372, 49644), (389, 49785), (392, 49803), (400, 49878), (404, 49896), (406, 49902), (407, 49911), (410, 49932), (412, 49944), (484, 50199), (490, 50235), (492, 50241), (493, 50244), (506, 50319), (508, 50325), (521, 50382), (530, 50421), (536, 50451), (544, 50505), (545, 50520), (553, 50568), (562, 50628), (569, 50655), (578, 50706), (583, 50724),

Gene: LittleFella_70 Start: 49071, Stop: 51476, Start Num: 168

Candidate Starts for LittleFella_70:

(152, 48999), (166, 49056), (Start: 168 @49071 has 1 MA's), (187, 49152), (207, 49299), (223, 49416), (225, 49431), (261, 49722), (266, 49752), (271, 49782), (278, 49827), (290, 49899), (298, 49977), (301, 49983), (309, 50004), (311, 50013), (345, 50211), (371, 50412), (372, 50418), (389, 50559), (390, 50562), (392, 50577), (400, 50652), (404, 50670), (406, 50676), (409, 50703), (410, 50706), (412, 50718), (457, 50859), (485, 50979), (490, 51006), (530, 51165), (533, 51177), (536, 51195), (544, 51249), (547, 51279), (548, 51282), (565, 51387), (579, 51453), (580, 51456), (582, 51462),

Gene: Lizz_51 Start: 38864, Stop: 35667, Start Num: 36

Candidate Starts for Lizz_51:

(19, 38945), (29, 38885), (Start: 36 @38864 has 76 MA's), (37, 38855), (39, 38822), (Start: 46 @38768 has 6 MA's), (53, 38714), (56, 38690), (62, 38645), (63, 38636), (64, 38627), (69, 38597), (72, 38564), (84, 38486), (87, 38474), (93, 38420), (94, 38417), (108, 38333), (125, 38177), (129, 38135), (136, 38072), (137, 38069), (Start: 158 @37964 has 9 MA's), (160, 37955), (180, 37913), (Start: 183

@37898 has 1 MA's), (187, 37883), (207, 37757), (218, 37676), (223, 37640), (225, 37625), (226, 37622), (236, 37529), (246, 37439), (277, 37232), (282, 37199), (291, 37148), (298, 37076), (301, 37070), (311, 37040), (317, 37010), (331, 36929), (334, 36914), (350, 36800), (369, 36665), (387, 36521), (388, 36509), (389, 36497), (392, 36479), (402, 36386), (425, 36281), (484, 36170), (487, 36146), (511, 36029), (547, 35858), (550, 35846), (553, 35825), (566, 35747), (568, 35741), (574, 35705), (577, 35690),

Gene: Lollipop1437_64 Start: 49866, Stop: 46552, Start Num: 36

Candidate Starts for Lollipop1437_64:

(Start: 36 @49866 has 76 MA's), (Start: 46 @49770 has 6 MA's), (66, 49617), (68, 49608), (86, 49485), (111, 49326), (112, 49320), (126, 49188), (142, 49077), (154, 48996), (177, 48951), (207, 48780), (214, 48738), (223, 48660), (225, 48645), (242, 48507), (269, 48309), (284, 48207), (295, 48141), (306, 48090), (311, 48072), (318, 48027), (353, 47784), (357, 47742), (358, 47739), (360, 47733), (364, 47715), (377, 47619), (380, 47601), (384, 47565), (402, 47421), (405, 47412), (408, 47388), (414, 47361), (423, 47337), (448, 47208), (474, 47118), (476, 47109), (484, 47058), (486, 47037), (492, 47016), (530, 46860), (534, 46845), (560, 46665), (574, 46596),

Gene: LordBart_63 Start: 42526, Stop: 44781, Start Num: 158

Candidate Starts for LordBart_63:

(154, 42517), (Start: 158 @42526 has 9 MA's), (203, 42661), (207, 42694), (210, 42709), (215, 42736), (223, 42811), (225, 42826), (236, 42922), (245, 43003), (246, 43012), (260, 43111), (261, 43117), (276, 43204), (278, 43222), (282, 43252), (285, 43273), (287, 43285), (290, 43300), (293, 43315), (296, 43348), (298, 43378), (301, 43384), (309, 43405), (311, 43414), (317, 43444), (331, 43525), (334, 43540), (339, 43558), (342, 43573), (351, 43672), (384, 43903), (389, 43957), (392, 43975), (394, 43987), (402, 44059), (405, 44068), (470, 44257), (472, 44260), (484, 44278), (489, 44311), (498, 44356), (512, 44419), (519, 44443), (526, 44473), (544, 44563), (555, 44635), (559, 44668), (570, 44713), (576, 44749), (577, 44758), (579, 44764),

Gene: LuckyLeo_75 Start: 51198, Stop: 54536, Start Num: 33

Candidate Starts for LuckyLeo_75:

(Start: 33 @51198 has 3 MA's), (Start: 42 @51258 has 1 MA's), (44, 51270), (Start: 46 @51294 has 6 MA's), (57, 51381), (115, 51777), (125, 51873), (141, 51996), (170, 52143), (172, 52152), (182, 52185), (187, 52221), (193, 52263), (201, 52308), (207, 52350), (225, 52482), (226, 52485), (227, 52515), (233, 52566), (238, 52587), (240, 52605), (246, 52668), (258, 52758), (261, 52773), (263, 52794), (295, 52989), (298, 53022), (306, 53040), (318, 53103), (319, 53106), (331, 53169), (339, 53202), (344, 53244), (345, 53256), (349, 53292), (365, 53406), (374, 53472), (378, 53499), (380, 53514), (384, 53550), (389, 53604), (392, 53622), (405, 53718), (408, 53742), (429, 53814), (493, 54018), (515, 54129), (520, 54144), (525, 54165), (529, 54177), (530, 54183), (531, 54186), (536, 54213), (542, 54258), (557, 54366), (565, 54405), (567, 54411), (572, 54435), (574, 54450), (576, 54456), (579, 54471),

Gene: MacGully_67 Start: 47987, Stop: 45444, Start Num: 174

Candidate Starts for MacGully_67:

(50, 48773), (88, 48497), (110, 48371), (121, 48290), (Start: 174 @47987 has 1 MA's), (195, 47864), (196, 47858), (223, 47660), (225, 47645), (244, 47483), (245, 47474), (253, 47417), (277, 47258), (298, 47108), (306, 47090), (309, 47081), (316, 47045), (318, 47024), (323, 47009), (345, 46808), (352, 46742), (357, 46691), (358, 46688), (360, 46682), (364, 46664), (377, 46568), (380, 46550), (384, 46514), (389, 46460), (392, 46442), (393, 46436), (395, 46418), (405, 46349), (407, 46337), (409, 46319), (431, 46229), (454, 46097), (461, 46064), (478, 46001), (484, 45947), (526, 45761), (535, 45719), (550, 45620), (553, 45599), (554, 45593), (565, 45524), (581, 45449),

Gene: Madi_65 Start: 47552, Stop: 49987, Start Num: 173

Candidate Starts for Madi_65:

(169, 47537), (Start: 173 @47552 has 8 MA's), (181, 47570), (199, 47693), (208, 47750), (223, 47864), (225, 47879), (261, 48170), (276, 48257), (294, 48386), (298, 48425), (301, 48431), (309, 48452), (311, 48461), (345, 48659), (346, 48674), (347, 48680), (352, 48722), (361, 48785), (365, 48809), (372, 48866), (376, 48890), (381, 48929), (388, 48995), (389, 49007), (392, 49025), (404, 49118), (407, 49133), (413, 49169), (439, 49271), (492, 49463), (493, 49466), (506, 49541), (508, 49547), (521, 49604), (527, 49631), (530, 49643), (544, 49727), (547, 49757), (557, 49826), (562, 49850), (565, 49865), (576, 49916), (578, 49928), (579, 49931), (583, 49946), (585, 49982),

Gene: Madruga_89 Start: 57366, Stop: 60599, Start Num: 36

Candidate Starts for Madruga_89:

(Start: 26 @57339 has 3 MA's), (Start: 36 @57366 has 76 MA's), (Start: 46 @57462 has 6 MA's), (68, 57627), (85, 57741), (90, 57786), (97, 57825), (107, 57876), (125, 58041), (220, 58539), (225, 58584), (228, 58623), (255, 58827), (264, 58908), (275, 58968), (281, 59019), (295, 59115), (297, 59124), (298, 59148), (299, 59154), (305, 59184), (308, 59190), (332, 59322), (333, 59325), (334, 59334), (343, 59376), (344, 59394), (358, 59526), (392, 59772), (418, 59922), (435, 59979), (443, 60021), (463, 60045), (490, 60114), (529, 60282), (544, 60372), (552, 60444), (565, 60519),

Gene: Marietta_61 Start: 45676, Stop: 42425, Start Num: 36

Candidate Starts for Marietta_61:

(5, 45904), (Start: 36 @45676 has 76 MA's), (45, 45595), (Start: 46 @45580 has 6 MA's), (51, 45535), (66, 45427), (68, 45418), (90, 45253), (112, 45130), (118, 45079), (123, 45052), (126, 44998), (128, 44968), (161, 44785), (177, 44761), (198, 44653), (210, 44575), (214, 44548), (223, 44470), (225, 44455), (242, 44317), (269, 44119), (270, 44113), (274, 44086), (283, 44026), (295, 43951), (298, 43918), (311, 43882), (322, 43825), (332, 43762), (353, 43597), (354, 43594), (357, 43555), (358, 43552), (360, 43546), (362, 43537), (364, 43528), (377, 43432), (380, 43414), (384, 43378), (404, 43228), (414, 43174), (448, 43078), (474, 42994), (476, 42985), (484, 42934), (500, 42844), (526, 42748), (527, 42745), (556, 42562), (581, 42439),

Gene: Maselop_59 Start: 45784, Stop: 42368, Start Num: 36

Candidate Starts for Maselop_59:

(Start: 36 @45784 has 76 MA's), (45, 45703), (Start: 46 @45688 has 6 MA's), (59, 45580), (60, 45574), (68, 45526), (77, 45445), (86, 45403), (117, 45193), (119, 45178), (120, 45169), (124, 45145), (125, 45115), (128, 45076), (142, 44995), (147, 44953), (185, 44818), (202, 44704), (210, 44653), (212, 44635), (214, 44626), (223, 44548), (225, 44533), (228, 44494), (233, 44455), (245, 44362), (251, 44311), (253, 44305), (257, 44266), (276, 44161), (277, 44146), (278, 44143), (295, 44029), (296, 44026), (298, 43996), (306, 43978), (308, 43975), (309, 43969), (310, 43966), (316, 43933), (318, 43912), (345, 43744), (354, 43666), (357, 43627), (358, 43624), (360, 43618), (364, 43600), (377, 43504), (380, 43486), (384, 43450), (392, 43378), (405, 43285), (407, 43273), (421, 43210), (434, 43153), (455, 43024), (462, 42994), (477, 42934), (478, 42931), (484, 42877), (500, 42787), (507, 42751), (523, 42706), (526, 42691), (535, 42649), (541, 42604), (550, 42550), (551, 42541), (553, 42529), (554, 42523), (556, 42505), (565, 42454), (566, 42451), (574, 42409),

Gene: Megatron06_78 Start: 56087, Stop: 59383, Start Num: 36

Candidate Starts for Megatron06_78:

(Start: 26 @56060 has 3 MA's), (Start: 36 @56087 has 76 MA's), (44, 56159), (Start: 46 @56183 has 6 MA's), (49, 56216), (68, 56351), (79, 56444), (84, 56462), (90, 56510), (101, 56570), (125, 56762), (164, 56996), (184, 57053), (201, 57152), (205, 57179), (210, 57209), (220, 57287), (225, 57332), (228, 57371), (232, 57413), (243, 57491), (245, 57509), (247, 57527), (249, 57539), (259, 57614), (278, 57770), (291, 57854), (299, 57932), (304, 57953), (305, 57962), (308, 57968), (310, 57977), (323, 58049), (326, 58064), (332, 58103), (334, 58115), (347, 58208), (348, 58214), (354, 58262), (358, 58304), (381, 58454), (383, 58466), (392, 58550), (411, 58691), (443, 58796), (487, 58895), (489, 58904), (504, 58982), (514, 59021), (518, 59036), (531, 59084), (545, 59180), (548, 59198), (552, 59225), (560, 59273), (566, 59303), (567, 59306), (571, 59321), (576, 59351), (577, 59360),

(579, 59366), (580, 59369),

Gene: MerCougar_61 Start: 49170, Stop: 45856, Start Num: 36

Candidate Starts for MerCougar_61:

(Start: 36 @49170 has 76 MA's), (Start: 46 @49074 has 6 MA's), (66, 48921), (68, 48912), (80, 48807), (86, 48789), (111, 48630), (112, 48624), (114, 48600), (126, 48492), (142, 48381), (177, 48255), (207, 48084), (214, 48042), (217, 48003), (223, 47964), (225, 47949), (242, 47811), (257, 47679), (269, 47613), (278, 47556), (288, 47496), (295, 47445), (311, 47376), (318, 47331), (343, 47196), (357, 47046), (358, 47043), (360, 47037), (364, 47019), (377, 46923), (384, 46869), (405, 46716), (414, 46665), (417, 46656), (448, 46512), (474, 46422), (484, 46362), (486, 46341), (492, 46320), (500, 46272), (524, 46188), (526, 46176), (527, 46173), (543, 46080), (574, 45897), (581, 45867),

Gene: Mima20_77 Start: 51887, Stop: 55228, Start Num: 35

Candidate Starts for Mima20_77:

(22, 51839), (Start: 35 @51887 has 25 MA's), (Start: 42 @51947 has 1 MA's), (Start: 46 @51983 has 6 MA's), (51, 52028), (57, 52070), (95, 52331), (111, 52433), (115, 52466), (125, 52562), (170, 52832), (172, 52841), (193, 52949), (201, 52994), (207, 53036), (225, 53168), (226, 53171), (227, 53201), (230, 53222), (240, 53291), (245, 53345), (258, 53444), (261, 53459), (268, 53501), (295, 53675), (298, 53708), (306, 53726), (311, 53744), (318, 53789), (319, 53792), (339, 53888), (344, 53930), (345, 53942), (349, 53978), (374, 54158), (380, 54200), (384, 54236), (389, 54290), (392, 54308), (405, 54404), (407, 54416), (473, 54611), (490, 54695), (505, 54776), (511, 54800), (515, 54815), (525, 54851), (529, 54863), (530, 54869), (531, 54872), (536, 54899), (542, 54944), (557, 55052), (567, 55097), (572, 55121), (579, 55157),

Gene: MoiGyank_82 Start: 52491, Stop: 55832, Start Num: 35

Candidate Starts for MoiGyank_82:

(22, 52443), (Start: 35 @52491 has 25 MA's), (Start: 42 @52551 has 1 MA's), (Start: 46 @52587 has 6 MA's), (51, 52632), (57, 52674), (95, 52935), (111, 53037), (115, 53070), (125, 53166), (170, 53436), (172, 53445), (193, 53553), (201, 53598), (207, 53640), (225, 53772), (226, 53775), (227, 53805), (230, 53826), (240, 53895), (245, 53949), (258, 54048), (261, 54063), (268, 54105), (295, 54279), (298, 54312), (306, 54330), (311, 54348), (318, 54393), (319, 54396), (339, 54492), (344, 54534), (345, 54546), (349, 54582), (374, 54762), (380, 54804), (384, 54840), (389, 54894), (392, 54912), (405, 55008), (407, 55020), (473, 55215), (490, 55299), (505, 55380), (511, 55404), (515, 55419), (525, 55455), (529, 55467), (530, 55473), (531, 55476), (536, 55503), (542, 55548), (557, 55656), (567, 55701), (572, 55725), (579, 55761),

Gene: MontyDev_76 Start: 55561, Stop: 57873, Start Num: 162

Candidate Starts for MontyDev_76:

(Start: 162 @55561 has 10 MA's), (193, 55657), (200, 55696), (207, 55747), (208, 55750), (209, 55759), (210, 55762), (216, 55792), (220, 55840), (225, 55876), (253, 56110), (256, 56143), (268, 56209), (278, 56287), (280, 56305), (307, 56470), (311, 56488), (325, 56560), (326, 56563), (329, 56587), (332, 56602), (339, 56632), (376, 56905), (382, 56947), (383, 56953), (384, 56965), (388, 57007), (392, 57037), (394, 57049), (400, 57109), (404, 57127), (406, 57133), (412, 57175), (420, 57202), (430, 57238), (488, 57361), (489, 57364), (496, 57400), (522, 57499), (529, 57526), (530, 57532), (536, 57562), (554, 57691), (555, 57697), (564, 57754), (568, 57769), (571, 57781), (573, 57799),

Gene: Mopey_68 Start: 49703, Stop: 53005, Start Num: 14

Candidate Starts for Mopey_68:

(Start: 14 @49703 has 21 MA's), (Start: 30 @49790 has 1 MA's), (31, 49796), (Start: 36 @49805 has 76 MA's), (Start: 46 @49901 has 6 MA's), (68, 50057), (81, 50144), (82, 50147), (89, 50198), (125, 50462), (128, 50501), (139, 50573), (142, 50582), (153, 50657), (175, 50723), (179, 50729), (190, 50783), (193, 50801), (202, 50852), (203, 50855), (206, 50885), (218, 50969), (219, 50978), (223,

51005), (225, 51020), (245, 51197), (246, 51206), (248, 51221), (261, 51311), (274, 51392), (283, 51452), (295, 51527), (298, 51560), (301, 51566), (309, 51587), (311, 51596), (318, 51641), (332, 51710), (335, 51725), (345, 51794), (352, 51857), (355, 51890), (356, 51893), (365, 51944), (375, 52019), (389, 52142), (392, 52160), (404, 52238), (405, 52241), (407, 52253), (416, 52298), (422, 52319), (425, 52331), (431, 52361), (436, 52382), (472, 52454), (490, 52511), (510, 52610), (529, 52676), (544, 52766), (547, 52796), (548, 52799), (553, 52829), (559, 52874), (568, 52916), (573, 52946), (576, 52958), (579, 52973), (581, 52982),

Gene: MortySmith_55 Start: 40308, Stop: 42608, Start Num: 155

Candidate Starts for MortySmith_55:

(Start: 155 @40308 has 33 MA's), (Start: 158 @40314 has 9 MA's), (186, 40389), (199, 40461), (203, 40482), (207, 40515), (209, 40527), (210, 40530), (212, 40548), (213, 40554), (222, 40623), (225, 40647), (228, 40686), (236, 40743), (245, 40824), (261, 40938), (262, 40950), (276, 41025), (278, 41043), (290, 41121), (291, 41127), (293, 41136), (296, 41169), (298, 41199), (301, 41205), (309, 41226), (311, 41235), (317, 41265), (330, 41340), (332, 41349), (338, 41373), (339, 41379), (342, 41394), (352, 41496), (363, 41568), (367, 41592), (378, 41676), (388, 41766), (389, 41778), (392, 41796), (401, 41874), (402, 41880), (405, 41889), (409, 41922), (428, 41994), (497, 42174), (503, 42204), (519, 42267), (535, 42339), (555, 42462), (570, 42540), (577, 42585), (579, 42591),

Gene: NadineRae_59 Start: 44917, Stop: 41666, Start Num: 36

Candidate Starts for NadineRae_59:

(13, 45019), (15, 45007), (28, 44938), (Start: 36 @44917 has 76 MA's), (45, 44836), (Start: 46 @44821 has 6 MA's), (51, 44776), (66, 44668), (68, 44659), (112, 44371), (118, 44320), (123, 44293), (126, 44239), (128, 44209), (161, 44026), (177, 44002), (198, 43894), (210, 43816), (214, 43789), (223, 43711), (225, 43696), (242, 43558), (253, 43465), (269, 43360), (270, 43354), (274, 43327), (283, 43267), (295, 43192), (298, 43159), (311, 43123), (318, 43078), (322, 43066), (332, 43003), (353, 42838), (354, 42835), (357, 42796), (358, 42793), (360, 42787), (362, 42778), (364, 42769), (377, 42673), (380, 42655), (384, 42619), (414, 42415), (448, 42319), (451, 42316), (474, 42235), (476, 42226), (484, 42175), (500, 42085), (526, 41989), (527, 41986), (556, 41803),

Gene: NarutoRun_57 Start: 41234, Stop: 43537, Start Num: 155

Candidate Starts for NarutoRun_57:

(Start: 155 @41234 has 33 MA's), (Start: 158 @41240 has 9 MA's), (186, 41318), (199, 41390), (203, 41411), (207, 41444), (209, 41456), (210, 41459), (212, 41477), (222, 41552), (225, 41576), (228, 41615), (233, 41660), (236, 41672), (245, 41753), (261, 41867), (262, 41879), (276, 41954), (278, 41972), (290, 42050), (291, 42056), (293, 42065), (296, 42098), (298, 42128), (301, 42134), (309, 42155), (311, 42164), (317, 42194), (330, 42269), (332, 42278), (338, 42302), (339, 42308), (342, 42323), (344, 42350), (352, 42425), (363, 42497), (367, 42521), (378, 42605), (388, 42695), (389, 42707), (392, 42725), (401, 42803), (402, 42809), (405, 42818), (409, 42851), (428, 42923), (497, 43103), (503, 43133), (519, 43196), (535, 43268), (555, 43391), (559, 43424), (570, 43469), (577, 43514), (579, 43520),

Gene: NatB6_60 Start: 48176, Stop: 44865, Start Num: 36

Candidate Starts for NatB6_60:

(4, 48419), (Start: 36 @48176 has 76 MA's), (44, 48104), (Start: 46 @48080 has 6 MA's), (51, 48035), (66, 47927), (68, 47918), (86, 47795), (111, 47636), (112, 47630), (114, 47606), (126, 47498), (128, 47468), (142, 47387), (177, 47261), (184, 47243), (207, 47090), (214, 47048), (223, 46970), (225, 46955), (242, 46817), (269, 46619), (277, 46565), (278, 46562), (288, 46502), (295, 46451), (306, 46400), (311, 46382), (318, 46337), (353, 46097), (357, 46055), (358, 46052), (360, 46046), (364, 46028), (377, 45932), (384, 45878), (402, 45734), (405, 45725), (412, 45680), (423, 45650), (440, 45575), (448, 45521), (460, 45479), (474, 45431), (486, 45350), (492, 45329), (509, 45239), (517, 45209), (526, 45185), (527, 45182), (556, 44999), (568, 44942),

Gene: Neptune_57 Start: 41252, Stop: 43555, Start Num: 155

Candidate Starts for Neptune_57:

(Start: 155 @41252 has 33 MA's), (Start: 158 @41258 has 9 MA's), (186, 41336), (199, 41408), (203, 41429), (207, 41462), (209, 41474), (210, 41477), (212, 41495), (222, 41570), (225, 41594), (228, 41633), (233, 41678), (236, 41690), (245, 41771), (261, 41885), (262, 41897), (276, 41972), (278, 41990), (290, 42068), (291, 42074), (293, 42083), (296, 42116), (298, 42146), (301, 42152), (309, 42173), (311, 42182), (317, 42212), (330, 42287), (332, 42296), (338, 42320), (339, 42326), (340, 42332), (342, 42341), (352, 42443), (363, 42515), (367, 42539), (378, 42623), (388, 42713), (389, 42725), (392, 42743), (401, 42821), (402, 42827), (405, 42836), (409, 42869), (428, 42941), (497, 43121), (503, 43151), (519, 43214), (535, 43286), (555, 43409), (559, 43442), (570, 43487), (577, 43532), (579, 43538),

Gene: Nilo_76 Start: 55918, Stop: 58230, Start Num: 162

Candidate Starts for Nilo_76:

(Start: 162 @55918 has 10 MA's), (193, 56014), (200, 56053), (207, 56104), (208, 56107), (210, 56119), (216, 56149), (220, 56197), (225, 56233), (253, 56467), (256, 56500), (268, 56566), (278, 56644), (280, 56662), (303, 56809), (307, 56827), (311, 56845), (325, 56917), (326, 56920), (329, 56944), (332, 56959), (339, 56989), (376, 57262), (382, 57304), (383, 57310), (384, 57322), (388, 57364), (392, 57394), (394, 57406), (400, 57466), (404, 57484), (406, 57490), (412, 57532), (420, 57559), (430, 57595), (488, 57718), (489, 57721), (496, 57757), (522, 57856), (529, 57883), (530, 57889), (536, 57919), (548, 58012), (554, 58048), (555, 58054), (564, 58111), (568, 58126), (571, 58138), (573, 58156),

Gene: Nish23_78 Start: 55192, Stop: 58488, Start Num: 36

Candidate Starts for Nish23_78:

(Start: 26 @55162 has 3 MA's), (31, 55183), (Start: 36 @55192 has 76 MA's), (44, 55264), (Start: 46 @55288 has 6 MA's), (49, 55321), (68, 55456), (78, 55546), (79, 55549), (84, 55567), (101, 55675), (125, 55867), (164, 56101), (184, 56158), (201, 56257), (205, 56284), (209, 56311), (210, 56314), (225, 56437), (228, 56476), (232, 56518), (243, 56596), (245, 56614), (247, 56632), (249, 56644), (259, 56719), (278, 56875), (291, 56959), (299, 57037), (304, 57058), (305, 57067), (308, 57073), (310, 57082), (323, 57154), (326, 57169), (332, 57208), (334, 57220), (347, 57313), (348, 57319), (354, 57367), (358, 57409), (381, 57559), (383, 57571), (392, 57655), (411, 57796), (443, 57901), (487, 58000), (489, 58009), (504, 58087), (514, 58126), (518, 58141), (531, 58189), (545, 58285), (548, 58303), (552, 58330), (560, 58378), (566, 58408), (567, 58411), (571, 58426), (576, 58456), (577, 58465), (579, 58471), (580, 58474),

Gene: NorManre_84 Start: 53277, Stop: 56585, Start Num: 38

Candidate Starts for NorManre_84:

(Start: 38 @53277 has 4 MA's), (Start: 42 @53304 has 1 MA's), (Start: 46 @53340 has 6 MA's), (51, 53385), (57, 53427), (95, 53688), (111, 53790), (115, 53823), (125, 53919), (170, 54189), (172, 54198), (193, 54306), (201, 54351), (207, 54393), (225, 54525), (226, 54528), (227, 54558), (230, 54579), (240, 54648), (245, 54702), (258, 54801), (261, 54816), (268, 54858), (295, 55032), (298, 55065), (306, 55083), (311, 55101), (318, 55146), (319, 55149), (339, 55245), (344, 55287), (345, 55299), (349, 55335), (374, 55515), (380, 55557), (384, 55593), (389, 55647), (392, 55665), (405, 55761), (407, 55773), (473, 55968), (490, 56052), (511, 56157), (515, 56172), (525, 56208), (529, 56220), (530, 56226), (531, 56229), (536, 56256), (542, 56301), (557, 56409), (567, 56454), (572, 56478), (579, 56514),

Gene: NosilaM_62 Start: 48632, Stop: 45330, Start Num: 36

Candidate Starts for NosilaM_62:

(Start: 36 @48632 has 76 MA's), (Start: 46 @48536 has 6 MA's), (66, 48383), (68, 48374), (86, 48251), (111, 48092), (112, 48086), (114, 48062), (126, 47954), (142, 47843), (177, 47717), (207, 47546), (214, 47504), (219, 47453), (223, 47426), (225, 47411), (242, 47273), (247, 47222), (257, 47141),

(269, 47075), (278, 47018), (288, 46958), (295, 46907), (311, 46838), (318, 46793), (348, 46601), (352, 46559), (353, 46550), (357, 46508), (358, 46505), (360, 46499), (364, 46481), (377, 46385), (384, 46331), (405, 46178), (417, 46118), (423, 46103), (448, 45974), (474, 45896), (484, 45836), (486, 45815), (487, 45812), (492, 45794), (507, 45710), (526, 45650), (527, 45647), (533, 45623), (543, 45554), (581, 45341),

Gene: Nova_66 Start: 50242, Stop: 53544, Start Num: 14

Candidate Starts for Nova_66:

(Start: 14 @50242 has 21 MA's), (Start: 30 @50329 has 1 MA's), (31, 50335), (Start: 36 @50344 has 76 MA's), (Start: 46 @50440 has 6 MA's), (68, 50596), (81, 50683), (82, 50686), (89, 50737), (125, 51001), (128, 51040), (139, 51112), (142, 51121), (153, 51196), (175, 51262), (179, 51268), (190, 51322), (193, 51340), (202, 51391), (203, 51394), (206, 51424), (218, 51508), (219, 51517), (223, 51544), (225, 51559), (245, 51736), (246, 51745), (261, 51850), (274, 51931), (283, 51991), (295, 52066), (298, 52099), (301, 52105), (309, 52126), (311, 52135), (318, 52180), (332, 52249), (335, 52264), (345, 52333), (352, 52396), (355, 52429), (356, 52432), (365, 52483), (375, 52558), (389, 52681), (392, 52699), (404, 52777), (405, 52780), (407, 52792), (416, 52837), (422, 52858), (425, 52870), (431, 52900), (436, 52921), (472, 52993), (490, 53050), (510, 53149), (529, 53215), (544, 53305), (547, 53335), (548, 53338), (553, 53368), (559, 53413), (568, 53455), (573, 53485), (576, 53497), (579, 53512), (581, 53521),

Gene: NovaSharks_80 Start: 50500, Stop: 53745, Start Num: 46

Candidate Starts for NovaSharks_80:

(Start: 46 @50500 has 6 MA's), (51, 50545), (57, 50587), (95, 50848), (115, 50983), (125, 51079), (170, 51349), (172, 51358), (193, 51466), (201, 51511), (207, 51553), (217, 51631), (225, 51685), (226, 51688), (227, 51718), (240, 51808), (245, 51862), (258, 51961), (261, 51976), (268, 52018), (295, 52192), (298, 52225), (306, 52243), (311, 52261), (318, 52306), (319, 52309), (339, 52405), (344, 52447), (345, 52459), (349, 52495), (374, 52675), (380, 52717), (384, 52753), (388, 52795), (389, 52807), (392, 52825), (405, 52921), (407, 52933), (473, 53128), (490, 53212), (511, 53317), (515, 53332), (520, 53347), (525, 53368), (529, 53380), (530, 53386), (531, 53389), (536, 53416), (542, 53461), (557, 53569), (567, 53614), (572, 53638), (579, 53674),

Gene: NovumRegina_60 Start: 48485, Stop: 45174, Start Num: 36

Candidate Starts for NovumRegina_60:

(4, 48728), (Start: 36 @48485 has 76 MA's), (44, 48413), (Start: 46 @48389 has 6 MA's), (51, 48344), (66, 48236), (68, 48227), (86, 48104), (111, 47945), (112, 47939), (114, 47915), (126, 47807), (128, 47777), (138, 47708), (177, 47570), (184, 47552), (207, 47399), (214, 47357), (223, 47279), (225, 47264), (242, 47126), (269, 46928), (277, 46874), (278, 46871), (288, 46811), (295, 46760), (311, 46691), (318, 46646), (353, 46406), (357, 46364), (358, 46361), (360, 46355), (364, 46337), (377, 46241), (384, 46187), (402, 46043), (405, 46034), (423, 45959), (440, 45884), (448, 45830), (460, 45788), (474, 45740), (486, 45659), (492, 45638), (509, 45548), (517, 45518), (526, 45494), (527, 45491), (556, 45308), (568, 45251),

Gene: Oaker_77 Start: 56089, Stop: 59412, Start Num: 26

Candidate Starts for Oaker_77:

(Start: 26 @56089 has 3 MA's), (Start: 36 @56116 has 76 MA's), (44, 56188), (Start: 46 @56212 has 6 MA's), (49, 56245), (68, 56380), (79, 56473), (84, 56491), (90, 56539), (101, 56599), (125, 56791), (164, 57025), (184, 57082), (192, 57136), (201, 57181), (205, 57208), (210, 57238), (225, 57361), (228, 57400), (232, 57442), (243, 57520), (245, 57538), (247, 57556), (259, 57643), (278, 57799), (291, 57883), (299, 57961), (304, 57982), (305, 57991), (308, 57997), (310, 58006), (323, 58078), (326, 58093), (332, 58132), (334, 58144), (347, 58237), (348, 58243), (354, 58291), (358, 58333), (381, 58483), (383, 58495), (392, 58579), (411, 58720), (443, 58825), (487, 58924), (489, 58933), (504, 59011), (514, 59050), (518, 59065), (531, 59113), (545, 59209), (548, 59227), (552, 59254), (560, 59302), (566, 59332), (567, 59335), (571, 59350), (576, 59380), (577, 59389), (579, 59395),

(580, 59398),

Gene: OhDear_57 Start: 41232, Stop: 43535, Start Num: 155

Candidate Starts for OhDear_57:

(Start: 155 @41232 has 33 MA's), (Start: 158 @41238 has 9 MA's), (186, 41316), (199, 41388), (203, 41409), (207, 41442), (209, 41454), (210, 41457), (212, 41475), (222, 41550), (225, 41574), (228, 41613), (233, 41658), (236, 41670), (245, 41751), (261, 41865), (262, 41877), (276, 41952), (278, 41970), (290, 42048), (291, 42054), (293, 42063), (296, 42096), (298, 42126), (301, 42132), (309, 42153), (311, 42162), (317, 42192), (330, 42267), (332, 42276), (338, 42300), (339, 42306), (342, 42321), (344, 42348), (352, 42423), (363, 42495), (367, 42519), (378, 42603), (388, 42693), (389, 42705), (392, 42723), (401, 42801), (402, 42807), (405, 42816), (409, 42849), (428, 42921), (497, 43101), (503, 43131), (519, 43194), (535, 43266), (555, 43389), (559, 43422), (570, 43467), (577, 43512), (579, 43518),

Gene: Onyinye_84 Start: 57643, Stop: 59931, Start Num: 156

Candidate Starts for Onyinye_84:

(133, 57520), (Start: 156 @57643 has 3 MA's), (171, 57676), (172, 57682), (194, 57772), (199, 57805), (204, 57829), (206, 57856), (218, 57940), (219, 57949), (220, 57952), (225, 57991), (226, 57994), (230, 58045), (241, 58123), (242, 58135), (274, 58363), (277, 58384), (288, 58447), (291, 58459), (298, 58531), (301, 58537), (310, 58561), (311, 58567), (314, 58582), (317, 58597), (319, 58615), (325, 58639), (332, 58681), (341, 58720), (344, 58753), (365, 58915), (367, 58924), (384, 59059), (386, 59086), (392, 59131), (409, 59245), (425, 59305), (502, 59521), (526, 59608), (527, 59611), (536, 59653), (560, 59818), (565, 59848), (575, 59896), (577, 59908), (581, 59923),

Gene: OtterstedtS21_79 Start: 52012, Stop: 55257, Start Num: 46

Candidate Starts for OtterstedtS21_79:

(Start: 42 @51976 has 1 MA's), (Start: 46 @52012 has 6 MA's), (51, 52057), (57, 52099), (95, 52360), (111, 52462), (115, 52495), (125, 52591), (170, 52861), (172, 52870), (193, 52978), (201, 53023), (207, 53065), (225, 53197), (226, 53200), (227, 53230), (240, 53320), (245, 53374), (258, 53473), (261, 53488), (268, 53530), (295, 53704), (298, 53737), (306, 53755), (308, 53758), (311, 53773), (318, 53818), (319, 53821), (339, 53917), (344, 53959), (345, 53971), (349, 54007), (374, 54187), (380, 54229), (384, 54265), (389, 54319), (392, 54337), (405, 54433), (407, 54445), (473, 54640), (490, 54724), (511, 54829), (515, 54844), (525, 54880), (529, 54892), (530, 54898), (531, 54901), (536, 54928), (542, 54973), (557, 55081), (567, 55126), (572, 55150), (579, 55186),

Gene: Outis_61 Start: 48867, Stop: 45550, Start Num: 36

Candidate Starts for Outis_61:

(Start: 36 @48867 has 76 MA's), (41, 48810), (Start: 46 @48771 has 6 MA's), (66, 48618), (68, 48609), (86, 48486), (111, 48327), (112, 48321), (114, 48297), (126, 48189), (142, 48078), (177, 47952), (207, 47781), (214, 47739), (217, 47700), (223, 47661), (225, 47646), (242, 47508), (257, 47376), (269, 47310), (278, 47253), (288, 47193), (295, 47142), (311, 47073), (318, 47028), (353, 46785), (357, 46743), (358, 46740), (360, 46734), (364, 46716), (377, 46620), (384, 46566), (405, 46413), (414, 46362), (417, 46353), (448, 46209), (468, 46131), (474, 46116), (484, 46056), (486, 46035), (492, 46014), (500, 45966), (524, 45882), (526, 45870), (527, 45867), (543, 45774), (574, 45591), (581, 45561),

Gene: OverHedge_56 Start: 41131, Stop: 43434, Start Num: 155

Candidate Starts for OverHedge_56:

(Start: 155 @41131 has 33 MA's), (Start: 158 @41137 has 9 MA's), (186, 41215), (199, 41287), (203, 41308), (207, 41341), (210, 41356), (212, 41374), (222, 41449), (225, 41473), (228, 41512), (233, 41557), (236, 41569), (245, 41650), (261, 41764), (262, 41776), (276, 41851), (278, 41869), (290, 41947), (291, 41953), (293, 41962), (296, 41995), (298, 42025), (301, 42031), (309, 42052), (311, 42061), (317, 42091), (330, 42166), (332, 42175), (338, 42199), (339, 42205), (340, 42211), (342,

42220), (352, 42322), (363, 42394), (367, 42418), (378, 42502), (388, 42592), (389, 42604), (392, 42622), (401, 42700), (402, 42706), (405, 42715), (409, 42748), (428, 42820), (497, 43000), (503, 43030), (519, 43093), (535, 43165), (555, 43288), (559, 43321), (570, 43366), (577, 43411), (579, 43417),

Gene: PBI1_63 Start: 49783, Stop: 52983, Start Num: 36

Candidate Starts for PBI1_63:

(Start: 14 @49681 has 21 MA's), (Start: 30 @49768 has 1 MA's), (31, 49774), (Start: 36 @49783 has 76 MA's), (Start: 46 @49879 has 6 MA's), (68, 50035), (81, 50122), (82, 50125), (89, 50176), (125, 50440), (128, 50479), (139, 50551), (142, 50560), (153, 50635), (175, 50701), (179, 50707), (190, 50761), (193, 50779), (202, 50830), (203, 50833), (206, 50863), (218, 50947), (219, 50956), (223, 50983), (225, 50998), (245, 51175), (246, 51184), (261, 51289), (274, 51370), (283, 51430), (295, 51505), (298, 51538), (301, 51544), (309, 51565), (311, 51574), (318, 51619), (332, 51688), (335, 51703), (345, 51772), (352, 51835), (355, 51868), (356, 51871), (365, 51922), (375, 51997), (389, 52120), (392, 52138), (404, 52216), (405, 52219), (407, 52231), (416, 52276), (422, 52297), (425, 52309), (431, 52339), (436, 52360), (472, 52432), (490, 52489), (510, 52588), (529, 52654), (544, 52744), (547, 52774), (548, 52777), (553, 52807), (559, 52852), (568, 52894), (573, 52924), (576, 52936), (579, 52951), (581, 52960),

Gene: PHTowN_51 Start: 38862, Stop: 35665, Start Num: 36

Candidate Starts for PHTowN_51:

(29, 38883), (Start: 36 @38862 has 76 MA's), (39, 38820), (Start: 46 @38766 has 6 MA's), (53, 38712), (62, 38643), (63, 38634), (64, 38625), (69, 38595), (72, 38562), (76, 38526), (84, 38484), (87, 38472), (93, 38418), (106, 38349), (109, 38310), (116, 38268), (118, 38247), (125, 38175), (129, 38133), (136, 38070), (137, 38067), (Start: 158 @37962 has 9 MA's), (160, 37953), (180, 37911), (Start: 183 @37896 has 1 MA's), (187, 37881), (207, 37755), (218, 37674), (223, 37638), (225, 37623), (226, 37620), (236, 37527), (246, 37437), (277, 37230), (282, 37197), (291, 37146), (298, 37074), (301, 37068), (311, 37038), (317, 37008), (331, 36927), (334, 36912), (350, 36798), (369, 36663), (387, 36519), (388, 36507), (389, 36495), (392, 36477), (402, 36384), (425, 36279), (438, 36222), (484, 36168), (487, 36144), (511, 36027), (547, 35856), (550, 35844), (553, 35823), (566, 35745), (568, 35739), (574, 35703), (577, 35688),

Gene: PLOT_66 Start: 49805, Stop: 53005, Start Num: 36

Candidate Starts for PLOT_66:

(Start: 14 @49703 has 21 MA's), (Start: 30 @49790 has 1 MA's), (Start: 36 @49805 has 76 MA's), (Start: 46 @49901 has 6 MA's), (68, 50057), (81, 50144), (82, 50147), (89, 50198), (125, 50462), (128, 50501), (139, 50573), (142, 50582), (153, 50657), (175, 50723), (179, 50729), (190, 50783), (193, 50801), (202, 50852), (203, 50855), (206, 50885), (218, 50969), (219, 50978), (223, 51005), (225, 51020), (245, 51197), (246, 51206), (261, 51311), (274, 51392), (295, 51527), (298, 51560), (301, 51566), (309, 51587), (311, 51596), (318, 51641), (332, 51710), (335, 51725), (340, 51746), (345, 51794), (352, 51857), (355, 51890), (356, 51893), (357, 51908), (365, 51944), (375, 52019), (389, 52142), (392, 52160), (404, 52238), (405, 52241), (407, 52253), (416, 52298), (422, 52319), (425, 52331), (431, 52361), (436, 52382), (472, 52454), (490, 52511), (510, 52610), (529, 52676), (544, 52766), (547, 52796), (548, 52799), (553, 52829), (559, 52874), (560, 52877), (568, 52916), (573, 52946), (576, 52958), (579, 52973), (581, 52982),

Gene: Papyrus_74 Start: 55529, Stop: 57841, Start Num: 162

Candidate Starts for Papyrus_74:

(Start: 162 @55529 has 10 MA's), (193, 55625), (200, 55664), (207, 55715), (208, 55718), (210, 55730), (216, 55760), (220, 55808), (225, 55844), (253, 56078), (256, 56111), (268, 56177), (278, 56255), (280, 56273), (303, 56420), (307, 56438), (311, 56456), (325, 56528), (326, 56531), (329, 56555), (332, 56570), (339, 56600), (343, 56624), (376, 56873), (382, 56915), (383, 56921), (384, 56933), (388, 56975), (392, 57005), (394, 57017), (400, 57077), (406, 57101), (412, 57143), (420,

57170), (430, 57206), (488, 57329), (489, 57332), (496, 57368), (522, 57467), (529, 57494), (530, 57500), (536, 57530), (554, 57659), (555, 57665), (564, 57722), (568, 57737), (571, 57749), (573, 57767), (577, 57788),

Gene: ParvusTarda_77 Start: 51186, Stop: 54527, Start Num: 35

Candidate Starts for ParvusTarda_77:

(22, 51138), (Start: 35 @51186 has 25 MA's), (Start: 42 @51246 has 1 MA's), (Start: 46 @51282 has 6 MA's), (51, 51327), (57, 51369), (95, 51630), (111, 51732), (115, 51765), (125, 51861), (170, 52131), (172, 52140), (193, 52248), (201, 52293), (207, 52335), (225, 52467), (226, 52470), (227, 52500), (230, 52521), (240, 52590), (245, 52644), (258, 52743), (261, 52758), (295, 52974), (298, 53007), (306, 53025), (311, 53043), (318, 53088), (319, 53091), (339, 53187), (344, 53229), (345, 53241), (349, 53277), (374, 53457), (380, 53499), (384, 53535), (389, 53589), (392, 53607), (405, 53703), (407, 53715), (473, 53910), (490, 53994), (511, 54099), (515, 54114), (525, 54150), (529, 54162), (530, 54168), (531, 54171), (536, 54198), (542, 54243), (557, 54351), (567, 54396), (572, 54420), (579, 54456),

Gene: Patience_91 Start: 58279, Stop: 61512, Start Num: 36

Candidate Starts for Patience_91:

(Start: 26 @58252 has 3 MA's), (Start: 36 @58279 has 76 MA's), (Start: 46 @58375 has 6 MA's), (68, 58540), (85, 58654), (97, 58738), (107, 58789), (125, 58954), (220, 59452), (225, 59497), (228, 59536), (255, 59740), (264, 59821), (275, 59881), (281, 59932), (295, 60028), (297, 60037), (298, 60061), (299, 60067), (305, 60097), (308, 60103), (332, 60235), (333, 60238), (334, 60247), (343, 60289), (344, 60307), (358, 60439), (392, 60685), (418, 60835), (435, 60892), (443, 60934), (463, 60958), (490, 61027), (529, 61195), (544, 61285), (552, 61357), (565, 61432),

Gene: Patio_62 Start: 48881, Stop: 45567, Start Num: 36

Candidate Starts for Patio_62:

(3, 49133), (9, 49046), (12, 49019), (Start: 36 @48881 has 76 MA's), (Start: 46 @48785 has 6 MA's), (66, 48632), (68, 48623), (86, 48500), (111, 48341), (112, 48335), (126, 48203), (128, 48173), (134, 48134), (142, 48092), (154, 48011), (177, 47966), (207, 47795), (214, 47753), (223, 47675), (225, 47660), (242, 47522), (269, 47324), (278, 47267), (284, 47222), (295, 47156), (306, 47105), (311, 47087), (318, 47042), (353, 46799), (357, 46757), (358, 46754), (360, 46748), (364, 46730), (377, 46634), (380, 46616), (384, 46580), (402, 46436), (405, 46427), (408, 46403), (423, 46352), (448, 46223), (460, 46181), (474, 46133), (476, 46124), (484, 46073), (486, 46052), (492, 46031), (530, 45875), (534, 45860), (574, 45611),

Gene: Patos_84 Start: 53276, Stop: 56584, Start Num: 38

Candidate Starts for Patos_84:

(Start: 38 @53276 has 4 MA's), (Start: 42 @53303 has 1 MA's), (Start: 46 @53339 has 6 MA's), (51, 53384), (57, 53426), (95, 53687), (111, 53789), (115, 53822), (125, 53918), (170, 54188), (172, 54197), (193, 54305), (201, 54350), (207, 54392), (225, 54524), (226, 54527), (227, 54557), (230, 54578), (240, 54647), (245, 54701), (258, 54800), (261, 54815), (268, 54857), (295, 55031), (298, 55064), (306, 55082), (311, 55100), (318, 55145), (319, 55148), (339, 55244), (344, 55286), (345, 55298), (349, 55334), (374, 55514), (380, 55556), (384, 55592), (389, 55646), (392, 55664), (405, 55760), (407, 55772), (473, 55967), (490, 56051), (511, 56156), (515, 56171), (525, 56207), (529, 56219), (530, 56225), (531, 56228), (536, 56255), (542, 56300), (557, 56408), (567, 56453), (572, 56477), (579, 56513),

Gene: Pemberton_62 Start: 45661, Stop: 42410, Start Num: 36

Candidate Starts for Pemberton_62:

(11, 45793), (13, 45763), (15, 45751), (Start: 36 @45661 has 76 MA's), (45, 45580), (Start: 46 @45565 has 6 MA's), (51, 45520), (66, 45412), (68, 45403), (89, 45241), (90, 45238), (112, 45115), (118, 45064), (123, 45037), (126, 44983), (128, 44953), (161, 44770), (177, 44746), (198, 44638), (210,

44560), (214, 44533), (223, 44455), (225, 44440), (242, 44302), (269, 44104), (270, 44098), (274, 44071), (283, 44011), (295, 43936), (298, 43903), (311, 43867), (318, 43822), (322, 43810), (332, 43747), (353, 43582), (354, 43579), (357, 43540), (358, 43537), (360, 43531), (362, 43522), (364, 43513), (377, 43417), (380, 43399), (384, 43363), (404, 43213), (414, 43159), (448, 43063), (474, 42979), (476, 42970), (484, 42919), (500, 42829), (516, 42760), (526, 42733), (527, 42730), (556, 42547), (581, 42424),

Gene: Penelope2018_67 Start: 49737, Stop: 53039, Start Num: 14

Candidate Starts for Penelope2018_67:

(Start: 14 @49737 has 21 MA's), (Start: 30 @49824 has 1 MA's), (31, 49830), (Start: 36 @49839 has 76 MA's), (Start: 46 @49935 has 6 MA's), (68, 50091), (81, 50178), (82, 50181), (89, 50232), (125, 50496), (128, 50535), (139, 50607), (142, 50616), (153, 50691), (175, 50757), (179, 50763), (190, 50817), (193, 50835), (202, 50886), (203, 50889), (206, 50919), (218, 51003), (219, 51012), (223, 51039), (225, 51054), (245, 51231), (246, 51240), (261, 51345), (274, 51426), (283, 51486), (295, 51561), (298, 51594), (301, 51600), (309, 51621), (311, 51630), (318, 51675), (332, 51744), (335, 51759), (345, 51828), (352, 51891), (355, 51924), (356, 51927), (365, 51978), (375, 52053), (389, 52176), (392, 52194), (404, 52272), (405, 52275), (407, 52287), (416, 52332), (422, 52353), (425, 52365), (431, 52395), (436, 52416), (472, 52488), (490, 52545), (510, 52644), (529, 52710), (544, 52800), (547, 52830), (548, 52833), (553, 52863), (559, 52908), (568, 52950), (573, 52980), (576, 52992), (579, 53007), (581, 53016),

Gene: PeteyPab_45 Start: 42797, Stop: 39504, Start Num: 36

Candidate Starts for PeteyPab_45:

(Start: 36 @42797 has 76 MA's), (41, 42740), (45, 42716), (Start: 46 @42701 has 6 MA's), (47, 42692), (68, 42545), (96, 42338), (102, 42263), (104, 42239), (111, 42185), (188, 41771), (202, 41669), (221, 41534), (223, 41516), (225, 41501), (236, 41405), (264, 41186), (265, 41183), (268, 41168), (273, 41138), (277, 41108), (295, 40991), (298, 40958), (309, 40931), (313, 40907), (339, 40760), (345, 40706), (347, 40685), (356, 40610), (358, 40592), (384, 40415), (387, 40385), (390, 40358), (392, 40343), (415, 40214), (442, 40181), (464, 40094), (490, 39980), (492, 39974), (494, 39962), (531, 39812), (532, 39809), (533, 39803), (536, 39785), (537, 39776), (538, 39758), (555, 39656), (557, 39632), (564, 39596), (565, 39590),

Gene: Phalaborwa_70 Start: 50156, Stop: 53653, Start Num: 14

Candidate Starts for Phalaborwa_70:

(Start: 14 @50156 has 21 MA's), (Start: 36 @50258 has 76 MA's), (37, 50267), (Start: 42 @50318 has 1 MA's), (Start: 46 @50354 has 6 MA's), (66, 50501), (68, 50510), (71, 50546), (81, 50597), (82, 50600), (89, 50651), (91, 50666), (92, 50669), (125, 50915), (128, 50954), (142, 51035), (175, 51176), (179, 51182), (190, 51236), (193, 51254), (202, 51305), (203, 51308), (206, 51338), (218, 51422), (223, 51458), (225, 51473), (245, 51650), (246, 51659), (261, 51764), (274, 51845), (283, 51905), (295, 51980), (298, 52013), (301, 52019), (309, 52040), (311, 52049), (318, 52094), (332, 52163), (335, 52178), (340, 52199), (345, 52247), (355, 52343), (356, 52346), (357, 52361), (365, 52397), (367, 52406), (375, 52472), (389, 52595), (392, 52613), (405, 52694), (407, 52706), (422, 52772), (425, 52784), (431, 52814), (436, 52835), (446, 52913), (452, 52958), (459, 52991), (467, 53036), (481, 53099), (490, 53159), (510, 53258), (529, 53324), (544, 53414), (547, 53444), (548, 53447), (553, 53477), (559, 53522), (568, 53564), (573, 53594), (576, 53606), (579, 53621), (581, 53630),

Gene: Pharpay_56 Start: 41279, Stop: 43582, Start Num: 155

Candidate Starts for Pharpay_56:

(Start: 155 @41279 has 33 MA's), (Start: 158 @41285 has 9 MA's), (186, 41363), (199, 41435), (203, 41456), (207, 41489), (209, 41501), (210, 41504), (212, 41522), (222, 41597), (225, 41621), (228, 41660), (233, 41705), (236, 41717), (245, 41798), (261, 41912), (262, 41924), (276, 41999), (278, 42017), (290, 42095), (291, 42101), (293, 42110), (296, 42143), (298, 42173), (301, 42179), (309, 42200), (311, 42209), (317, 42239), (330, 42314), (332, 42323), (338, 42347), (339, 42353), (342,

42368), (344, 42395), (352, 42470), (363, 42542), (367, 42566), (378, 42650), (388, 42740), (389, 42752), (392, 42770), (401, 42848), (402, 42854), (405, 42863), (409, 42896), (428, 42968), (497, 43148), (503, 43178), (519, 43241), (535, 43313), (555, 43436), (559, 43469), (570, 43514), (577, 43559), (579, 43565),

Gene: Phomeo_59 Start: 48754, Stop: 45443, Start Num: 36

Candidate Starts for Phomeo_59:

(4, 48997), (Start: 36 @48754 has 76 MA's), (44, 48682), (Start: 46 @48658 has 6 MA's), (66, 48505), (68, 48496), (86, 48373), (111, 48214), (112, 48208), (114, 48184), (126, 48076), (128, 48046), (138, 47977), (177, 47839), (184, 47821), (207, 47668), (214, 47626), (223, 47548), (225, 47533), (242, 47395), (269, 47197), (277, 47143), (278, 47140), (288, 47080), (295, 47029), (311, 46960), (318, 46915), (353, 46675), (357, 46633), (358, 46630), (360, 46624), (364, 46606), (377, 46510), (384, 46456), (402, 46312), (405, 46303), (423, 46228), (440, 46153), (448, 46099), (460, 46057), (474, 46009), (486, 45928), (492, 45907), (509, 45817), (517, 45787), (526, 45763), (527, 45760), (556, 45577), (568, 45520),

Gene: Phreeze_76 Start: 55086, Stop: 58382, Start Num: 36

Candidate Starts for Phreeze_76:

(Start: 26 @55059 has 3 MA's), (Start: 36 @55086 has 76 MA's), (44, 55158), (Start: 46 @55182 has 6 MA's), (47, 55191), (49, 55215), (68, 55350), (79, 55443), (84, 55461), (90, 55509), (101, 55569), (125, 55761), (164, 55995), (184, 56052), (192, 56106), (201, 56151), (205, 56178), (210, 56208), (225, 56331), (228, 56370), (232, 56412), (243, 56490), (245, 56508), (247, 56526), (249, 56538), (259, 56613), (278, 56769), (291, 56853), (299, 56931), (304, 56952), (305, 56961), (308, 56967), (310, 56976), (323, 57048), (326, 57063), (332, 57102), (334, 57114), (347, 57207), (348, 57213), (354, 57261), (358, 57303), (381, 57453), (383, 57465), (392, 57549), (411, 57690), (443, 57795), (487, 57894), (489, 57903), (504, 57981), (514, 58020), (518, 58035), (531, 58083), (545, 58179), (548, 58197), (552, 58224), (560, 58272), (566, 58302), (567, 58305), (571, 58320), (576, 58350), (577, 58359), (579, 58365), (580, 58368),

Gene: PhunaPhoke_57 Start: 41249, Stop: 43552, Start Num: 155

Candidate Starts for PhunaPhoke_57:

(Start: 155 @41249 has 33 MA's), (Start: 158 @41255 has 9 MA's), (186, 41333), (199, 41405), (203, 41426), (207, 41459), (209, 41471), (210, 41474), (212, 41492), (222, 41567), (225, 41591), (228, 41630), (233, 41675), (236, 41687), (245, 41768), (261, 41882), (262, 41894), (276, 41969), (278, 41987), (290, 42065), (291, 42071), (293, 42080), (296, 42113), (298, 42143), (301, 42149), (309, 42170), (311, 42179), (317, 42209), (330, 42284), (332, 42293), (338, 42317), (339, 42323), (340, 42329), (352, 42440), (363, 42512), (367, 42536), (378, 42620), (388, 42710), (389, 42722), (392, 42740), (401, 42818), (402, 42824), (405, 42833), (409, 42866), (428, 42938), (497, 43118), (503, 43148), (519, 43211), (535, 43283), (555, 43406), (559, 43439), (570, 43484), (577, 43529), (579, 43535),

Gene: Pleakley_67 Start: 47999, Stop: 44610, Start Num: 20

Candidate Starts for Pleakley_67:

(13, 48050), (Start: 20 @47999 has 2 MA's), (24, 47981), (27, 47954), (Start: 36 @47930 has 76 MA's), (45, 47849), (Start: 46 @47834 has 6 MA's), (52, 47783), (66, 47681), (68, 47672), (80, 47567), (86, 47549), (99, 47456), (111, 47390), (112, 47384), (113, 47372), (123, 47306), (126, 47252), (142, 47141), (145, 47120), (154, 47060), (164, 47033), (177, 47015), (199, 46898), (223, 46724), (225, 46709), (242, 46571), (253, 46478), (257, 46439), (269, 46373), (274, 46340), (278, 46316), (288, 46256), (295, 46205), (296, 46202), (297, 46196), (298, 46172), (306, 46154), (311, 46136), (318, 46091), (353, 45851), (356, 45824), (358, 45806), (360, 45800), (364, 45782), (377, 45686), (380, 45668), (383, 45644), (384, 45632), (399, 45500), (403, 45479), (405, 45473), (409, 45443), (448, 45266), (459, 45230), (474, 45179), (484, 45119), (486, 45098), (492, 45077), (534, 44903), (568, 44690), (581, 44624),

Gene: Polygyki_59 Start: 45773, Stop: 42357, Start Num: 36

Candidate Starts for Polygyki_59:

(Start: 36 @45773 has 76 MA's), (45, 45692), (Start: 46 @45677 has 6 MA's), (59, 45569), (60, 45563), (68, 45515), (77, 45434), (86, 45392), (117, 45182), (119, 45167), (120, 45158), (124, 45134), (125, 45104), (128, 45065), (142, 44984), (147, 44942), (185, 44807), (202, 44693), (210, 44642), (212, 44624), (214, 44615), (223, 44537), (225, 44522), (228, 44483), (233, 44444), (245, 44351), (251, 44300), (253, 44294), (257, 44255), (276, 44150), (277, 44135), (278, 44132), (295, 44018), (296, 44015), (298, 43985), (306, 43967), (308, 43964), (309, 43958), (310, 43955), (316, 43922), (318, 43901), (345, 43733), (354, 43655), (357, 43616), (358, 43613), (360, 43607), (364, 43589), (377, 43493), (380, 43475), (384, 43439), (392, 43367), (405, 43274), (407, 43262), (421, 43199), (434, 43142), (455, 43013), (462, 42983), (477, 42923), (478, 42920), (484, 42866), (500, 42776), (507, 42740), (523, 42695), (526, 42680), (535, 42638), (541, 42593), (550, 42539), (551, 42530), (553, 42518), (554, 42512), (556, 42494), (565, 42443), (566, 42440), (574, 42398),

Gene: PotatoChip_46 Start: 42799, Stop: 39506, Start Num: 36

Candidate Starts for PotatoChip_46:

(Start: 36 @42799 has 76 MA's), (41, 42742), (45, 42718), (Start: 46 @42703 has 6 MA's), (47, 42694), (68, 42547), (96, 42340), (102, 42265), (104, 42241), (111, 42187), (188, 41773), (202, 41671), (221, 41536), (223, 41518), (225, 41503), (236, 41407), (264, 41188), (265, 41185), (268, 41170), (273, 41140), (277, 41110), (295, 40993), (298, 40960), (309, 40933), (313, 40909), (339, 40762), (345, 40708), (347, 40687), (356, 40612), (358, 40594), (384, 40417), (387, 40387), (390, 40360), (392, 40345), (415, 40216), (442, 40183), (464, 40096), (490, 39982), (492, 39976), (494, 39964), (531, 39814), (532, 39811), (533, 39805), (536, 39787), (537, 39778), (538, 39760), (555, 39658), (557, 39634), (564, 39598), (565, 39592),

Gene: Potty_56 Start: 41179, Stop: 43482, Start Num: 155

Candidate Starts for Potty_56:

(Start: 155 @41179 has 33 MA's), (Start: 158 @41185 has 9 MA's), (186, 41263), (199, 41335), (203, 41356), (207, 41389), (209, 41401), (210, 41404), (212, 41422), (222, 41497), (225, 41521), (228, 41560), (233, 41605), (236, 41617), (245, 41698), (261, 41812), (262, 41824), (276, 41899), (278, 41917), (290, 41995), (291, 42001), (293, 42010), (296, 42043), (298, 42073), (301, 42079), (309, 42100), (311, 42109), (317, 42139), (330, 42214), (332, 42223), (338, 42247), (339, 42253), (340, 42259), (342, 42268), (352, 42370), (363, 42442), (367, 42466), (378, 42550), (388, 42640), (389, 42652), (392, 42670), (401, 42748), (402, 42754), (405, 42763), (409, 42796), (428, 42868), (497, 43048), (503, 43078), (519, 43141), (535, 43213), (555, 43336), (559, 43369), (570, 43414), (577, 43459), (579, 43465),

Gene: Poultriss_56 Start: 41476, Stop: 43779, Start Num: 155

Candidate Starts for Poultriss_56:

(Start: 155 @41476 has 33 MA's), (Start: 158 @41482 has 9 MA's), (186, 41560), (199, 41632), (203, 41653), (207, 41686), (209, 41698), (210, 41701), (212, 41719), (213, 41725), (222, 41794), (225, 41818), (228, 41857), (233, 41902), (236, 41914), (245, 41995), (261, 42109), (262, 42121), (276, 42196), (278, 42214), (290, 42292), (291, 42298), (293, 42307), (296, 42340), (298, 42370), (301, 42376), (309, 42397), (311, 42406), (317, 42436), (330, 42511), (332, 42520), (338, 42544), (339, 42550), (340, 42556), (342, 42565), (352, 42667), (363, 42739), (367, 42763), (378, 42847), (388, 42937), (389, 42949), (392, 42967), (401, 43045), (402, 43051), (405, 43060), (409, 43093), (428, 43165), (497, 43345), (503, 43375), (519, 43438), (535, 43510), (555, 43633), (559, 43666), (570, 43711), (577, 43756), (579, 43762),

Gene: Prager_67 Start: 49797, Stop: 53099, Start Num: 14

Candidate Starts for Prager_67:

(Start: 14 @49797 has 21 MA's), (Start: 30 @49884 has 1 MA's), (31, 49890), (Start: 36 @49899 has 76 MA's), (Start: 46 @49995 has 6 MA's), (68, 50151), (81, 50238), (82, 50241), (89, 50292), (125, 50556), (128, 50595), (139, 50667), (142, 50676), (153, 50751), (175, 50817), (179, 50823), (190, 50877), (193, 50895), (202, 50946), (203, 50949), (206, 50979), (218, 51063), (219, 51072), (223, 51099), (225, 51114), (245, 51291), (246, 51300), (261, 51405), (274, 51486), (283, 51546), (295, 51621), (298, 51654), (301, 51660), (309, 51681), (311, 51690), (318, 51735), (332, 51804), (335, 51819), (345, 51888), (352, 51951), (355, 51984), (356, 51987), (365, 52038), (375, 52113), (389, 52236), (392, 52254), (404, 52332), (405, 52335), (407, 52347), (416, 52392), (422, 52413), (425, 52425), (431, 52455), (436, 52476), (472, 52548), (490, 52605), (510, 52704), (529, 52770), (544, 52860), (547, 52890), (548, 52893), (553, 52923), (559, 52968), (568, 53010), (573, 53040), (576, 53052), (579, 53067), (581, 53076),

Gene: Predator_76 Start: 54791, Stop: 58105, Start Num: 36

Candidate Starts for Predator_76:

(Start: 26 @54761 has 3 MA's), (Start: 36 @54791 has 76 MA's), (44, 54863), (45, 54872), (Start: 46 @54887 has 6 MA's), (47, 54896), (48, 54902), (49, 54920), (68, 55055), (71, 55091), (78, 55145), (90, 55214), (106, 55292), (125, 55466), (130, 55514), (167, 55718), (184, 55790), (185, 55793), (201, 55889), (202, 55895), (205, 55916), (206, 55928), (207, 55931), (210, 55946), (220, 56024), (225, 56069), (228, 56108), (234, 56156), (237, 56168), (242, 56213), (244, 56237), (245, 56246), (247, 56264), (259, 56351), (262, 56381), (272, 56414), (278, 56477), (291, 56561), (295, 56600), (299, 56639), (304, 56660), (305, 56669), (308, 56675), (310, 56684), (311, 56693), (335, 56825), (356, 56993), (358, 57011), (361, 57020), (367, 57053), (383, 57173), (392, 57257), (425, 57437), (469, 57566), (489, 57626), (490, 57629), (491, 57632), (504, 57704), (518, 57758), (531, 57806), (548, 57920), (552, 57947), (560, 57995), (565, 58022), (571, 58043), (574, 58067),

Gene: Puissant_73 Start: 55227, Stop: 58568, Start Num: 26

Candidate Starts for Puissant_73:

(Start: 26 @55227 has 3 MA's), (Start: 36 @55254 has 76 MA's), (44, 55326), (Start: 46 @55350 has 6 MA's), (49, 55383), (68, 55518), (79, 55611), (90, 55677), (101, 55737), (109, 55794), (125, 55929), (154, 56130), (164, 56163), (184, 56220), (201, 56319), (205, 56346), (210, 56376), (216, 56406), (225, 56499), (228, 56538), (232, 56580), (245, 56676), (247, 56694), (258, 56775), (276, 56937), (278, 56955), (291, 57039), (294, 57072), (295, 57078), (300, 57120), (305, 57147), (308, 57153), (310, 57162), (315, 57192), (323, 57234), (326, 57249), (332, 57288), (334, 57300), (347, 57393), (348, 57399), (354, 57447), (358, 57489), (381, 57639), (383, 57651), (392, 57735), (404, 57828), (411, 57876), (417, 57897), (489, 58089), (504, 58167), (518, 58221), (522, 58233), (546, 58377), (548, 58383), (552, 58410), (558, 58449), (566, 58488), (567, 58491), (571, 58506), (579, 58551),

Gene: Pywacket_76 Start: 52328, Stop: 55669, Start Num: 35

Candidate Starts for Pywacket_76:

(23, 52286), (Start: 35 @52328 has 25 MA's), (Start: 42 @52388 has 1 MA's), (Start: 46 @52424 has 6 MA's), (51, 52469), (57, 52511), (95, 52772), (111, 52874), (115, 52907), (125, 53003), (170, 53273), (172, 53282), (193, 53390), (201, 53435), (207, 53477), (225, 53609), (226, 53612), (227, 53642), (230, 53663), (240, 53732), (245, 53786), (258, 53885), (261, 53900), (295, 54116), (298, 54149), (306, 54167), (311, 54185), (318, 54230), (319, 54233), (339, 54329), (344, 54371), (345, 54383), (349, 54419), (374, 54599), (380, 54641), (384, 54677), (389, 54731), (392, 54749), (405, 54845), (407, 54857), (473, 55052), (490, 55136), (505, 55217), (511, 55241), (515, 55256), (525, 55292), (529, 55304), (530, 55310), (531, 55313), (536, 55340), (542, 55385), (557, 55493), (567, 55538), (572, 55562), (579, 55598),

Gene: Rachella_57 Start: 41260, Stop: 43563, Start Num: 155

Candidate Starts for Rachella_57:

(Start: 155 @41260 has 33 MA's), (Start: 158 @41266 has 9 MA's), (186, 41344), (199, 41416), (203, 41437), (207, 41470), (209, 41482), (210, 41485), (212, 41503), (222, 41578), (225, 41602), (228,

41641), (233, 41686), (236, 41698), (245, 41779), (261, 41893), (262, 41905), (276, 41980), (278, 41998), (290, 42076), (291, 42082), (293, 42091), (296, 42124), (298, 42154), (301, 42160), (309, 42181), (311, 42190), (317, 42220), (330, 42295), (332, 42304), (338, 42328), (339, 42334), (342, 42349), (344, 42376), (352, 42451), (363, 42523), (367, 42547), (378, 42631), (388, 42721), (389, 42733), (392, 42751), (401, 42829), (402, 42835), (405, 42844), (409, 42877), (428, 42949), (497, 43129), (503, 43159), (519, 43222), (535, 43294), (555, 43417), (559, 43450), (570, 43495), (577, 43540), (579, 43546),

Gene: Ranch_80 Start: 51036, Stop: 54344, Start Num: 38

Candidate Starts for Ranch_80:

(Start: 38 @51036 has 4 MA's), (Start: 42 @51063 has 1 MA's), (Start: 46 @51099 has 6 MA's), (51, 51144), (57, 51186), (95, 51447), (111, 51549), (115, 51582), (125, 51678), (170, 51948), (172, 51957), (193, 52065), (201, 52110), (207, 52152), (225, 52284), (226, 52287), (227, 52317), (230, 52338), (240, 52407), (245, 52461), (258, 52560), (261, 52575), (268, 52617), (295, 52791), (298, 52824), (306, 52842), (311, 52860), (318, 52905), (319, 52908), (339, 53004), (344, 53046), (345, 53058), (349, 53094), (374, 53274), (380, 53316), (384, 53352), (389, 53406), (392, 53424), (405, 53520), (407, 53532), (473, 53727), (490, 53811), (511, 53916), (515, 53931), (520, 53946), (525, 53967), (529, 53979), (530, 53985), (531, 53988), (536, 54015), (542, 54060), (557, 54168), (567, 54213), (572, 54237), (579, 54273),

Gene: RazorC_78 Start: 50446, Stop: 53787, Start Num: 35

Candidate Starts for RazorC_78:

(Start: 35 @50446 has 25 MA's), (Start: 46 @50542 has 6 MA's), (51, 50587), (57, 50629), (95, 50890), (115, 51025), (125, 51121), (170, 51391), (172, 51400), (193, 51508), (201, 51553), (207, 51595), (217, 51673), (225, 51727), (226, 51730), (227, 51760), (240, 51850), (245, 51904), (258, 52003), (261, 52018), (268, 52060), (295, 52234), (298, 52267), (306, 52285), (311, 52303), (318, 52348), (319, 52351), (339, 52447), (344, 52489), (345, 52501), (349, 52537), (374, 52717), (380, 52759), (384, 52795), (388, 52837), (389, 52849), (392, 52867), (405, 52963), (407, 52975), (473, 53170), (490, 53254), (511, 53359), (515, 53374), (520, 53389), (525, 53410), (529, 53422), (530, 53428), (531, 53431), (536, 53458), (542, 53503), (557, 53611), (567, 53656), (572, 53680), (579, 53716),

Gene: RedRaider_67 Start: 51121, Stop: 47807, Start Num: 36

Candidate Starts for RedRaider_67:

(Start: 36 @51121 has 76 MA's), (Start: 38 @51088 has 4 MA's), (Start: 46 @51025 has 6 MA's), (66, 50872), (68, 50863), (86, 50740), (111, 50581), (112, 50575), (114, 50551), (115, 50548), (123, 50497), (126, 50443), (128, 50413), (177, 50206), (207, 50035), (214, 49993), (223, 49915), (225, 49900), (242, 49762), (247, 49711), (269, 49564), (278, 49507), (284, 49462), (295, 49396), (306, 49345), (311, 49327), (318, 49282), (353, 49039), (357, 48997), (358, 48994), (360, 48988), (364, 48970), (373, 48901), (377, 48874), (380, 48856), (384, 48820), (402, 48676), (405, 48667), (408, 48643), (423, 48592), (448, 48463), (460, 48421), (474, 48373), (476, 48364), (484, 48313), (486, 48292), (492, 48271), (534, 48100), (574, 47851),

Gene: Riduram_77 Start: 50021, Stop: 53362, Start Num: 35

Candidate Starts for Riduram_77:

(Start: 35 @50021 has 25 MA's), (Start: 42 @50081 has 1 MA's), (Start: 46 @50117 has 6 MA's), (51, 50162), (57, 50204), (95, 50465), (115, 50600), (125, 50696), (170, 50966), (172, 50975), (193, 51083), (201, 51128), (207, 51170), (217, 51248), (225, 51302), (226, 51305), (227, 51335), (240, 51425), (245, 51479), (258, 51578), (261, 51593), (268, 51635), (295, 51809), (298, 51842), (306, 51860), (311, 51878), (318, 51923), (319, 51926), (339, 52022), (344, 52064), (345, 52076), (349, 52112), (374, 52292), (380, 52334), (384, 52370), (388, 52412), (389, 52424), (392, 52442), (405, 52538), (407, 52550), (473, 52745), (490, 52829), (511, 52934), (515, 52949), (520, 52964), (525, 52985), (529, 52997), (530, 53003), (531, 53006), (536, 53033), (542, 53078), (548, 53120), (557, 53186), (567, 53231), (572, 53255), (579, 53291),

Gene: Rie18_57 Start: 41055, Stop: 43352, Start Num: 158

Candidate Starts for Rie18_57:

(Start: 158 @41055 has 9 MA's), (186, 41133), (203, 41226), (207, 41259), (209, 41271), (210, 41274), (212, 41292), (222, 41367), (225, 41391), (228, 41430), (236, 41487), (245, 41568), (261, 41682), (262, 41694), (278, 41787), (288, 41853), (291, 41871), (296, 41913), (298, 41943), (301, 41949), (309, 41970), (311, 41979), (317, 42009), (325, 42051), (330, 42084), (339, 42123), (363, 42312), (367, 42336), (388, 42510), (389, 42522), (392, 42540), (397, 42585), (402, 42624), (405, 42633), (422, 42711), (428, 42738), (438, 42780), (497, 42918), (503, 42948), (510, 42981), (519, 43011), (535, 43083), (539, 43119), (554, 43200), (555, 43206), (559, 43239), (570, 43284), (577, 43329), (579, 43335),

Gene: RikSengupta_63 Start: 42657, Stop: 44912, Start Num: 158

Candidate Starts for RikSengupta_63:

(154, 42648), (Start: 158 @42657 has 9 MA's), (203, 42792), (207, 42825), (210, 42840), (223, 42942), (225, 42957), (236, 43053), (245, 43134), (246, 43143), (260, 43242), (261, 43248), (276, 43335), (278, 43353), (282, 43383), (285, 43404), (287, 43416), (290, 43431), (293, 43446), (296, 43479), (298, 43509), (301, 43515), (309, 43536), (311, 43545), (317, 43575), (331, 43656), (334, 43671), (339, 43689), (342, 43704), (351, 43803), (384, 44034), (385, 44037), (389, 44088), (392, 44106), (394, 44118), (398, 44160), (402, 44190), (405, 44199), (425, 44289), (472, 44391), (489, 44442), (498, 44487), (512, 44550), (519, 44574), (526, 44604), (528, 44610), (559, 44799), (570, 44844), (577, 44889), (579, 44895),

Gene: Riparian_76 Start: 55365, Stop: 57677, Start Num: 162

Candidate Starts for Riparian_76:

(Start: 162 @55365 has 10 MA's), (193, 55461), (200, 55500), (207, 55551), (208, 55554), (210, 55566), (216, 55596), (220, 55644), (225, 55680), (253, 55914), (256, 55947), (268, 56013), (278, 56091), (280, 56109), (303, 56256), (307, 56274), (311, 56292), (325, 56364), (326, 56367), (329, 56391), (332, 56406), (339, 56436), (376, 56709), (382, 56751), (383, 56757), (384, 56769), (388, 56811), (392, 56841), (394, 56853), (400, 56913), (404, 56931), (406, 56937), (412, 56979), (420, 57006), (430, 57042), (488, 57165), (489, 57168), (496, 57204), (522, 57303), (529, 57330), (530, 57336), (536, 57366), (548, 57459), (554, 57495), (555, 57501), (564, 57558), (568, 57573), (571, 57585), (573, 57603),

Gene: Rooney_51 Start: 39051, Stop: 35854, Start Num: 36

Candidate Starts for Rooney_51:

(29, 39072), (Start: 36 @39051 has 76 MA's), (39, 39009), (Start: 46 @38955 has 6 MA's), (53, 38901), (62, 38832), (63, 38823), (64, 38814), (69, 38784), (72, 38751), (76, 38715), (84, 38673), (87, 38661), (93, 38607), (106, 38538), (109, 38499), (116, 38457), (118, 38436), (125, 38364), (129, 38322), (136, 38259), (137, 38256), (153, 38166), (Start: 158 @38151 has 9 MA's), (160, 38142), (180, 38100), (Start: 183 @38085 has 1 MA's), (187, 38070), (207, 37944), (218, 37863), (220, 37851), (223, 37827), (225, 37812), (226, 37809), (236, 37716), (244, 37644), (246, 37626), (251, 37584), (260, 37527), (263, 37500), (277, 37419), (279, 37413), (282, 37386), (291, 37335), (296, 37293), (298, 37263), (301, 37257), (311, 37227), (314, 37212), (317, 37197), (325, 37155), (326, 37152), (331, 37116), (334, 37101), (350, 36987), (387, 36708), (388, 36696), (389, 36684), (392, 36666), (402, 36573), (425, 36468), (484, 36357), (487, 36333), (507, 36231), (511, 36216), (535, 36123), (547, 36045), (550, 36033), (553, 36012), (560, 35964), (568, 35928), (574, 35892), (577, 35877),

Gene: Rope_74 Start: 55521, Stop: 57833, Start Num: 162

Candidate Starts for Rope_74:

(Start: 162 @55521 has 10 MA's), (193, 55617), (200, 55656), (207, 55707), (208, 55710), (210, 55722), (216, 55752), (220, 55800), (225, 55836), (253, 56070), (256, 56103), (268, 56169), (278, 56247), (280, 56265), (307, 56430), (311, 56448), (325, 56520), (326, 56523), (329, 56547), (332,

56562), (339, 56592), (343, 56616), (376, 56865), (382, 56907), (383, 56913), (384, 56925), (388, 56967), (392, 56997), (394, 57009), (406, 57093), (420, 57162), (430, 57198), (488, 57321), (489, 57324), (496, 57360), (522, 57459), (529, 57486), (530, 57492), (536, 57522), (554, 57651), (555, 57657), (564, 57714), (568, 57729), (571, 57741), (573, 57759), (577, 57780),

Gene: Rota_76 Start: 52096, Stop: 55377, Start Num: 42

Candidate Starts for Rota_76:

(Start: 42 @52096 has 1 MA's), (44, 52108), (Start: 46 @52132 has 6 MA's), (51, 52177), (57, 52219), (95, 52480), (108, 52555), (123, 52666), (125, 52711), (170, 52981), (172, 52990), (193, 53098), (201, 53143), (207, 53185), (225, 53317), (226, 53320), (227, 53350), (230, 53371), (240, 53440), (245, 53494), (258, 53593), (261, 53608), (268, 53650), (295, 53824), (298, 53857), (306, 53875), (311, 53893), (318, 53938), (319, 53941), (339, 54037), (344, 54079), (345, 54091), (349, 54127), (374, 54307), (380, 54349), (384, 54385), (389, 54439), (392, 54457), (405, 54553), (407, 54565), (473, 54760), (490, 54844), (505, 54925), (511, 54949), (515, 54964), (525, 55000), (529, 55012), (530, 55018), (531, 55021), (536, 55048), (542, 55093), (557, 55201), (567, 55246), (572, 55270), (579, 55306),

Gene: Rukungu_80 Start: 52624, Stop: 55965, Start Num: 35

Candidate Starts for Rukungu_80:

(23, 52582), (Start: 35 @52624 has 25 MA's), (Start: 42 @52684 has 1 MA's), (Start: 46 @52720 has 6 MA's), (51, 52765), (57, 52807), (95, 53068), (111, 53170), (115, 53203), (125, 53299), (170, 53569), (172, 53578), (193, 53686), (201, 53731), (207, 53773), (225, 53905), (226, 53908), (227, 53938), (230, 53959), (240, 54028), (245, 54082), (258, 54181), (261, 54196), (268, 54238), (295, 54412), (298, 54445), (306, 54463), (311, 54481), (318, 54526), (319, 54529), (339, 54625), (344, 54667), (345, 54679), (349, 54715), (374, 54895), (380, 54937), (384, 54973), (389, 55027), (392, 55045), (405, 55141), (407, 55153), (473, 55348), (490, 55432), (505, 55513), (511, 55537), (515, 55552), (520, 55567), (525, 55588), (529, 55600), (530, 55606), (531, 55609), (536, 55636), (542, 55681), (557, 55789), (567, 55834), (572, 55858), (579, 55894),

Gene: Rumi_79 Start: 49989, Stop: 53330, Start Num: 35

Candidate Starts for Rumi_79:

(Start: 35 @49989 has 25 MA's), (Start: 42 @50049 has 1 MA's), (Start: 46 @50085 has 6 MA's), (51, 50130), (57, 50172), (95, 50433), (115, 50568), (125, 50664), (170, 50934), (172, 50943), (193, 51051), (201, 51096), (207, 51138), (217, 51216), (225, 51270), (226, 51273), (227, 51303), (240, 51393), (245, 51447), (258, 51546), (261, 51561), (268, 51603), (295, 51777), (298, 51810), (306, 51828), (311, 51846), (318, 51891), (319, 51894), (339, 51990), (344, 52032), (345, 52044), (349, 52080), (374, 52260), (380, 52302), (384, 52338), (388, 52380), (389, 52392), (392, 52410), (405, 52506), (407, 52518), (473, 52713), (490, 52797), (511, 52902), (515, 52917), (520, 52932), (525, 52953), (529, 52965), (530, 52971), (531, 52974), (536, 53001), (542, 53046), (557, 53154), (567, 53199), (572, 53223), (579, 53259),

Gene: Sadboi_79 Start: 52345, Stop: 55686, Start Num: 35

Candidate Starts for Sadboi_79:

(22, 52297), (Start: 35 @52345 has 25 MA's), (Start: 42 @52405 has 1 MA's), (Start: 46 @52441 has 6 MA's), (51, 52486), (57, 52528), (95, 52789), (111, 52891), (115, 52924), (125, 53020), (170, 53290), (172, 53299), (193, 53407), (201, 53452), (207, 53494), (225, 53626), (226, 53629), (227, 53659), (230, 53680), (240, 53749), (245, 53803), (258, 53902), (261, 53917), (268, 53959), (295, 54133), (298, 54166), (306, 54184), (311, 54202), (318, 54247), (319, 54250), (339, 54346), (344, 54388), (345, 54400), (349, 54436), (374, 54616), (380, 54658), (384, 54694), (389, 54748), (392, 54766), (405, 54862), (407, 54874), (473, 55069), (490, 55153), (505, 55234), (511, 55258), (515, 55273), (525, 55309), (529, 55321), (530, 55327), (531, 55330), (536, 55357), (542, 55402), (557, 55510), (567, 55555), (572, 55579), (579, 55615),

Gene: Sampudon_80 Start: 52937, Stop: 56278, Start Num: 35

Candidate Starts for Sampudon_80:

(22, 52889), (Start: 35 @52937 has 25 MA's), (Start: 42 @52997 has 1 MA's), (Start: 46 @53033 has 6 MA's), (51, 53078), (57, 53120), (95, 53381), (111, 53483), (115, 53516), (125, 53612), (170, 53882), (172, 53891), (193, 53999), (201, 54044), (207, 54086), (225, 54218), (226, 54221), (227, 54251), (230, 54272), (240, 54341), (245, 54395), (258, 54494), (261, 54509), (295, 54725), (298, 54758), (306, 54776), (311, 54794), (318, 54839), (319, 54842), (339, 54938), (344, 54980), (345, 54992), (349, 55028), (363, 55127), (374, 55208), (380, 55250), (384, 55286), (389, 55340), (392, 55358), (405, 55454), (407, 55466), (473, 55661), (490, 55745), (505, 55826), (511, 55850), (515, 55865), (525, 55901), (529, 55913), (530, 55919), (531, 55922), (536, 55949), (542, 55994), (557, 56102), (567, 56147), (572, 56171), (579, 56207),

Gene: SassyC_56 Start: 39581, Stop: 36360, Start Num: 29

Candidate Starts for SassyC_56:

(29, 39581), (Start: 36 @39560 has 76 MA's), (39, 39518), (Start: 46 @39464 has 6 MA's), (53, 39410), (54, 39407), (62, 39341), (63, 39332), (65, 39314), (69, 39293), (72, 39260), (84, 39182), (87, 39170), (93, 39116), (118, 38945), (129, 38831), (136, 38768), (137, 38765), (Start: 158 @38660 has 9 MA's), (180, 38609), (Start: 183 @38594 has 1 MA's), (187, 38579), (204, 38483), (207, 38453), (218, 38372), (223, 38336), (225, 38321), (226, 38318), (236, 38225), (245, 38144), (246, 38135), (270, 37976), (277, 37928), (282, 37895), (293, 37835), (296, 37802), (298, 37772), (301, 37766), (311, 37736), (314, 37721), (317, 37706), (325, 37664), (326, 37661), (331, 37625), (334, 37610), (350, 37496), (369, 37361), (387, 37217), (388, 37205), (389, 37193), (393, 37169), (402, 37082), (409, 37040), (419, 36998), (487, 36842), (510, 36731), (547, 36554), (550, 36542), (553, 36521), (554, 36515), (566, 36443), (568, 36437), (570, 36431), (574, 36401), (577, 36386),

Gene: Scuba_68 Start: 48073, Stop: 44684, Start Num: 20

Candidate Starts for Scuba_68:

(13, 48124), (Start: 20 @48073 has 2 MA's), (24, 48055), (27, 48028), (Start: 36 @48004 has 76 MA's), (45, 47923), (Start: 46 @47908 has 6 MA's), (52, 47857), (66, 47755), (68, 47746), (80, 47641), (86, 47623), (99, 47530), (111, 47464), (112, 47458), (113, 47446), (123, 47380), (126, 47326), (154, 47134), (164, 47107), (177, 47089), (199, 46972), (223, 46798), (225, 46783), (242, 46645), (269, 46447), (274, 46414), (278, 46390), (288, 46330), (295, 46279), (296, 46276), (297, 46270), (298, 46246), (306, 46228), (311, 46210), (318, 46165), (353, 45925), (358, 45880), (360, 45874), (364, 45856), (377, 45760), (380, 45742), (383, 45718), (384, 45706), (399, 45574), (403, 45553), (405, 45547), (409, 45517), (412, 45502), (448, 45340), (459, 45304), (474, 45253), (486, 45172), (492, 45151), (534, 44977), (568, 44764), (581, 44698),

Gene: Send513_74 Start: 55899, Stop: 58211, Start Num: 162

Candidate Starts for Send513_74:

(Start: 162 @55899 has 10 MA's), (193, 55995), (200, 56034), (207, 56085), (208, 56088), (209, 56097), (210, 56100), (216, 56130), (220, 56178), (225, 56214), (253, 56448), (256, 56481), (268, 56547), (278, 56625), (280, 56643), (307, 56808), (311, 56826), (326, 56901), (329, 56925), (332, 56940), (339, 56970), (376, 57243), (382, 57285), (383, 57291), (384, 57303), (388, 57345), (392, 57375), (394, 57387), (400, 57447), (404, 57465), (406, 57471), (420, 57540), (430, 57576), (488, 57699), (489, 57702), (496, 57738), (522, 57837), (529, 57864), (530, 57870), (536, 57900), (554, 58029), (555, 58035), (564, 58092), (568, 58107), (571, 58119), (573, 58137),

Gene: ShakeNBake_51 Start: 38880, Stop: 35683, Start Num: 36

Candidate Starts for ShakeNBake_51:

(19, 38961), (29, 38901), (Start: 36 @38880 has 76 MA's), (37, 38871), (39, 38838), (Start: 46 @38784 has 6 MA's), (51, 38739), (53, 38730), (56, 38706), (62, 38661), (63, 38652), (64, 38643), (69, 38613), (72, 38580), (84, 38502), (87, 38490), (93, 38436), (94, 38433), (108, 38349), (125, 38193), (129, 38151), (136, 38088), (137, 38085), (Start: 158 @37980 has 9 MA's), (160, 37971), (180, 37929),

(Start: 183 @37914 has 1 MA's), (187, 37899), (207, 37773), (218, 37692), (223, 37656), (225, 37641), (226, 37638), (236, 37545), (246, 37455), (263, 37329), (277, 37248), (282, 37215), (291, 37164), (298, 37092), (301, 37086), (311, 37056), (317, 37026), (331, 36945), (334, 36930), (350, 36816), (369, 36681), (387, 36537), (388, 36525), (389, 36513), (392, 36495), (402, 36402), (425, 36297), (484, 36186), (487, 36162), (511, 36045), (547, 35874), (550, 35862), (553, 35841), (566, 35763), (568, 35757), (574, 35721), (577, 35706),

Gene: Sienna_66 Start: 47793, Stop: 50228, Start Num: 173

Candidate Starts for Sienna_66:

(Start: 173 @47793 has 8 MA's), (181, 47811), (208, 47991), (223, 48105), (225, 48120), (261, 48411), (276, 48498), (294, 48627), (298, 48666), (301, 48672), (309, 48693), (311, 48702), (345, 48900), (346, 48915), (347, 48921), (352, 48963), (361, 49026), (365, 49050), (372, 49107), (376, 49131), (381, 49170), (388, 49236), (389, 49248), (392, 49266), (404, 49359), (407, 49374), (413, 49410), (439, 49512), (492, 49704), (493, 49707), (506, 49782), (508, 49788), (521, 49845), (527, 49872), (530, 49884), (544, 49968), (547, 49998), (557, 50067), (562, 50091), (565, 50106), (576, 50157), (578, 50169), (579, 50172), (583, 50187), (585, 50223),

Gene: SilentWarrior_58 Start: 40669, Stop: 42969, Start Num: 155

Candidate Starts for SilentWarrior_58:

(Start: 155 @40669 has 33 MA's), (Start: 158 @40675 has 9 MA's), (186, 40750), (199, 40822), (203, 40843), (207, 40876), (209, 40888), (212, 40909), (213, 40915), (222, 40984), (225, 41008), (228, 41047), (236, 41104), (245, 41185), (261, 41299), (262, 41311), (276, 41386), (278, 41404), (290, 41482), (291, 41488), (293, 41497), (296, 41530), (298, 41560), (301, 41566), (309, 41587), (311, 41596), (317, 41626), (330, 41701), (332, 41710), (338, 41734), (339, 41740), (340, 41746), (342, 41755), (352, 41857), (363, 41929), (367, 41953), (378, 42037), (388, 42127), (389, 42139), (392, 42157), (401, 42235), (402, 42241), (405, 42250), (409, 42283), (428, 42355), (497, 42535), (503, 42565), (519, 42628), (535, 42700), (555, 42823), (559, 42856), (570, 42901), (577, 42946), (579, 42952),

Gene: SirHarley_69 Start: 50202, Stop: 53504, Start Num: 14

Candidate Starts for SirHarley_69:

(Start: 14 @50202 has 21 MA's), (Start: 30 @50289 has 1 MA's), (31, 50295), (Start: 36 @50304 has 76 MA's), (Start: 46 @50400 has 6 MA's), (68, 50556), (81, 50643), (82, 50646), (89, 50697), (125, 50961), (128, 51000), (139, 51072), (142, 51081), (153, 51156), (175, 51222), (179, 51228), (190, 51282), (193, 51300), (202, 51351), (203, 51354), (206, 51384), (218, 51468), (219, 51477), (223, 51504), (225, 51519), (245, 51696), (246, 51705), (261, 51810), (274, 51891), (283, 51951), (295, 52026), (298, 52059), (301, 52065), (309, 52086), (311, 52095), (318, 52140), (332, 52209), (335, 52224), (345, 52293), (355, 52389), (356, 52392), (365, 52443), (375, 52518), (389, 52641), (392, 52659), (404, 52737), (405, 52740), (407, 52752), (416, 52797), (422, 52818), (425, 52830), (431, 52860), (436, 52881), (472, 52953), (490, 53010), (510, 53109), (529, 53175), (544, 53265), (547, 53295), (548, 53298), (553, 53328), (559, 53373), (568, 53415), (573, 53445), (576, 53457), (579, 53472), (581, 53481),

Gene: Skysand_61 Start: 49139, Stop: 45828, Start Num: 36

Candidate Starts for Skysand_61:

(3, 49391), (9, 49304), (12, 49277), (Start: 36 @49139 has 76 MA's), (44, 49067), (Start: 46 @49043 has 6 MA's), (66, 48890), (68, 48881), (86, 48758), (111, 48599), (112, 48593), (114, 48569), (126, 48461), (128, 48431), (177, 48224), (207, 48053), (214, 48011), (223, 47933), (225, 47918), (242, 47780), (269, 47582), (278, 47525), (284, 47480), (295, 47414), (306, 47363), (311, 47345), (318, 47300), (353, 47057), (357, 47015), (358, 47012), (360, 47006), (364, 46988), (377, 46892), (380, 46874), (384, 46838), (402, 46694), (405, 46685), (408, 46661), (414, 46634), (423, 46610), (448, 46481), (474, 46394), (476, 46385), (486, 46313), (492, 46292), (534, 46121), (574, 45872), (581, 45842),

Gene: Snakehole_58 Start: 40677, Stop: 42980, Start Num: 155

Candidate Starts for Snakehole_58:

(Start: 155 @40677 has 33 MA's), (Start: 158 @40683 has 9 MA's), (186, 40761), (199, 40833), (203, 40854), (207, 40887), (209, 40899), (210, 40902), (212, 40920), (213, 40926), (222, 40995), (225, 41019), (228, 41058), (233, 41103), (236, 41115), (245, 41196), (261, 41310), (262, 41322), (276, 41397), (278, 41415), (290, 41493), (291, 41499), (293, 41508), (296, 41541), (298, 41571), (301, 41577), (309, 41598), (311, 41607), (317, 41637), (330, 41712), (332, 41721), (334, 41733), (339, 41751), (342, 41766), (352, 41868), (363, 41940), (367, 41964), (378, 42048), (388, 42138), (389, 42150), (392, 42168), (401, 42246), (402, 42252), (405, 42261), (409, 42294), (428, 42366), (497, 42546), (503, 42576), (519, 42639), (535, 42711), (555, 42834), (559, 42867), (570, 42912), (577, 42957), (579, 42963),

Gene: Sparcetus_63 Start: 42534, Stop: 44789, Start Num: 158

Candidate Starts for Sparcetus_63:

(154, 42525), (Start: 158 @42534 has 9 MA's), (203, 42669), (207, 42702), (210, 42717), (223, 42819), (225, 42834), (236, 42930), (245, 43011), (246, 43020), (260, 43119), (261, 43125), (276, 43212), (278, 43230), (282, 43260), (285, 43281), (287, 43293), (290, 43308), (293, 43323), (296, 43356), (298, 43386), (301, 43392), (309, 43413), (311, 43422), (317, 43452), (331, 43533), (334, 43548), (339, 43566), (342, 43581), (351, 43680), (384, 43911), (385, 43914), (389, 43965), (392, 43983), (394, 43995), (398, 44037), (402, 44067), (405, 44076), (425, 44166), (472, 44268), (489, 44319), (498, 44364), (512, 44427), (519, 44451), (526, 44481), (528, 44487), (559, 44676), (570, 44721), (577, 44766), (579, 44772),

Gene: StarStruck_61 Start: 48867, Stop: 45550, Start Num: 36

Candidate Starts for StarStruck_61:

(Start: 36 @48867 has 76 MA's), (41, 48810), (Start: 46 @48771 has 6 MA's), (66, 48618), (68, 48609), (86, 48486), (111, 48327), (112, 48321), (114, 48297), (126, 48189), (142, 48078), (177, 47952), (207, 47781), (214, 47739), (217, 47700), (223, 47661), (225, 47646), (242, 47508), (257, 47376), (269, 47310), (278, 47253), (288, 47193), (295, 47142), (311, 47073), (318, 47028), (353, 46785), (357, 46743), (358, 46740), (360, 46734), (364, 46716), (377, 46620), (384, 46566), (405, 46413), (414, 46362), (417, 46353), (448, 46209), (468, 46131), (474, 46116), (484, 46056), (486, 46035), (492, 46014), (500, 45966), (524, 45882), (526, 45870), (527, 45867), (543, 45774), (574, 45591), (581, 45561),

Gene: Stickynote_45 Start: 42219, Stop: 38926, Start Num: 36

Candidate Starts for Stickynote_45:

(Start: 36 @42219 has 76 MA's), (41, 42162), (45, 42138), (Start: 46 @42123 has 6 MA's), (47, 42114), (68, 41967), (102, 41685), (104, 41661), (111, 41607), (188, 41193), (202, 41091), (223, 40938), (225, 40923), (236, 40827), (264, 40608), (265, 40605), (268, 40590), (273, 40560), (277, 40530), (295, 40413), (298, 40380), (309, 40353), (313, 40329), (339, 40182), (345, 40128), (347, 40107), (356, 40032), (358, 40014), (384, 39837), (387, 39807), (390, 39780), (392, 39765), (415, 39636), (442, 39603), (464, 39516), (490, 39402), (492, 39396), (494, 39384), (531, 39234), (532, 39231), (533, 39225), (536, 39207), (537, 39198), (538, 39180), (555, 39078), (557, 39054), (564, 39018), (565, 39012),

Gene: Stormer_79 Start: 49993, Stop: 53334, Start Num: 35

Candidate Starts for Stormer_79:

(Start: 35 @49993 has 25 MA's), (Start: 42 @50053 has 1 MA's), (Start: 46 @50089 has 6 MA's), (51, 50134), (57, 50176), (95, 50437), (115, 50572), (125, 50668), (170, 50938), (172, 50947), (193, 51055), (201, 51100), (207, 51142), (217, 51220), (225, 51274), (226, 51277), (227, 51307), (240, 51397), (245, 51451), (258, 51550), (261, 51565), (268, 51607), (295, 51781), (298, 51814), (306, 51832), (311, 51850), (318, 51895), (319, 51898), (339, 51994), (344, 52036), (345, 52048), (349,

52084), (374, 52264), (380, 52306), (384, 52342), (388, 52384), (389, 52396), (392, 52414), (405, 52510), (407, 52522), (473, 52717), (490, 52801), (511, 52906), (515, 52921), (520, 52936), (525, 52957), (529, 52969), (530, 52975), (531, 52978), (536, 53005), (542, 53050), (557, 53158), (567, 53203), (572, 53227), (579, 53263),

Gene: Sukkupi_60 Start: 47229, Stop: 43978, Start Num: 36

Candidate Starts for Sukkupi_60:

(11, 47361), (13, 47331), (15, 47319), (Start: 36 @47229 has 76 MA's), (45, 47148), (Start: 46 @47133 has 6 MA's), (51, 47088), (66, 46980), (68, 46971), (90, 46806), (112, 46683), (118, 46632), (123, 46605), (126, 46551), (128, 46521), (177, 46314), (198, 46206), (210, 46128), (214, 46101), (223, 46023), (225, 46008), (242, 45870), (269, 45672), (270, 45666), (274, 45639), (295, 45504), (298, 45471), (311, 45435), (318, 45390), (322, 45378), (332, 45315), (353, 45150), (354, 45147), (357, 45108), (358, 45105), (360, 45099), (362, 45090), (364, 45081), (377, 44985), (380, 44967), (384, 44931), (404, 44781), (414, 44727), (448, 44631), (474, 44547), (476, 44538), (484, 44487), (500, 44397), (526, 44301), (527, 44298), (537, 44247), (556, 44115), (581, 43992),

Gene: SuperSonics_94 Start: 57430, Stop: 60567, Start Num: 46

Candidate Starts for SuperSonics_94:

(Start: 26 @57307 has 3 MA's), (Start: 36 @57334 has 76 MA's), (Start: 46 @57430 has 6 MA's), (68, 57595), (85, 57709), (90, 57754), (97, 57793), (107, 57844), (125, 58009), (220, 58507), (225, 58552), (228, 58591), (255, 58795), (275, 58936), (281, 58987), (295, 59083), (297, 59092), (298, 59116), (299, 59122), (305, 59152), (308, 59158), (332, 59290), (333, 59293), (334, 59302), (343, 59344), (344, 59362), (358, 59494), (392, 59740), (418, 59890), (435, 59947), (443, 59989), (463, 60013), (490, 60082), (529, 60250), (544, 60340), (552, 60412), (565, 60487),

Gene: SuperSulley_61 Start: 49019, Stop: 45717, Start Num: 36

Candidate Starts for SuperSulley_61:

(17, 49094), (Start: 36 @49019 has 76 MA's), (Start: 46 @48923 has 6 MA's), (66, 48770), (68, 48761), (86, 48638), (111, 48479), (112, 48473), (114, 48449), (126, 48341), (142, 48230), (177, 48104), (207, 47933), (214, 47891), (223, 47813), (225, 47798), (242, 47660), (257, 47528), (269, 47462), (278, 47405), (288, 47345), (295, 47294), (301, 47255), (311, 47225), (318, 47180), (353, 46937), (357, 46895), (358, 46892), (360, 46886), (364, 46868), (377, 46772), (384, 46718), (405, 46565), (417, 46505), (423, 46490), (448, 46361), (474, 46283), (484, 46223), (486, 46202), (487, 46199), (492, 46181), (507, 46097), (526, 46037), (533, 46010), (574, 45758), (581, 45728),

Gene: SuperheroCarly_67 Start: 49885, Stop: 53187, Start Num: 14

Candidate Starts for SuperheroCarly_67:

(Start: 14 @49885 has 21 MA's), (Start: 30 @49972 has 1 MA's), (31, 49978), (Start: 36 @49987 has 76 MA's), (Start: 46 @50083 has 6 MA's), (68, 50239), (81, 50326), (82, 50329), (89, 50380), (125, 50644), (128, 50683), (139, 50755), (142, 50764), (153, 50839), (175, 50905), (179, 50911), (190, 50965), (193, 50983), (202, 51034), (203, 51037), (206, 51067), (218, 51151), (219, 51160), (223, 51187), (225, 51202), (245, 51379), (246, 51388), (261, 51493), (274, 51574), (283, 51634), (295, 51709), (298, 51742), (301, 51748), (309, 51769), (311, 51778), (318, 51823), (332, 51892), (335, 51907), (345, 51976), (352, 52039), (355, 52072), (356, 52075), (365, 52126), (375, 52201), (389, 52324), (392, 52342), (404, 52420), (405, 52423), (407, 52435), (416, 52480), (422, 52501), (425, 52513), (431, 52543), (436, 52564), (472, 52636), (490, 52693), (510, 52792), (529, 52858), (544, 52948), (547, 52978), (548, 52981), (553, 53011), (559, 53056), (568, 53098), (573, 53128), (576, 53140), (579, 53155), (581, 53164),

Gene: Suzy_65 Start: 48746, Stop: 51181, Start Num: 173

Candidate Starts for Suzy_65:

(Start: 173 @48746 has 8 MA's), (181, 48764), (208, 48944), (223, 49058), (225, 49073), (261, 49364), (267, 49403), (274, 49445), (276, 49451), (298, 49619), (301, 49625), (309, 49646), (311, 49655),

(343, 49823), (345, 49853), (346, 49868), (352, 49916), (356, 49952), (361, 49979), (365, 50003), (372, 50060), (376, 50084), (381, 50123), (388, 50189), (389, 50201), (392, 50219), (404, 50312), (407, 50327), (413, 50363), (430, 50423), (439, 50465), (492, 50657), (493, 50660), (506, 50735), (508, 50741), (521, 50798), (527, 50825), (530, 50837), (544, 50921), (557, 51020), (562, 51044), (565, 51059), (576, 51110), (578, 51122), (579, 51125), (583, 51140), (585, 51176),

Gene: Tedro_57 Start: 40690, Stop: 42990, Start Num: 155

Candidate Starts for Tedro_57:

(Start: 155 @40690 has 33 MA's), (Start: 158 @40696 has 9 MA's), (186, 40771), (199, 40843), (203, 40864), (207, 40897), (209, 40909), (210, 40912), (212, 40930), (213, 40936), (222, 41005), (225, 41029), (228, 41068), (233, 41113), (236, 41125), (245, 41206), (261, 41320), (262, 41332), (276, 41407), (278, 41425), (290, 41503), (291, 41509), (293, 41518), (296, 41551), (298, 41581), (301, 41587), (309, 41608), (311, 41617), (317, 41647), (330, 41722), (332, 41731), (339, 41761), (340, 41767), (342, 41776), (352, 41878), (363, 41950), (367, 41974), (388, 42148), (389, 42160), (392, 42178), (401, 42256), (402, 42262), (405, 42271), (409, 42304), (428, 42376), (497, 42556), (503, 42586), (519, 42649), (535, 42721), (549, 42805), (555, 42844), (559, 42877), (570, 42922), (577, 42967), (579, 42973),

Gene: Terapin_67 Start: 47717, Stop: 50152, Start Num: 173

Candidate Starts for Terapin_67:

(Start: 173 @47717 has 8 MA's), (181, 47735), (208, 47915), (223, 48029), (225, 48044), (261, 48335), (276, 48422), (294, 48551), (298, 48590), (301, 48596), (309, 48617), (311, 48626), (345, 48824), (346, 48839), (347, 48845), (352, 48887), (361, 48950), (365, 48974), (372, 49031), (376, 49055), (381, 49094), (388, 49160), (389, 49172), (392, 49190), (404, 49283), (407, 49298), (413, 49334), (439, 49436), (492, 49628), (493, 49631), (506, 49706), (508, 49712), (521, 49769), (527, 49796), (530, 49808), (544, 49892), (547, 49922), (557, 49991), (562, 50015), (565, 50030), (576, 50081), (578, 50093), (579, 50096), (583, 50111), (585, 50147),

Gene: Thoth_67 Start: 49791, Stop: 53093, Start Num: 14

Candidate Starts for Thoth_67:

(Start: 14 @49791 has 21 MA's), (Start: 30 @49878 has 1 MA's), (31, 49884), (Start: 36 @49893 has 76 MA's), (Start: 46 @49989 has 6 MA's), (68, 50145), (81, 50232), (82, 50235), (89, 50286), (125, 50550), (128, 50589), (139, 50661), (142, 50670), (153, 50745), (175, 50811), (179, 50817), (190, 50871), (193, 50889), (202, 50940), (203, 50943), (206, 50973), (218, 51057), (219, 51066), (223, 51093), (225, 51108), (245, 51285), (246, 51294), (261, 51399), (274, 51480), (283, 51540), (295, 51615), (298, 51648), (301, 51654), (309, 51675), (311, 51684), (318, 51729), (332, 51798), (335, 51813), (345, 51882), (352, 51945), (355, 51978), (356, 51981), (365, 52032), (375, 52107), (389, 52230), (392, 52248), (404, 52326), (405, 52329), (407, 52341), (416, 52386), (422, 52407), (425, 52419), (431, 52449), (436, 52470), (472, 52542), (490, 52599), (510, 52698), (529, 52764), (544, 52854), (547, 52884), (548, 52887), (553, 52917), (559, 52962), (568, 53004), (573, 53034), (576, 53046), (579, 53061), (581, 53070),

Gene: Thumb_78 Start: 55518, Stop: 58814, Start Num: 36

Candidate Starts for Thumb_78:

(Start: 26 @55491 has 3 MA's), (Start: 36 @55518 has 76 MA's), (44, 55590), (Start: 46 @55614 has 6 MA's), (49, 55647), (68, 55782), (79, 55875), (84, 55893), (90, 55941), (101, 56001), (125, 56193), (164, 56427), (184, 56484), (192, 56538), (201, 56583), (205, 56610), (210, 56640), (225, 56763), (228, 56802), (232, 56844), (243, 56922), (245, 56940), (247, 56958), (249, 56970), (259, 57045), (278, 57201), (291, 57285), (299, 57363), (304, 57384), (305, 57393), (308, 57399), (310, 57408), (323, 57480), (326, 57495), (332, 57534), (334, 57546), (347, 57639), (348, 57645), (354, 57693), (358, 57735), (381, 57885), (383, 57897), (392, 57981), (411, 58122), (443, 58227), (487, 58326), (489, 58335), (504, 58413), (514, 58452), (518, 58467), (531, 58515), (545, 58611), (548, 58629), (552, 58656), (560, 58704), (566, 58734), (567, 58737), (571, 58752), (576, 58782), (577, 58791),

(579, 58797), (580, 58800),

Gene: Tiggy93_56 Start: 41278, Stop: 43581, Start Num: 155

Candidate Starts for Tiggy93_56:

(Start: 155 @41278 has 33 MA's), (Start: 158 @41284 has 9 MA's), (186, 41362), (199, 41434), (203, 41455), (207, 41488), (209, 41500), (210, 41503), (212, 41521), (222, 41596), (225, 41620), (228, 41659), (233, 41704), (236, 41716), (245, 41797), (261, 41911), (262, 41923), (276, 41998), (278, 42016), (290, 42094), (291, 42100), (293, 42109), (296, 42142), (298, 42172), (301, 42178), (309, 42199), (311, 42208), (317, 42238), (330, 42313), (332, 42322), (338, 42346), (339, 42352), (340, 42358), (342, 42367), (352, 42469), (363, 42541), (367, 42565), (378, 42649), (388, 42739), (389, 42751), (392, 42769), (401, 42847), (402, 42853), (405, 42862), (409, 42895), (428, 42967), (497, 43147), (503, 43177), (519, 43240), (535, 43312), (555, 43435), (559, 43468), (570, 43513), (577, 43558), (579, 43564),

Gene: Tillicus_72 Start: 51147, Stop: 54485, Start Num: 33

Candidate Starts for Tillicus_72:

(Start: 33 @51147 has 3 MA's), (Start: 42 @51207 has 1 MA's), (44, 51219), (Start: 46 @51243 has 6 MA's), (51, 51288), (57, 51330), (108, 51666), (123, 51777), (125, 51822), (141, 51945), (170, 52092), (172, 52101), (182, 52134), (187, 52170), (193, 52212), (201, 52257), (207, 52299), (225, 52431), (226, 52434), (227, 52464), (233, 52515), (238, 52536), (240, 52554), (246, 52617), (258, 52707), (261, 52722), (263, 52743), (292, 52902), (295, 52938), (298, 52971), (306, 52989), (318, 53052), (319, 53055), (331, 53118), (339, 53151), (344, 53193), (345, 53205), (349, 53241), (374, 53421), (378, 53448), (380, 53463), (384, 53499), (389, 53553), (392, 53571), (405, 53667), (407, 53679), (408, 53691), (493, 53967), (515, 54078), (525, 54114), (529, 54126), (530, 54132), (531, 54135), (536, 54162), (542, 54207), (557, 54315), (565, 54354), (567, 54360), (572, 54384), (579, 54420),

Gene: TinyMiny_63 Start: 42556, Stop: 44817, Start Num: 158

Candidate Starts for TinyMiny_63:

(131, 42403), (132, 42406), (143, 42469), (148, 42511), (150, 42520), (154, 42547), (Start: 158 @42556 has 9 MA's), (203, 42697), (207, 42730), (210, 42745), (223, 42847), (225, 42862), (236, 42958), (245, 43039), (246, 43048), (253, 43096), (261, 43153), (276, 43240), (278, 43258), (285, 43309), (287, 43321), (290, 43336), (293, 43351), (296, 43384), (298, 43414), (301, 43420), (309, 43441), (311, 43450), (317, 43480), (331, 43561), (334, 43576), (339, 43594), (351, 43708), (384, 43939), (389, 43993), (392, 44011), (394, 44023), (402, 44095), (405, 44104), (470, 44293), (472, 44296), (484, 44314), (489, 44347), (498, 44392), (512, 44455), (519, 44479), (526, 44509), (544, 44599), (555, 44671), (559, 44704), (570, 44749), (576, 44785), (577, 44794), (579, 44800),

Gene: Tongui_57 Start: 40964, Stop: 43264, Start Num: 155

Candidate Starts for Tongui_57:

(137, 40865), (140, 40874), (144, 40895), (Start: 155 @40964 has 33 MA's), (159, 40970), (186, 41045), (203, 41138), (207, 41171), (209, 41183), (210, 41186), (212, 41204), (222, 41279), (225, 41303), (228, 41342), (236, 41399), (245, 41480), (261, 41594), (262, 41606), (278, 41699), (288, 41765), (290, 41777), (291, 41783), (293, 41792), (296, 41825), (298, 41855), (301, 41861), (309, 41882), (311, 41891), (317, 41921), (330, 41996), (332, 42005), (339, 42035), (363, 42224), (367, 42248), (388, 42422), (389, 42434), (392, 42452), (393, 42458), (402, 42536), (405, 42545), (409, 42578), (422, 42623), (428, 42650), (438, 42692), (497, 42830), (503, 42860), (510, 42893), (519, 42923), (531, 42971), (535, 42995), (555, 43118), (559, 43151), (570, 43196), (577, 43241), (579, 43247),

Gene: Tracker_60 Start: 47900, Stop: 44589, Start Num: 36

Candidate Starts for Tracker_60:

(Start: 36 @47900 has 76 MA's), (44, 47828), (Start: 46 @47804 has 6 MA's), (66, 47651), (68, 47642), (111, 47360), (112, 47354), (114, 47330), (126, 47222), (128, 47192), (177, 46985), (207, 46814),

(214, 46772), (216, 46766), (223, 46694), (225, 46679), (242, 46541), (269, 46343), (278, 46286), (288, 46226), (295, 46175), (311, 46106), (318, 46061), (353, 45821), (358, 45776), (360, 45770), (364, 45752), (377, 45656), (384, 45602), (402, 45458), (405, 45449), (423, 45374), (440, 45299), (448, 45245), (474, 45155), (486, 45074), (492, 45053), (526, 44909), (527, 44906), (541, 44822), (556, 44723), (568, 44666), (581, 44600),

Gene: Troll4_66 Start: 49859, Stop: 53161, Start Num: 14

Candidate Starts for Troll4_66:

(Start: 14 @49859 has 21 MA's), (Start: 30 @49946 has 1 MA's), (31, 49952), (Start: 36 @49961 has 76 MA's), (Start: 46 @50057 has 6 MA's), (68, 50213), (81, 50300), (82, 50303), (89, 50354), (125, 50618), (128, 50657), (139, 50729), (142, 50738), (153, 50813), (175, 50879), (179, 50885), (190, 50939), (193, 50957), (202, 51008), (203, 51011), (206, 51041), (218, 51125), (219, 51134), (223, 51161), (225, 51176), (245, 51353), (246, 51362), (261, 51467), (274, 51548), (283, 51608), (295, 51683), (298, 51716), (301, 51722), (309, 51743), (311, 51752), (318, 51797), (332, 51866), (335, 51881), (345, 51950), (352, 52013), (355, 52046), (356, 52049), (365, 52100), (375, 52175), (389, 52298), (392, 52316), (404, 52394), (405, 52397), (407, 52409), (416, 52454), (422, 52475), (425, 52487), (431, 52517), (436, 52538), (472, 52610), (490, 52667), (510, 52766), (529, 52832), (544, 52922), (547, 52952), (548, 52955), (553, 52985), (559, 53030), (568, 53072), (573, 53102), (576, 53114), (579, 53129), (581, 53138),

Gene: Turuncu_63 Start: 49020, Stop: 45739, Start Num: 36

Candidate Starts for Turuncu_63:

(18, 49104), (Start: 36 @49020 has 76 MA's), (45, 48939), (Start: 46 @48924 has 6 MA's), (51, 48879), (66, 48768), (68, 48759), (75, 48693), (86, 48636), (107, 48510), (112, 48471), (114, 48447), (118, 48420), (123, 48393), (126, 48339), (161, 48126), (177, 48102), (223, 47808), (225, 47793), (264, 47475), (269, 47451), (277, 47397), (278, 47394), (295, 47283), (311, 47214), (314, 47199), (318, 47169), (348, 46980), (353, 46932), (357, 46890), (358, 46887), (360, 46881), (364, 46863), (377, 46767), (380, 46749), (384, 46713), (405, 46548), (409, 46518), (417, 46488), (440, 46449), (448, 46395), (458, 46371), (474, 46308), (484, 46248), (492, 46206), (516, 46089), (526, 46062), (527, 46059), (533, 46035), (568, 45819), (574, 45783), (581, 45753),

Gene: Virizion_56 Start: 39250, Stop: 36053, Start Num: 36

Candidate Starts for Virizion_56:

(29, 39271), (Start: 36 @39250 has 76 MA's), (39, 39208), (Start: 46 @39154 has 6 MA's), (53, 39100), (62, 39031), (63, 39022), (64, 39013), (69, 38983), (72, 38950), (76, 38914), (84, 38872), (87, 38860), (93, 38806), (106, 38737), (109, 38698), (116, 38656), (118, 38635), (125, 38563), (129, 38521), (136, 38458), (137, 38455), (153, 38365), (Start: 158 @38350 has 9 MA's), (160, 38341), (180, 38299), (Start: 183 @38284 has 1 MA's), (187, 38269), (204, 38173), (207, 38143), (218, 38062), (220, 38050), (223, 38026), (225, 38011), (226, 38008), (236, 37915), (244, 37843), (246, 37825), (251, 37783), (260, 37726), (263, 37699), (277, 37618), (279, 37612), (282, 37585), (291, 37534), (296, 37492), (298, 37462), (301, 37456), (311, 37426), (314, 37411), (317, 37396), (325, 37354), (326, 37351), (331, 37315), (334, 37300), (350, 37186), (387, 36907), (388, 36895), (389, 36883), (392, 36865), (402, 36772), (425, 36667), (484, 36556), (487, 36532), (511, 36415), (535, 36322), (547, 36244), (550, 36232), (553, 36211), (560, 36163), (568, 36127), (574, 36091), (577, 36076),

Gene: Visconti_68 Start: 49767, Stop: 53069, Start Num: 14

Candidate Starts for Visconti_68:

(Start: 14 @49767 has 21 MA's), (Start: 30 @49854 has 1 MA's), (31, 49860), (Start: 36 @49869 has 76 MA's), (Start: 46 @49965 has 6 MA's), (68, 50121), (81, 50208), (82, 50211), (89, 50262), (125, 50526), (128, 50565), (139, 50637), (142, 50646), (153, 50721), (175, 50787), (179, 50793), (190, 50847), (193, 50865), (202, 50916), (203, 50919), (206, 50949), (218, 51033), (219, 51042), (223, 51069), (225, 51084), (245, 51261), (246, 51270), (261, 51375), (274, 51456), (283, 51516), (295, 51591), (298, 51624), (301, 51630), (309, 51651), (311, 51660), (318, 51705), (332, 51774), (335,

51789), (345, 51858), (352, 51921), (355, 51954), (356, 51957), (365, 52008), (375, 52083), (389, 52206), (392, 52224), (404, 52302), (405, 52305), (407, 52317), (416, 52362), (422, 52383), (425, 52395), (431, 52425), (436, 52446), (472, 52518), (490, 52575), (510, 52674), (529, 52740), (544, 52830), (547, 52860), (548, 52863), (553, 52893), (559, 52938), (568, 52980), (573, 53010), (576, 53022), (579, 53037), (581, 53046),

Gene: WaldoWhy_69 Start: 49783, Stop: 53085, Start Num: 14

Candidate Starts for WaldoWhy_69:

(Start: 14 @49783 has 21 MA's), (Start: 30 @49870 has 1 MA's), (31, 49876), (Start: 36 @49885 has 76 MA's), (Start: 46 @49981 has 6 MA's), (68, 50137), (81, 50224), (82, 50227), (89, 50278), (125, 50542), (128, 50581), (139, 50653), (142, 50662), (153, 50737), (175, 50803), (179, 50809), (190, 50863), (193, 50881), (202, 50932), (203, 50935), (206, 50965), (218, 51049), (223, 51085), (225, 51100), (245, 51277), (261, 51391), (274, 51472), (295, 51607), (298, 51640), (301, 51646), (309, 51667), (311, 51676), (318, 51721), (332, 51790), (335, 51805), (340, 51826), (345, 51874), (352, 51937), (355, 51970), (356, 51973), (357, 51988), (365, 52024), (375, 52099), (389, 52222), (392, 52240), (404, 52318), (405, 52321), (407, 52333), (422, 52399), (425, 52411), (431, 52441), (436, 52462), (472, 52534), (490, 52591), (510, 52690), (529, 52756), (544, 52846), (547, 52876), (548, 52879), (553, 52909), (559, 52954), (568, 52996), (573, 53026), (576, 53038), (579, 53053), (581, 53062),

Gene: Weiss13_74 Start: 55602, Stop: 57914, Start Num: 162

Candidate Starts for Weiss13_74:

(Start: 162 @55602 has 10 MA's), (193, 55698), (200, 55737), (207, 55788), (208, 55791), (210, 55803), (216, 55833), (220, 55881), (225, 55917), (253, 56151), (256, 56184), (268, 56250), (278, 56328), (280, 56346), (303, 56493), (307, 56511), (311, 56529), (325, 56601), (326, 56604), (329, 56628), (332, 56643), (339, 56673), (376, 56946), (382, 56988), (383, 56994), (384, 57006), (388, 57048), (392, 57078), (394, 57090), (400, 57150), (404, 57168), (406, 57174), (412, 57216), (420, 57243), (430, 57279), (488, 57402), (489, 57405), (496, 57441), (522, 57540), (529, 57567), (530, 57573), (536, 57603), (548, 57696), (554, 57732), (555, 57738), (564, 57795), (568, 57810), (571, 57822), (573, 57840),

Gene: Wentworth_52 Start: 39280, Stop: 36083, Start Num: 36

Candidate Starts for Wentworth_52:

(29, 39301), (Start: 36 @39280 has 76 MA's), (37, 39271), (39, 39238), (Start: 46 @39184 has 6 MA's), (53, 39130), (62, 39061), (63, 39052), (67, 39025), (69, 39013), (72, 38980), (76, 38944), (84, 38902), (87, 38890), (93, 38836), (105, 38770), (106, 38767), (129, 38551), (154, 38389), (Start: 158 @38380 has 9 MA's), (180, 38329), (Start: 183 @38314 has 1 MA's), (187, 38299), (207, 38173), (218, 38092), (223, 38056), (225, 38041), (226, 38038), (236, 37945), (246, 37855), (248, 37840), (277, 37648), (279, 37642), (282, 37615), (290, 37570), (291, 37564), (293, 37555), (298, 37492), (301, 37486), (311, 37456), (317, 37426), (326, 37381), (331, 37345), (350, 37216), (385, 36964), (387, 36937), (388, 36925), (389, 36913), (398, 36841), (402, 36802), (425, 36697), (445, 36622), (487, 36562), (490, 36550), (510, 36451), (528, 36385), (547, 36274), (550, 36262), (553, 36241), (556, 36217), (566, 36163), (568, 36157), (570, 36151), (577, 36106),

Gene: Wheezy_60 Start: 48108, Stop: 44797, Start Num: 36

Candidate Starts for Wheezy_60:

(Start: 36 @48108 has 76 MA's), (44, 48036), (Start: 46 @48012 has 6 MA's), (51, 47967), (66, 47859), (68, 47850), (111, 47568), (112, 47562), (114, 47538), (126, 47430), (128, 47400), (177, 47193), (207, 47022), (214, 46980), (216, 46974), (223, 46902), (225, 46887), (242, 46749), (269, 46551), (277, 46497), (278, 46494), (288, 46434), (295, 46383), (311, 46314), (318, 46269), (353, 46029), (357, 45987), (358, 45984), (360, 45978), (364, 45960), (377, 45864), (384, 45810), (402, 45666), (405, 45657), (423, 45582), (440, 45507), (448, 45453), (460, 45411), (474, 45363), (486, 45282), (492, 45261), (509, 45171), (517, 45141), (526, 45117), (527, 45114), (556, 44931), (568, 44874), (581,

44808),

Gene: WhoseManz_60 Start: 45289, Stop: 42038, Start Num: 36

Candidate Starts for WhoseManz_60:

(5, 45517), (Start: 36 @45289 has 76 MA's), (45, 45208), (Start: 46 @45193 has 6 MA's), (51, 45148), (66, 45040), (68, 45031), (90, 44866), (112, 44743), (118, 44692), (123, 44665), (126, 44611), (128, 44581), (161, 44398), (177, 44374), (198, 44266), (210, 44188), (214, 44161), (223, 44083), (225, 44068), (242, 43930), (269, 43732), (270, 43726), (274, 43699), (283, 43639), (295, 43564), (298, 43531), (311, 43495), (322, 43438), (332, 43375), (353, 43210), (354, 43207), (357, 43168), (358, 43165), (360, 43159), (362, 43150), (364, 43141), (377, 43045), (380, 43027), (384, 42991), (404, 42841), (414, 42787), (448, 42691), (474, 42607), (476, 42598), (484, 42547), (500, 42457), (526, 42361), (527, 42358), (556, 42175), (581, 42052),

Gene: Wilkos_53 Start: 39157, Stop: 35936, Start Num: 29

Candidate Starts for Wilkos_53:

(29, 39157), (Start: 36 @39136 has 76 MA's), (39, 39094), (43, 39073), (Start: 46 @39040 has 6 MA's), (53, 38986), (57, 38953), (62, 38917), (63, 38908), (69, 38869), (72, 38836), (76, 38800), (84, 38758), (87, 38746), (93, 38692), (106, 38623), (118, 38521), (129, 38407), (153, 38251), (154, 38245), (Start: 158 @38236 has 9 MA's), (180, 38185), (Start: 183 @38170 has 1 MA's), (187, 38155), (207, 38029), (216, 37984), (218, 37948), (220, 37936), (223, 37912), (225, 37897), (226, 37894), (229, 37849), (236, 37801), (246, 37711), (248, 37696), (263, 37585), (282, 37471), (286, 37447), (291, 37420), (293, 37411), (298, 37348), (301, 37342), (311, 37312), (317, 37282), (326, 37237), (331, 37201), (350, 37072), (369, 36937), (385, 36820), (387, 36793), (388, 36781), (389, 36769), (390, 36766), (398, 36697), (402, 36658), (425, 36553), (438, 36496), (445, 36478), (484, 36442), (487, 36418), (490, 36406), (501, 36346), (510, 36307), (544, 36157), (547, 36130), (550, 36118), (553, 36097), (556, 36073), (566, 36019), (568, 36013), (570, 36007), (577, 35962),

Gene: Wollypog_59 Start: 44236, Stop: 46455, Start Num: 183

Candidate Starts for Wollypog_59:

(149, 44131), (157, 44170), (Start: 183 @44236 has 1 MA's), (191, 44287), (201, 44335), (207, 44377), (221, 44476), (223, 44494), (225, 44509), (227, 44542), (229, 44557), (230, 44563), (235, 44599), (245, 44686), (253, 44743), (261, 44800), (270, 44854), (295, 45022), (301, 45061), (311, 45091), (317, 45121), (325, 45163), (330, 45196), (331, 45202), (332, 45205), (339, 45235), (349, 45325), (368, 45457), (374, 45505), (380, 45547), (384, 45583), (389, 45637), (392, 45655), (394, 45667), (405, 45748), (409, 45781), (445, 45913), (482, 45946), (487, 45973), (511, 46090), (539, 46219), (547, 46261), (553, 46294), (561, 46351), (563, 46357), (567, 46375), (568, 46378), (572, 46399),

Gene: Xenia2_80 Start: 51941, Stop: 55192, Start Num: 46

Candidate Starts for Xenia2_80:

(Start: 38 @51878 has 4 MA's), (45, 51926), (Start: 46 @51941 has 6 MA's), (47, 51950), (48, 51956), (59, 52049), (90, 52259), (95, 52289), (103, 52337), (115, 52424), (125, 52520), (146, 52685), (153, 52721), (170, 52790), (172, 52799), (193, 52910), (201, 52955), (207, 52997), (225, 53129), (226, 53132), (227, 53162), (246, 53315), (258, 53405), (261, 53420), (263, 53441), (295, 53636), (298, 53669), (306, 53687), (318, 53750), (319, 53753), (339, 53849), (345, 53903), (349, 53939), (365, 54053), (374, 54119), (380, 54161), (384, 54197), (389, 54251), (392, 54269), (405, 54365), (407, 54377), (408, 54389), (432, 54473), (493, 54668), (511, 54764), (515, 54779), (529, 54827), (530, 54833), (531, 54836), (536, 54863), (542, 54908), (565, 55055), (567, 55061), (572, 55085), (579, 55121),

Gene: Yara_46 Start: 37592, Stop: 34395, Start Num: 36

Candidate Starts for Yara_46:

(Start: 36 @37592 has 76 MA's), (39, 37550), (Start: 46 @37496 has 6 MA's), (51, 37451), (53, 37442), (55, 37424), (62, 37373), (63, 37364), (69, 37325), (72, 37292), (76, 37256), (93, 37148), (105, 37082),

(106, 37079), (118, 36977), (125, 36905), (129, 36863), (136, 36800), (137, 36797), (Start: 158 @36692 has 9 MA's), (165, 36665), (180, 36641), (Start: 183 @36626 has 1 MA's), (187, 36611), (197, 36557), (204, 36515), (205, 36500), (207, 36485), (210, 36470), (223, 36368), (225, 36353), (226, 36350), (236, 36257), (239, 36239), (246, 36167), (258, 36077), (263, 36041), (277, 35960), (279, 35954), (282, 35927), (291, 35876), (298, 35804), (301, 35798), (309, 35777), (311, 35768), (314, 35753), (317, 35738), (325, 35696), (326, 35693), (331, 35657), (350, 35528), (369, 35393), (387, 35249), (388, 35237), (389, 35225), (402, 35114), (409, 35072), (425, 35009), (445, 34934), (487, 34874), (488, 34868), (490, 34862), (510, 34763), (526, 34703), (528, 34697), (547, 34586), (550, 34574), (553, 34553), (556, 34529), (568, 34469), (574, 34433), (577, 34418), (579, 34412),

Gene: Yelo_73 Start: 55981, Stop: 58293, Start Num: 162

Candidate Starts for Yelo_73:

(Start: 162 @55981 has 10 MA's), (193, 56077), (200, 56116), (207, 56167), (208, 56170), (209, 56179), (210, 56182), (216, 56212), (220, 56260), (225, 56296), (253, 56530), (256, 56563), (268, 56629), (278, 56707), (280, 56725), (307, 56890), (311, 56908), (325, 56980), (326, 56983), (329, 57007), (332, 57022), (339, 57052), (376, 57325), (382, 57367), (383, 57373), (384, 57385), (388, 57427), (392, 57457), (394, 57469), (400, 57529), (406, 57553), (420, 57622), (430, 57658), (488, 57781), (489, 57784), (496, 57820), (522, 57919), (529, 57946), (530, 57952), (536, 57982), (554, 58111), (555, 58117), (564, 58174), (568, 58189), (571, 58201), (573, 58219),

Gene: Yikes_80 Start: 52791, Stop: 56132, Start Num: 35

Candidate Starts for Yikes_80:

(22, 52743), (Start: 35 @52791 has 25 MA's), (Start: 42 @52851 has 1 MA's), (Start: 46 @52887 has 6 MA's), (51, 52932), (57, 52974), (95, 53235), (111, 53337), (115, 53370), (125, 53466), (170, 53736), (172, 53745), (193, 53853), (201, 53898), (207, 53940), (225, 54072), (226, 54075), (227, 54105), (230, 54126), (240, 54195), (245, 54249), (258, 54348), (261, 54363), (268, 54405), (295, 54579), (298, 54612), (306, 54630), (311, 54648), (318, 54693), (319, 54696), (339, 54792), (344, 54834), (345, 54846), (349, 54882), (374, 55062), (380, 55104), (384, 55140), (389, 55194), (392, 55212), (405, 55308), (407, 55320), (473, 55515), (490, 55599), (505, 55680), (511, 55704), (515, 55719), (525, 55755), (529, 55767), (530, 55773), (531, 55776), (536, 55803), (542, 55848), (557, 55956), (567, 56001), (572, 56025), (579, 56061),

Gene: Yindexa_60 Start: 47229, Stop: 43978, Start Num: 36

Candidate Starts for Yindexa_60:

(11, 47361), (13, 47331), (15, 47319), (Start: 36 @47229 has 76 MA's), (45, 47148), (Start: 46 @47133 has 6 MA's), (51, 47088), (66, 46980), (68, 46971), (90, 46806), (112, 46683), (118, 46632), (123, 46605), (126, 46551), (128, 46521), (177, 46314), (198, 46206), (210, 46128), (214, 46101), (223, 46023), (225, 46008), (242, 45870), (269, 45672), (270, 45666), (274, 45639), (295, 45504), (298, 45471), (311, 45435), (318, 45390), (322, 45378), (332, 45315), (353, 45150), (354, 45147), (357, 45108), (358, 45105), (360, 45099), (362, 45090), (364, 45081), (377, 44985), (380, 44967), (384, 44931), (404, 44781), (414, 44727), (448, 44631), (474, 44547), (476, 44538), (484, 44487), (500, 44397), (526, 44301), (527, 44298), (537, 44247), (556, 44115), (581, 43992),

Gene: Zany_76 Start: 52244, Stop: 55585, Start Num: 35

Candidate Starts for Zany_76:

(23, 52202), (Start: 35 @52244 has 25 MA's), (Start: 42 @52304 has 1 MA's), (Start: 46 @52340 has 6 MA's), (51, 52385), (57, 52427), (95, 52688), (111, 52790), (115, 52823), (125, 52919), (170, 53189), (172, 53198), (193, 53306), (201, 53351), (207, 53393), (225, 53525), (226, 53528), (227, 53558), (230, 53579), (240, 53648), (245, 53702), (258, 53801), (261, 53816), (268, 53858), (295, 54032), (298, 54065), (306, 54083), (311, 54101), (318, 54146), (319, 54149), (339, 54245), (344, 54287), (345, 54299), (349, 54335), (374, 54515), (380, 54557), (384, 54593), (389, 54647), (392, 54665), (405, 54761), (407, 54773), (471, 54962), (490, 55052), (511, 55157), (515, 55172), (525, 55208), (529, 55220), (530, 55226), (531, 55229), (536, 55256), (542, 55301), (557, 55409), (567, 55454),

(572, 55478), (579, 55514),

Gene: Zenon_76 Start: 55925, Stop: 58237, Start Num: 162

Candidate Starts for Zenon_76:

(Start: 162 @55925 has 10 MA's), (193, 56021), (200, 56060), (207, 56111), (208, 56114), (209, 56123), (210, 56126), (216, 56156), (220, 56204), (225, 56240), (253, 56474), (256, 56507), (268, 56573), (278, 56651), (280, 56669), (307, 56834), (311, 56852), (325, 56924), (326, 56927), (329, 56951), (332, 56966), (339, 56996), (376, 57269), (382, 57311), (383, 57317), (384, 57329), (388, 57371), (392, 57401), (394, 57413), (400, 57473), (404, 57491), (406, 57497), (420, 57566), (430, 57602), (488, 57725), (489, 57728), (496, 57764), (522, 57863), (529, 57890), (530, 57896), (536, 57926), (554, 58055), (555, 58061), (564, 58118), (568, 58133), (571, 58145), (573, 58163), (577, 58184),

Gene: Zion_46 Start: 42797, Stop: 39504, Start Num: 36

Candidate Starts for Zion_46:

(Start: 36 @42797 has 76 MA's), (41, 42740), (45, 42716), (Start: 46 @42701 has 6 MA's), (47, 42692), (68, 42545), (96, 42338), (102, 42263), (104, 42239), (111, 42185), (188, 41771), (202, 41669), (221, 41534), (223, 41516), (225, 41501), (236, 41405), (264, 41186), (265, 41183), (268, 41168), (273, 41138), (277, 41108), (295, 40991), (298, 40958), (309, 40931), (313, 40907), (339, 40760), (345, 40706), (347, 40685), (356, 40610), (358, 40592), (384, 40415), (387, 40385), (390, 40358), (392, 40343), (415, 40214), (442, 40181), (464, 40094), (490, 39980), (492, 39974), (494, 39962), (531, 39812), (532, 39809), (533, 39803), (536, 39785), (537, 39776), (538, 39758), (555, 39656), (557, 39632), (564, 39596), (565, 39590),