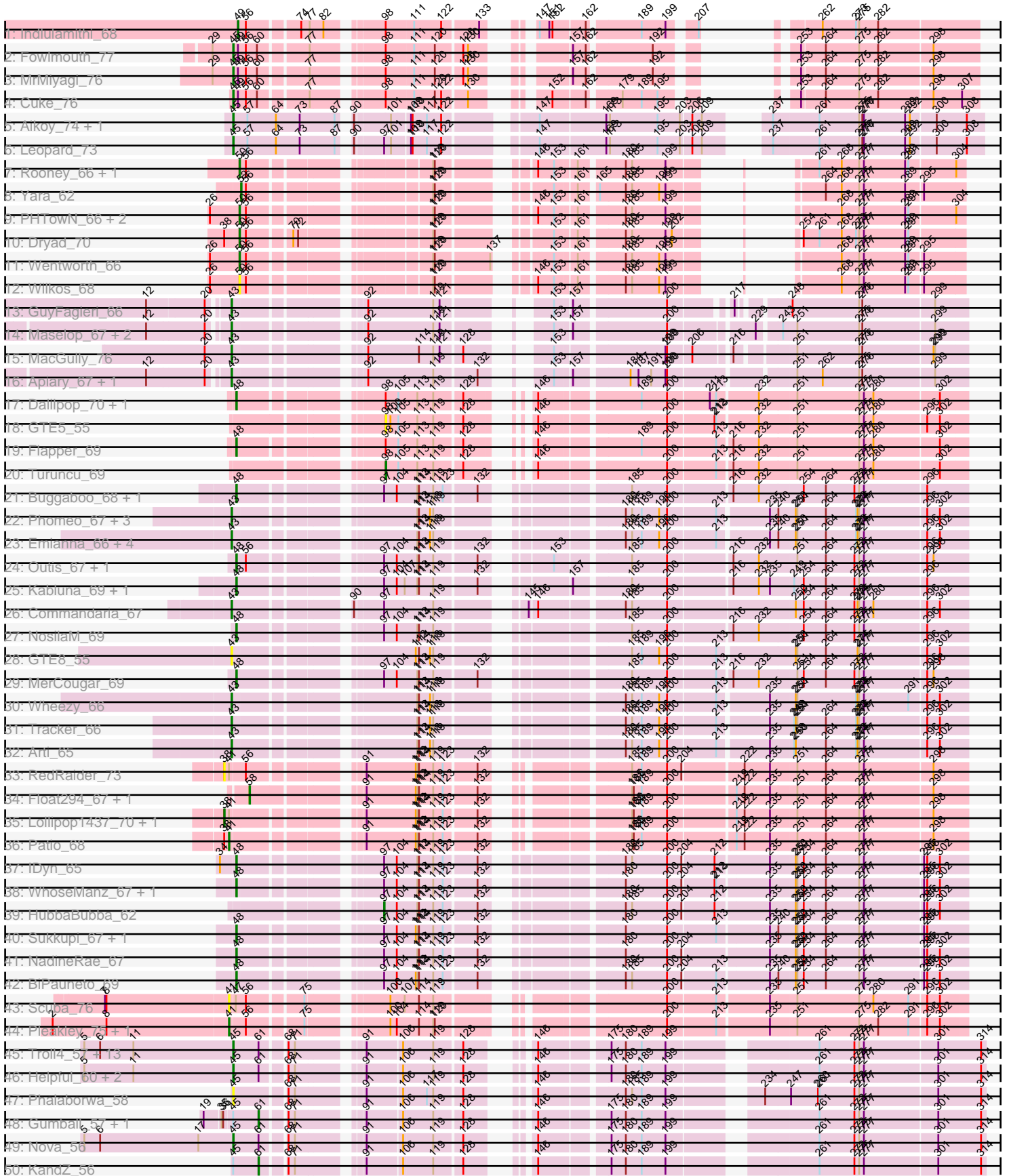
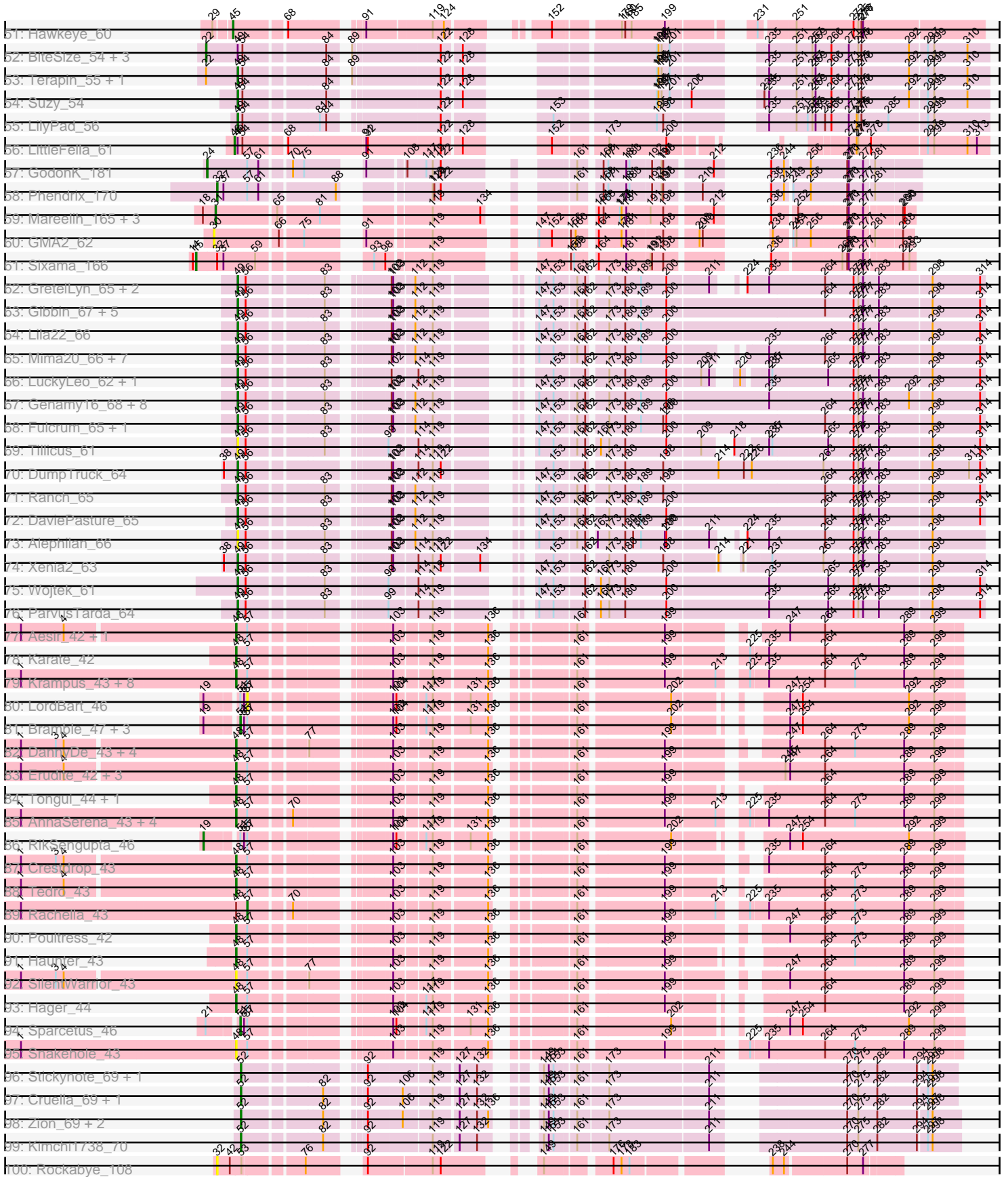
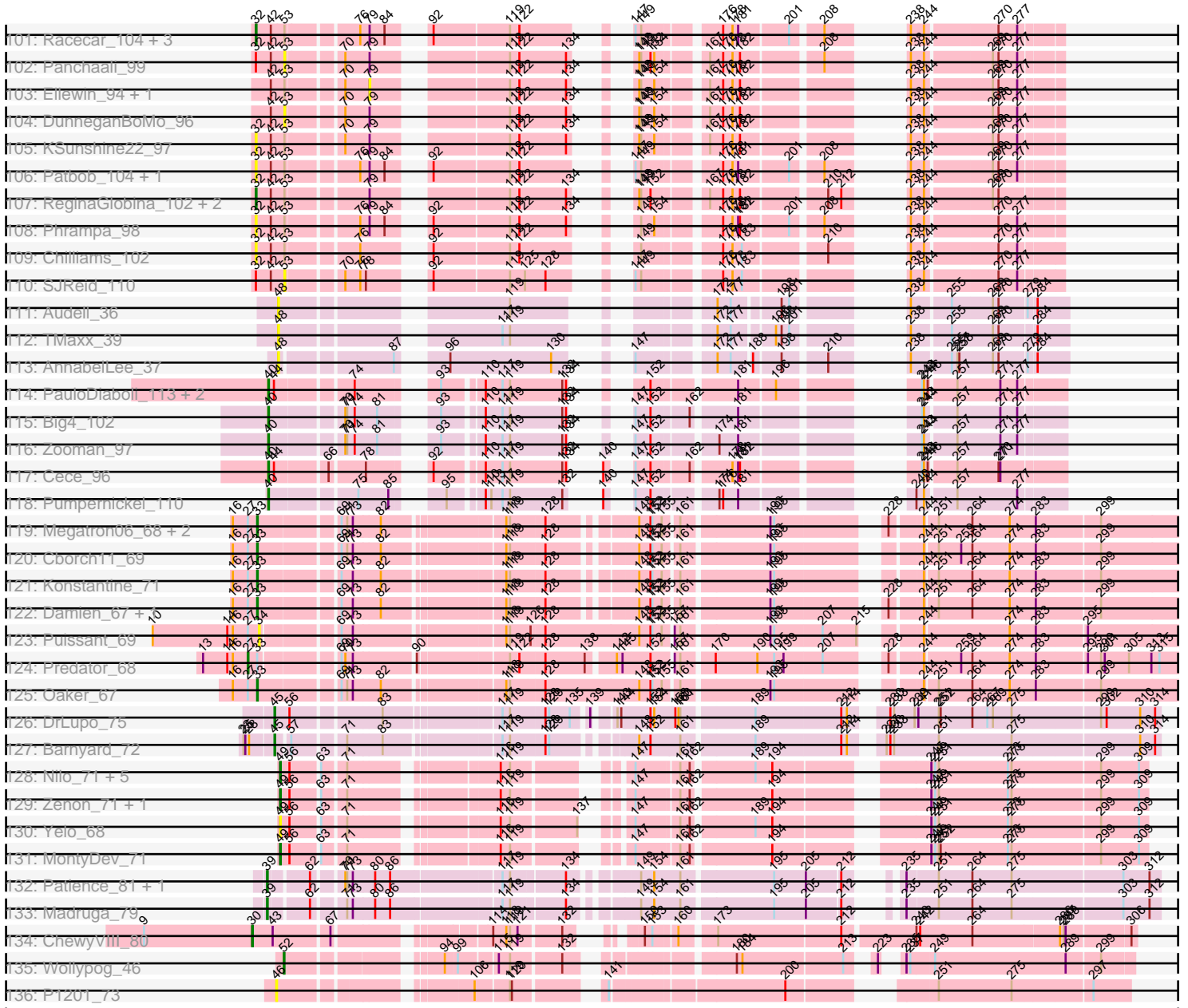


Pham 213959





Pham 213959



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 213959 Report

This analysis was run 02/22/25 on database version 588.

Pham number 213959 has 253 members, 47 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_68
- Track 2 : Fowlmouth_77
- Track 3 : MrMiyagi_76
- Track 4 : Cuke_76
- Track 5 : Aikoy_74, Onyinye_74
- Track 6 : Leopard_73
- Track 7 : Rooney_66, Gibson_66
- Track 8 : Yara_62
- Track 9 : PHTowN_66, ShakeNBake_66, Lizz_66
- Track 10 : Dryad_70
- Track 11 : Wentworth_66
- Track 12 : Wilkos_68
- Track 13 : GuyFagieri_66
- Track 14 : Maselop_67, CoffeeBean_67, Braxoaddie_67
- Track 15 : MacGully_76
- Track 16 : Apiary_67, Polyyuki_67
- Track 17 : Dalilpop_70, GRU1_55
- Track 18 : GTE5_55
- Track 19 : Flapper_69
- Track 20 : Turuncu_69
- Track 21 : Buggaboo_68, SuperSulley_68
- Track 22 : Phomeo_67, Jifall16_66, Foxboro_67, KidneyBean_67
- Track 23 : Emianna_66, NatB6_66, Kurt_66, NovumRegina_66, GrootJr_68
- Track 24 : Outis_67, StarStruck_67
- Track 25 : Kabluna_69, Bonum_70
- Track 26 : Commandaria_67
- Track 27 : NosilaM_69
- Track 28 : GTE8_55
- Track 29 : MerCougar_69
- Track 30 : Wheezy_66
- Track 31 : Tracker_66
- Track 32 : Arti_65
- Track 33 : RedRaider_73
- Track 34 : Float294_67, Skysand_68
- Track 35 : Lollipop1437_70, Ennea_73
- Track 36 : Patio_68
- Track 37 : IDyn_65

- Track 38 : WhoseManz_67, Marietta_68
- Track 39 : HubbaBubba_62
- Track 40 : Sukkupi_67, Yndexa_67
- Track 41 : NadineRae_67
- Track 42 : BiPauneto_69
- Track 43 : Scuba_76
- Track 44 : Pleakley_75, Fury_75
- Track 45 : Troll4_57, BigMama_55, Chill_59, Erk16_56, Mopey_58, Butterscotch_56, PBI1_54, Visconti_58, Giuseppe_58, Adjutor_56, Thoth_57, Delton_58, WaldoWhy_59, Prager_57
- Track 46 : Helpful_60, Penelope2018_57, PLOT_57
- Track 47 : Phalaborwa_58
- Track 48 : Gumball_57, SirHarley_59
- Track 49 : Nova_56
- Track 50 : KandZ_56
- Track 51 : Hawkeye_60
- Track 52 : BiteSize_54, Sienna_54, Madi_54, BeyonCage_54
- Track 53 : Terapin_55, Djokovic_54
- Track 54 : Suzy_54
- Track 55 : LilyPad_56
- Track 56 : LittleFella_61
- Track 57 : GodonK_181
- Track 58 : Phendrix_170
- Track 59 : Mareelih_165, Forza_168, Boopy_167, BlueNGold_164
- Track 60 : GMA2_62
- Track 61 : Sixama_166
- Track 62 : GretelLyn_65, Yikes_67, Sadboi_66
- Track 63 : Gibbin_67, Patos_69, NorManre_69, BirthdayBoy_67, Lambo_63, OtterstedtS21_65
- Track 64 : Lila22_66
- Track 65 : Mima20_66, DoobyDoo_64, Erutan_65, Zany_63, Jalebi_64, LavAbarElk_65, Sampudon_65, MoiGyank_68
- Track 66 : LuckyLeo_62, Apeppi_60
- Track 67 : Genamy16_68, RazorC_65, Stormer_65, NovaSharks_67, Astralis_66, Alyssamiracle_68, Avian_64, Rumi_66, Jamemuya19_65
- Track 68 : Fulcrum_65, GOATification_65
- Track 69 : Tillicus_61
- Track 70 : DumpTruck_64
- Track 71 : Ranch_65
- Track 72 : DaviePasture_65
- Track 73 : Alephilan_66
- Track 74 : Xenia2_63
- Track 75 : Wojtek_61
- Track 76 : ParvusTarda_64
- Track 77 : Aesir_42, JDawG_42
- Track 78 : Karate_42
- Track 79 : Krampus_43, Kate_44, Cybele_43, CoolCookie_43, Gilda_43, Neptune_43, Potty_43, PhunaPhoke_43, OverHedge_43
- Track 80 : LordBart_46
- Track 81 : Bramble_47, TinyMiny_46, Ajin_46, Kors_47
- Track 82 : DannyDe_43, Hiddenleaf_43, Chivey_43, FreddieHg_43, Annapurna_44
- Track 83 : Erudite_42, MortySmith_41, JingleBells_43, Dauntless_42
- Track 84 : Tongui_44, Rie18_43

- Track 85 : AnnaSerena_43, Pharpay_43, NarutoRun_43, Anakin_43, Artiphact_43
- Track 86 : RikSengupta_46
- Track 87 : Crestdrop_43
- Track 88 : Tedro_43
- Track 89 : Rachella_43
- Track 90 : Poultruss_42
- Track 91 : Haunter_43
- Track 92 : SilentWarrior_43
- Track 93 : Hager_44
- Track 94 : Sparcetus_46
- Track 95 : Snakehole_43
- Track 96 : Stickynote_69, Darwin_70
- Track 97 : Cruella_69, C3PO_69
- Track 98 : Zion_69, PeteyPab_68, PotatoChip_69
- Track 99 : Kimchi1738_70
- Track 100 : Rockabye_108
- Track 101 : Racecar_104, Bloom_107, Mimi_103, Talia1610_103
- Track 102 : Panchaali_99
- Track 103 : Ellewin_94, WaddleDee_96
- Track 104 : DunneganBoMo_96
- Track 105 : KSunshine22_97
- Track 106 : Patbob_104, GoldenEssence_92
- Track 107 : ReginaGlobina_102, Atuin_97, LeoJr_102
- Track 108 : Phrampa_98
- Track 109 : Chilliams_102
- Track 110 : SJReid_110
- Track 111 : Audell_36
- Track 112 : TMaxx_39
- Track 113 : AnnabelLee_37
- Track 114 : PauloDiaboli_113, Dodo_113, A3Wally_113
- Track 115 : Big4_102
- Track 116 : Zooman_97
- Track 117 : Cece_96
- Track 118 : Pumpernickel_110
- Track 119 : Megatron06_68, Thumb_68, Phreeze_66
- Track 120 : Cborch11_69
- Track 121 : Konstantine_71
- Track 122 : Damien_67, Beckerton_66
- Track 123 : Puissant_69
- Track 124 : Predator_68
- Track 125 : Oaker_67
- Track 126 : DrLupo_75
- Track 127 : Barnyard_72
- Track 128 : Nilo_71, Papyrus_69, Rope_69, Riparian_71, Weiss13_69, Candle_67
- Track 129 : Zenon_71, Send513_69
- Track 130 : Yelo_68
- Track 131 : MontyDev_71
- Track 132 : Patience_81, Labelle_80
- Track 133 : Madruga_79
- Track 134 : ChewyVIII_80
- Track 135 : Wollypog_46
- Track 136 : P1201_73

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

The start number called the most often in the published annotations is 48, it was called in 47 of the 206 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aesir_42, Anakin_43, AnnaSerena_43, AnnabelLee_37, Annapurna_44, Artiphact_43, Audell_36, BiPauneto_69, Bonum_70, Buggaboo_68, Chivey_43, CoolCookie_43, Crestdrop_43, Cybele_43, Dalilpop_70, DannyDe_43, Dauntless_42, Erudite_42, Flapper_69, FreddieHg_43, GRU1_55, Gilda_43, Hager_44, Haunter_43, Hiddenleaf_43, IDyn_65, JDawG_42, JingleBells_43, Kabluna_69, Karate_42, Kate_44, Krampus_43, Marietta_68, MerCougar_69, MortySmith_41, NadineRae_67, NarutoRun_43, Neptune_43, NosilaM_69, Outis_67, OverHedge_43, Pharpay_43, PhunaPhoke_43, Potty_43, Poultruss_42, Rie18_43, SilentWarrior_43, Snakehole_43, StarStruck_67, Sukkupi_67, SuperSulley_68, TMaxx_39, Tedro_43, Tongui_44, WhoseManz_67, Yndexa_67,

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

- Rachella_43,

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

- A3Wally_113, Adjutor_56, Aikoy_74, Ajin_46, Alephilan_66, Alyssamiracle_68, Apeppi_60, Apiary_67, Arti_65, Astralis_66, Atuin_97, Avian_64, Barnyard_72, Beckerton_66, Beyoncage_54, Big4_102, BigMama_55, BirthdayBoy_67, BiteSize_54, Bloom_107, BlueNGold_164, Boopy_167, Bramble_47, Braxoaddie_67, Butterscotch_56, C3PO_69, Candle_67, Cborch11_69, Cece_96, ChewyVIII_80, Chill_59, Chilliams_102, CoffeeBean_67, Commandaria_67, Cruella_69, Cuke_76, Damien_67, Darwin_70, DaviePasture_65, Delton_58, Djokovic_54, Dodo_113, DoobyDoo_64, DrLupo_75, Dryad_70, DumpTruck_64, DunneganBoMo_96, Ellewin_94, Emianna_66, Ennea_73, Erk16_56, Erutan_65, Float294_67, Forza_168, Fowlmouth_77, Foxboro_67, Fulcrum_65, Fury_75, GMA2_62, GOATification_65, GTE5_55, GTE8_55, Genamy16_68, Gibbin_67, Gibson_66, Giuseppe_58, GodonK_181, GoldenEssence_92, GretelLyn_65, GrootJr_68, Gumball_57, GuyFagieri_66, Hawkeye_60, Helpful_60, HubbaBubba_62, Indlulamithi_68, Jalebi_64, Jamemuya19_65, Jifall16_66, KSunshine22_97, KandZ_56, KidneyBean_67, Kimchi1738_70, Konstantine_71, Kors_47, Kurt_66, Labelle_80, Lambo_63, LavAbarElk_65, LeoJr_102, Leopard_73, Lila22_66, LilyPad_56, LittleFella_61, Lizz_66, Lollipop1437_70, LordBart_46, LuckyLeo_62, MacGully_76, Madi_54, Madrugua_79, Mareelih_165, Maselop_67, Megatron06_68, Mima20_66, Mimi_103, MoiGyank_68, MontyDev_71, Mopey_58, MrMiyagi_76, NatB6_66, Nilo_71, NorManre_69, NovaSharks_67, Nova_56, NovumRegina_66, Oaker_67, Onyinye_74, OtterstedtS21_65, P1201_73, PBI1_54, PHTowN_66, PLOT_57, Panchaali_99, Papyrus_69, ParvusTarda_64, Patbob_104, Patience_81, Patio_68, Patos_69, PauloDiaboli_113, Penelope2018_57, PeteyPab_68, Phalaborwa_58, Phendrix_170, Phomeo_67, Phrampa_98, Phreeze_66, Pleakley_75, Polyuyuki_67, PotatoChip_69, Prager_57, Predator_68, Puissant_69, Pumpnickel_110, Racecar_104, Ranch_65, RazorC_65, RedRaider_73, ReginaGlobina_102, RikSengupta_46, Riparian_71, Rockabye_108, Rooney_66, Rope_69, Rumi_66, SJReid_110, Sadboi_66, Sampudon_65, Scuba_76, Send513_69, ShakeNBake_66, Sienna_54, SirHarley_59, Sixama_166, Skysand_68, Sparcetus_46, Stickyntote_69,

Stormer_65, Suzy_54, Talia1610_103, Terapin_55, Thoth_57, Thumb_68, Tillicus_61, TinyMiny_46, Tracker_66, Troll4_57, Turuncu_69, Visconti_58, WaddleDee_96, WaldoWhy_59, Weiss13_69, Wentworth_66, Wheezy_66, Wilkos_68, Wojtek_61, Wolypog_46, Xenia2_63, Yara_62, Yelo_68, Yikes_67, Zany_63, Zenon_71, Zion_69, Zooman_97,

Summary by start number:

Start 15:

- Found in 1 of 253 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sixama_166 (DS),

Start 19:

- Found in 8 of 253 (3.2%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 12.5% of time when present
- Phage (with cluster) where this start called: RikSengupta_46 (EF),

Start 22:

- Found in 6 of 253 (2.4%) of genes in pham
- Manual Annotations of this start: 4 of 206
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Beyoncage_54 (DG1), BiteSize_54 (DG1), Madi_54 (DG1), Sienna_54 (DG1),

Start 24:

- Found in 1 of 253 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK_181 (DK),

Start 27:

- Found in 10 of 253 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Predator_68 (H1),

Start 30:

- Found in 2 of 253 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_80 (singleton), GMA2_62 (DS),

Start 31:

- Found in 4 of 253 (1.6%) of genes in pham
- Manual Annotations of this start: 4 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueNGold_164 (DS), Boopy_167 (DS), Forza_168 (DS), Mareelih_165 (DS),

Start 32:

- Found in 17 of 253 (6.7%) of genes in pham
- Manual Annotations of this start: 5 of 206
- Called 82.4% of time when present
- Phage (with cluster) where this start called: Atuin_97 (FC), Bloom_107 (FC), Chilliams_102 (FC), GoldenEssence_92 (FC), KSunshine22_97 (FC), LeoJr_102 (FC), Mimi_103 (FC), Patbob_104 (FC), Phendrix_170 (DK), Phrampa_98 (FC), Racecar_104 (FC), ReginaGlobina_102 (FC), Rockabye_108 (FC), Talia1610_103 (FC),

Start 33:

- Found in 9 of 253 (3.6%) of genes in pham
- Manual Annotations of this start: 8 of 206
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Beckerton_66 (H1), Cborch11_69 (H1), Damien_67 (H1), Konstantine_71 (H1), Megatron06_68 (H1), Oaker_67 (H1), Phreeze_66 (H1), Thumb_68 (H1),

Start 34:

- Found in 2 of 253 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Puissant_69 (H1),

Start 38:

- Found in 7 of 253 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 206
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Ennea_73 (CR3), Lollipop1437_70 (CR3), RedRaider_73 (CR3),

Start 39:

- Found in 3 of 253 (1.2%) of genes in pham
- Manual Annotations of this start: 3 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Labelle_80 (U), Madrugua_79 (U), Patience_81 (U),

Start 40:

- Found in 7 of 253 (2.8%) of genes in pham
- Manual Annotations of this start: 6 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_113 (GD1), Big4_102 (GD2), Cece_96 (GD3), Dodo_113 (GD1), PauloDiaboli_113 (GD1), Pumpernickel_110 (GD4), Zooman_97 (GD2),

Start 41:

- Found in 7 of 253 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 206
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Fury_75 (CR5), Patio_68 (CR3), Pleakley_75 (CR5), Scuba_76 (CR5),

Start 43:

- Found in 22 of 253 (8.7%) of genes in pham
- Manual Annotations of this start: 19 of 206
- Called 95.5% of time when present
- Phage (with cluster) where this start called: Apiary_67 (CR), Arti_65 (CR2), Braxoaddie_67 (CR), CoffeeBean_67 (CR), Commandaria_67 (CR2), Emianna_66 (CR2), Foxboro_67 (CR2), GTE8_55 (CR2), GrootJr_68 (CR2), GuyFagieri_66 (CR), Jifall16_66 (CR2), KidneyBean_67 (CR2), Kurt_66 (CR2), MacGully_76 (CR), Maselop_67 (CR), NatB6_66 (CR2), NovumRegina_66 (CR2), Phomeo_67 (CR2), Polyyuki_67 (CR), Tracker_66 (CR2), Wheezy_66 (CR2),

Start 45:

- Found in 31 of 253 (12.3%) of genes in pham
- Manual Annotations of this start: 27 of 206
- Called 90.3% of time when present
- Phage (with cluster) where this start called: Adjutor_56 (D1), Aikoy_74 (AE), Barnyard_72 (H2), BigMama_55 (D1), Butterscotch_56 (D1), Chill_59 (D1), Cuke_76 (AC), Delton_58 (D1), DrLupo_75 (H2), Erk16_56 (D1), Fowlmouth_77 (AC), Giuseppe_58 (D1), Hawkeye_60 (D2), Helpful_60 (D1), Leopard_73 (AE), Mopey_58 (D1), MrMiyagi_76 (AC), Nova_56 (D1), Onyinye_74 (AE), PBI1_54 (D1), PLOT_57 (D1), Penelope2018_57 (D1), Phalaborwa_58 (D1), Prager_57 (D1), Thoth_57 (D1), Troll4_57 (D1), Visconti_58 (D1), WaldoWhy_59 (D1),

Start 46:

- Found in 2 of 253 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleFella_61 (DG2), P1201_73 (singleton),

Start 48:

- Found in 57 of 253 (22.5%) of genes in pham
- Manual Annotations of this start: 47 of 206
- Called 98.2% of time when present
- Phage (with cluster) where this start called: Aesir_42 (EF), Anakin_43 (EF), AnnaSerena_43 (EF), AnnabelLee_37 (FR), Annapurna_44 (EF), Artiphact_43 (EF), Audell_36 (FR), BiPauneto_69 (CR4), Bonum_70 (CR2), Buggaboo_68 (CR2), Chivey_43 (EF), CoolCookie_43 (EF), Crestdrop_43 (EF), Cybele_43 (EF), Dalilpop_70 (CR1), DannyDe_43 (EF), Dauntless_42 (EF), Erudite_42 (EF), Flapper_69 (CR1), FreddieHg_43 (EF), GRU1_55 (CR1), Gilda_43 (EF), Hager_44 (EF), Haunter_43 (EF), Hiddenleaf_43 (EF), IDyn_65 (CR4), JDawG_42 (EF), JingleBells_43 (EF), Kabluna_69 (CR2), Karate_42 (EF), Kate_44 (EF), Krampus_43 (EF), Marietta_68 (CR4), MerCougar_69 (CR2), MortySmith_41 (EF), NadineRae_67 (CR4), NarutoRun_43 (EF), Neptune_43 (EF), NosilaM_69 (CR2), Outis_67 (CR2), OverHedge_43 (EF), Pharpay_43 (EF), PhunaPhoke_43 (EF), Potty_43 (EF), Poultruss_42 (EF), Rie18_43 (EF), SilentWarrior_43 (EF), Snakehole_43 (EF), StarStruck_67 (CR2), Sukkupi_67 (CR4), SuperSulley_68 (CR2), TMaxx_39 (FR), Tedro_43 (EF), Tongui_44 (EF), WhoseManz_67 (CR4), Yndexa_67 (CR4),

Start 49:

- Found in 62 of 253 (24.5%) of genes in pham
- Manual Annotations of this start: 44 of 206
- Called 87.1% of time when present

- Phage (with cluster) where this start called: Alephilan_66 (DV), Alyssamiracle_68 (DV), Apeppi_60 (DV), Astralis_66 (DV), Avian_64 (DV), BirthdayBoy_67 (DV), Candle_67 (R), DaviePasture_65 (DV), Djokovic_54 (DG1), DoobyDoo_64 (DV), DumpTruck_64 (DV), Erutan_65 (DV), Fulcrum_65 (DV), GOATification_65 (DV), Genamy16_68 (DV), Gibbin_67 (DV), GretelLyn_65 (DV), Indlulamithi_68 (AC), Jalebi_64 (DV), Jamemuya19_65 (DV), Lambo_63 (DV), LavAbarElk_65 (DV), Lila22_66 (DV), LilyPad_56 (DG1), LuckyLeo_62 (DV), Mima20_66 (DV), MoiGyank_68 (DV), MontyDev_71 (R), Nilo_71 (R), NorManre_69 (DV), NovaSharks_67 (DV), OtterstedtS21_65 (DV), Papyrus_69 (R), ParvusTarda_64 (DV), Patos_69 (DV), Ranch_65 (DV), RazorC_65 (DV), Riparian_71 (R), Rope_69 (R), Rumi_66 (DV), Sadboi_66 (DV), Sampudon_65 (DV), Send513_69 (R), Stormer_65 (DV), Suzy_54 (DG1), Terapin_55 (DG1), Tillicus_61 (DV), Weiss13_69 (R), Wojtek_61 (DV), Xenia2_63 (DV), Yelo_68 (R), Yikes_67 (DV), Zany_63 (DV), Zenon_71 (R),

Start 50:

- Found in 8 of 253 (3.2%) of genes in pham
- Manual Annotations of this start: 7 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dryad_70 (BN), Gibson_66 (BN), Lizz_66 (BN), PHTown_66 (BN), Rooney_66 (BN), ShakeNBake_66 (BN), Wentworth_66 (BN), Wilkos_68 (BN),

Start 51:

- Found in 7 of 253 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 206
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Ajin_46 (EF), Bramble_47 (EF), Kors_47 (EF), Sparcetus_46 (EF), TinyMiny_46 (EF),

Start 52:

- Found in 10 of 253 (4.0%) of genes in pham
- Manual Annotations of this start: 10 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: C3PO_69 (EN), Cruella_69 (EN), Darwin_70 (EN), Kimchi1738_70 (EN), PeteyPab_68 (EN), PotatoChip_69 (EN), Stickynote_69 (EN), Wollypog_46 (singleton), Yara_62 (BN), Zion_69 (EN),

Start 53:

- Found in 18 of 253 (7.1%) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: DunneganBoMo_96 (FC), Panchaali_99 (FC), SJReid_110 (FC),

Start 57:

- Found in 49 of 253 (19.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 4.1% of time when present
- Phage (with cluster) where this start called: LordBart_46 (EF), Rachella_43 (EF),

Start 58:

- Found in 2 of 253 (0.8%) of genes in pham

- Manual Annotations of this start: 2 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Float294_67 (CR3), Skysand_68 (CR3),

Start 61:

- Found in 23 of 253 (9.1%) of genes in pham
- Manual Annotations of this start: 3 of 206
- Called 13.0% of time when present
- Phage (with cluster) where this start called: Gumball_57 (D1), KandZ_56 (D1), SirHarley_59 (D1),

Start 79:

- Found in 15 of 253 (5.9%) of genes in pham
- No Manual Annotations of this start.
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Ellewin_94 (FC), WaddleDee_96 (FC),

Start 97:

- Found in 18 of 253 (7.1%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 5.6% of time when present
- Phage (with cluster) where this start called: HubbaBubba_62 (CR4),

Start 98:

- Found in 10 of 253 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 20.0% of time when present
- Phage (with cluster) where this start called: GTE5_55 (CR1), Turuncu_69 (CR1),

Summary by clusters:

There are 29 clusters represented in this pham: GD1, FR, GD3, GD4, DK, BN, GD2, FC, DV, DS, AC, EN, AE, EF, DG2, R, U, CR, singleton, CR2, CR3, CR1, CR4, CR5, H2, H1, DG1, D2, D1,

Info for manual annotations of cluster AC:

- Start number 45 was manually annotated 3 times for cluster AC.
- Start number 49 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AE:

- Start number 45 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster BN:

- Start number 50 was manually annotated 7 times for cluster BN.
- Start number 52 was manually annotated 1 time for cluster BN.

Info for manual annotations of cluster CR:

- Start number 43 was manually annotated 7 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 48 was manually annotated 2 times for cluster CR1.
- Start number 98 was manually annotated 1 time for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 43 was manually annotated 12 times for cluster CR2.
- Start number 48 was manually annotated 8 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 38 was manually annotated 2 times for cluster CR3.
- Start number 41 was manually annotated 1 time for cluster CR3.
- Start number 58 was manually annotated 2 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 48 was manually annotated 7 times for cluster CR4.
- Start number 97 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 41 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster D1:

- Start number 45 was manually annotated 18 times for cluster D1.
- Start number 61 was manually annotated 3 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 45 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DG1:

- Start number 22 was manually annotated 4 times for cluster DG1.
- Start number 49 was manually annotated 4 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 46 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DK:

- Start number 24 was manually annotated 1 time for cluster DK.
- Start number 32 was manually annotated 1 time for cluster DK.

Info for manual annotations of cluster DS:

- Start number 15 was manually annotated 1 time for cluster DS.
- Start number 31 was manually annotated 4 times for cluster DS.

Info for manual annotations of cluster DV:

- Start number 49 was manually annotated 30 times for cluster DV.

Info for manual annotations of cluster EF:

- Start number 19 was manually annotated 1 time for cluster EF.
- Start number 48 was manually annotated 30 times for cluster EF.
- Start number 51 was manually annotated 3 times for cluster EF.
- Start number 57 was manually annotated 1 time for cluster EF.

Info for manual annotations of cluster EN:

- Start number 52 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster FC:

- Start number 32 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster GD1:

- Start number 40 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 40 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 40 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 40 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster H1:

- Start number 27 was manually annotated 1 time for cluster H1.
- Start number 33 was manually annotated 8 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 45 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster R:

- Start number 49 was manually annotated 9 times for cluster R.

Info for manual annotations of cluster U:

- Start number 39 was manually annotated 3 times for cluster U.

Gene Information:

Gene: A3Wally_113 Start: 77350, Stop: 76415, Start Num: 40

Candidate Starts for A3Wally_113:

(Start: 40 @77350 has 6 MA's), (44, 77341), (74, 77233), (93, 77143), (110, 77092), (117, 77065), (119, 77053), (132, 76969), (134, 76963), (152, 76924), (181, 76807), (196, 76756), (243, 76624), (244, 76621), (246, 76615), (257, 76576), (271, 76510), (277, 76483),

Gene: Adjutor_56 Start: 43047, Stop: 44225, Start Num: 45

Candidate Starts for Adjutor_56:

(5, 42765), (6, 42795), (11, 42858), (Start: 45 @43047 has 27 MA's), (Start: 61 @43095 has 3 MA's), (68, 43134), (71, 43146), (91, 43245), (106, 43308), (119, 43362), (128, 43410), (146, 43476), (175, 43590), (180, 43617), (189, 43647), (199, 43692), (261, 43926), (272, 43992), (275, 44001), (277, 44010), (301, 44136), (314, 44217),

Gene: Aesir_42 Start: 28494, Stop: 29621, Start Num: 48

Candidate Starts for Aesir_42:

(1, 28101), (4, 28182), (Start: 48 @28494 has 47 MA's), (Start: 57 @28515 has 1 MA's), (103, 28725), (119, 28788), (136, 28884), (161, 28989), (199, 29139), (247, 29307), (264, 29373), (289, 29514), (299, 29571),

Gene: Aikoy_74 Start: 50610, Stop: 51827, Start Num: 45

Candidate Starts for Aikoy_74:

(Start: 45 @50610 has 27 MA's), (Start: 57 @50637 has 1 MA's), (64, 50691), (73, 50736), (87, 50802), (90, 50814), (101, 50874), (109, 50904), (110, 50907), (117, 50934), (122, 50961), (147, 51090), (169,

51210), (173, 51216), (195, 51306), (203, 51348), (206, 51366), (209, 51384), (237, 51447), (261, 51531), (275, 51606), (276, 51612), (277, 51615), (289, 51684), (292, 51693), (300, 51738), (308, 51795),

Gene: Ajin_46 Start: 29709, Stop: 30806, Start Num: 51

Candidate Starts for Ajin_46:

(Start: 19 @29655 has 1 MA's), (Start: 51 @29709 has 3 MA's), (55, 29712), (Start: 57 @29718 has 1 MA's), (103, 29928), (104, 29934), (117, 29979), (119, 29991), (131, 30054), (136, 30087), (161, 30192), (202, 30354), (247, 30489), (254, 30513), (292, 30705), (299, 30753),

Gene: Alephilan_66 Start: 44039, Stop: 45202, Start Num: 49

Candidate Starts for Alephilan_66:

(Start: 49 @44039 has 44 MA's), (56, 44054), (83, 44183), (102, 44273), (103, 44276), (112, 44312), (119, 44345), (147, 44459), (153, 44486), (161, 44525), (162, 44540), (163, 44549), (173, 44570), (180, 44600), (186, 44615), (189, 44630), (199, 44675), (200, 44678), (211, 44753), (224, 44774), (235, 44813), (264, 44915), (272, 44969), (275, 44978), (277, 44987), (283, 45011), (298, 45104),

Gene: Alyssamiracle_68 Start: 43081, Stop: 44298, Start Num: 49

Candidate Starts for Alyssamiracle_68:

(Start: 49 @43081 has 44 MA's), (56, 43096), (83, 43225), (102, 43315), (103, 43318), (112, 43354), (119, 43387), (147, 43501), (153, 43528), (161, 43567), (162, 43582), (173, 43612), (180, 43642), (189, 43672), (200, 43720), (235, 43909), (272, 44065), (275, 44074), (277, 44083), (283, 44107), (292, 44161), (298, 44200), (314, 44290),

Gene: Anakin_43 Start: 28820, Stop: 29974, Start Num: 48

Candidate Starts for Anakin_43:

(1, 28421), (Start: 48 @28820 has 47 MA's), (Start: 57 @28841 has 1 MA's), (70, 28910), (103, 29051), (119, 29114), (136, 29210), (161, 29315), (199, 29465), (213, 29555), (225, 29591), (235, 29621), (264, 29726), (273, 29783), (289, 29867), (299, 29924),

Gene: AnnaSerena_43 Start: 28855, Stop: 30009, Start Num: 48

Candidate Starts for AnnaSerena_43:

(1, 28456), (Start: 48 @28855 has 47 MA's), (Start: 57 @28876 has 1 MA's), (70, 28945), (103, 29086), (119, 29149), (136, 29245), (161, 29350), (199, 29500), (213, 29590), (225, 29626), (235, 29656), (264, 29761), (273, 29818), (289, 29902), (299, 29959),

Gene: AnnabelLee_37 Start: 24525, Stop: 23593, Start Num: 48

Candidate Starts for AnnabelLee_37:

(Start: 48 @24525 has 47 MA's), (87, 24366), (96, 24321), (130, 24159), (147, 24120), (172, 24018), (177, 23997), (188, 23970), (198, 23931), (210, 23871), (238, 23826), (255, 23769), (257, 23760), (258, 23757), (269, 23706), (270, 23697), (279, 23655), (284, 23643),

Gene: Annapurna_44 Start: 28123, Stop: 29250, Start Num: 48

Candidate Starts for Annapurna_44:

(1, 27730), (3, 27796), (4, 27811), (Start: 48 @28123 has 47 MA's), (Start: 57 @28144 has 1 MA's), (77, 28240), (103, 28354), (119, 28417), (136, 28513), (161, 28618), (199, 28768), (247, 28936), (264, 29002), (273, 29059), (289, 29143), (299, 29200),

Gene: Apeppi_60 Start: 43297, Stop: 44457, Start Num: 49

Candidate Starts for Apeppi_60:

(Start: 49 @43297 has 44 MA's), (56, 43312), (83, 43441), (102, 43531), (114, 43576), (119, 43603), (153, 43744), (162, 43795), (173, 43825), (180, 43855), (200, 43933), (209, 43993), (211, 44008), (220, 44029), (235, 44068), (237, 44074), (265, 44176), (272, 44224), (275, 44233), (283, 44266),

(298, 44359), (314, 44449),

Gene: Apiary_67 Start: 50069, Stop: 48903, Start Num: 43

Candidate Starts for Apiary_67:

(12, 50207), (20, 50099), (Start: 43 @50069 has 19 MA's), (92, 49871), (119, 49748), (132, 49673), (153, 49610), (157, 49583), (184, 49490), (187, 49475), (191, 49451), (199, 49424), (200, 49421), (251, 49211), (262, 49163), (275, 49094), (276, 49088), (299, 48962),

Gene: Arti_65 Start: 52065, Stop: 50866, Start Num: 43

Candidate Starts for Arti_65:

(Start: 43 @52065 has 19 MA's), (113, 51777), (114, 51774), (118, 51753), (119, 51747), (180, 51474), (185, 51462), (189, 51444), (196, 51411), (200, 51396), (213, 51309), (235, 51222), (249, 51180), (250, 51177), (264, 51120), (273, 51063), (274, 51060), (275, 51057), (277, 51048), (296, 50940), (302, 50916),

Gene: Artiphact_43 Start: 28844, Stop: 29998, Start Num: 48

Candidate Starts for Artiphact_43:

(1, 28445), (Start: 48 @28844 has 47 MA's), (Start: 57 @28865 has 1 MA's), (70, 28934), (103, 29075), (119, 29138), (136, 29234), (161, 29339), (199, 29489), (213, 29579), (225, 29615), (235, 29645), (264, 29750), (273, 29807), (289, 29891), (299, 29948),

Gene: Astralis_66 Start: 42660, Stop: 43877, Start Num: 49

Candidate Starts for Astralis_66:

(Start: 49 @42660 has 44 MA's), (56, 42675), (83, 42804), (102, 42894), (103, 42897), (112, 42933), (119, 42966), (147, 43080), (153, 43107), (161, 43146), (162, 43161), (173, 43191), (180, 43221), (189, 43251), (200, 43299), (235, 43488), (272, 43644), (275, 43653), (277, 43662), (283, 43686), (292, 43740), (298, 43779), (314, 43869),

Gene: Atuin_97 Start: 83319, Stop: 84290, Start Num: 32

Candidate Starts for Atuin_97:

(Start: 32 @83319 has 5 MA's), (42, 83343), (53, 83364), (79, 83478), (119, 83652), (122, 83667), (134, 83742), (148, 83769), (149, 83772), (152, 83787), (167, 83856), (176, 83877), (178, 83892), (182, 83904), (210, 84024), (212, 84045), (238, 84069), (244, 84090), (269, 84189), (270, 84198),

Gene: Audell_36 Start: 26923, Stop: 25982, Start Num: 48

Candidate Starts for Audell_36:

(Start: 48 @26923 has 47 MA's), (119, 26614), (172, 26407), (177, 26386), (198, 26320), (201, 26308), (238, 26215), (255, 26158), (269, 26095), (270, 26086), (279, 26044), (284, 26032),

Gene: Avian_64 Start: 42809, Stop: 44026, Start Num: 49

Candidate Starts for Avian_64:

(Start: 49 @42809 has 44 MA's), (56, 42824), (83, 42953), (102, 43043), (103, 43046), (112, 43082), (119, 43115), (147, 43229), (153, 43256), (161, 43295), (162, 43310), (173, 43340), (180, 43370), (189, 43400), (200, 43448), (235, 43637), (272, 43793), (275, 43802), (277, 43811), (283, 43835), (292, 43889), (298, 43928), (314, 44018),

Gene: Barnyard_72 Start: 49524, Stop: 50783, Start Num: 45

Candidate Starts for Barnyard_72:

(23, 49479), (25, 49482), (28, 49488), (Start: 45 @49524 has 27 MA's), (Start: 57 @49542 has 1 MA's), (71, 49614), (83, 49668), (117, 49833), (119, 49845), (128, 49899), (129, 49905), (148, 50010), (152, 50028), (161, 50073), (189, 50181), (212, 50316), (214, 50325), (227, 50358), (230, 50364), (233, 50370), (251, 50442), (275, 50559), (310, 50751), (314, 50775),

Gene: Beckerton_66 Start: 50602, Stop: 51891, Start Num: 33

Candidate Starts for Beckerton_66:

(16, 50563), (Start: 27 @50587 has 1 MA's), (Start: 33 @50602 has 8 MA's), (69, 50716), (73, 50734), (82, 50776), (118, 50950), (119, 50956), (128, 51007), (148, 51121), (152, 51139), (153, 51142), (155, 51157), (161, 51178), (193, 51310), (195, 51316), (228, 51454), (244, 51499), (251, 51517), (264, 51571), (274, 51631), (283, 51667), (299, 51763),

Gene: Beyoncage_54 Start: 40427, Stop: 41632, Start Num: 22

Candidate Starts for Beyoncage_54:

(Start: 22 @40427 has 4 MA's), (Start: 49 @40487 has 44 MA's), (54, 40496), (84, 40634), (89, 40658), (122, 40811), (128, 40844), (195, 41090), (196, 41093), (197, 41099), (201, 41114), (235, 41234), (251, 41282), (257, 41312), (259, 41318), (266, 41348), (271, 41381), (275, 41399), (276, 41405), (292, 41486), (297, 41516), (299, 41528), (310, 41591),

Gene: BiPauneto_69 Start: 51654, Stop: 50455, Start Num: 48

Candidate Starts for BiPauneto_69:

(Start: 48 @51654 has 47 MA's), (Start: 97 @51435 has 1 MA's), (104, 51411), (112, 51375), (113, 51372), (114, 51369), (119, 51342), (123, 51324), (132, 51267), (180, 51069), (185, 51057), (200, 50991), (204, 50964), (213, 50904), (235, 50811), (240, 50796), (250, 50766), (251, 50763), (254, 50751), (264, 50709), (275, 50646), (277, 50637), (295, 50535), (296, 50529), (302, 50505),

Gene: Big4_102 Start: 76433, Stop: 75498, Start Num: 40

Candidate Starts for Big4_102:

(Start: 40 @76433 has 6 MA's), (70, 76331), (71, 76328), (74, 76316), (81, 76280), (93, 76226), (110, 76175), (117, 76148), (119, 76136), (132, 76052), (134, 76046), (147, 76031), (152, 76007), (162, 75953), (181, 75890), (243, 75707), (244, 75704), (257, 75659), (271, 75593), (277, 75566),

Gene: BigMama_55 Start: 43123, Stop: 44301, Start Num: 45

Candidate Starts for BigMama_55:

(5, 42841), (6, 42871), (11, 42934), (Start: 45 @43123 has 27 MA's), (Start: 61 @43171 has 3 MA's), (68, 43210), (71, 43222), (91, 43321), (106, 43384), (119, 43438), (128, 43486), (146, 43552), (175, 43666), (180, 43693), (189, 43723), (199, 43768), (261, 44002), (272, 44068), (275, 44077), (277, 44086), (301, 44212), (314, 44293),

Gene: BirthdayBoy_67 Start: 44385, Stop: 45602, Start Num: 49

Candidate Starts for BirthdayBoy_67:

(Start: 49 @44385 has 44 MA's), (56, 44400), (83, 44529), (102, 44619), (103, 44622), (112, 44658), (119, 44691), (147, 44805), (153, 44832), (161, 44871), (162, 44886), (173, 44916), (180, 44946), (189, 44976), (200, 45024), (264, 45315), (272, 45369), (275, 45378), (277, 45387), (283, 45411), (298, 45504), (314, 45594),

Gene: BiteSize_54 Start: 40513, Stop: 41718, Start Num: 22

Candidate Starts for BiteSize_54:

(Start: 22 @40513 has 4 MA's), (Start: 49 @40573 has 44 MA's), (54, 40582), (84, 40720), (89, 40744), (122, 40897), (128, 40930), (195, 41176), (196, 41179), (197, 41185), (201, 41200), (235, 41320), (251, 41368), (257, 41398), (259, 41404), (266, 41434), (271, 41467), (275, 41485), (276, 41491), (292, 41572), (297, 41602), (299, 41614), (310, 41677),

Gene: Bloom_107 Start: 83495, Stop: 84466, Start Num: 32

Candidate Starts for Bloom_107:

(Start: 32 @83495 has 5 MA's), (42, 83519), (53, 83540), (76, 83639), (79, 83654), (84, 83678), (92, 83711), (119, 83828), (122, 83843), (147, 83939), (149, 83948), (176, 84053), (178, 84068), (181, 84077), (201, 84152), (208, 84194), (238, 84245), (244, 84266), (270, 84374), (277, 84404),

Gene: BlueNGold_164 Start: 94575, Stop: 93583, Start Num: 31

Candidate Starts for BlueNGold_164:

(18, 94599), (Start: 31 @94575 has 4 MA's), (65, 94473), (81, 94401), (119, 94248), (134, 94158), (164, 94050), (168, 94041), (177, 94011), (178, 94008), (181, 93999), (191, 93954), (198, 93930), (212, 93849), (236, 93828), (252, 93786), (270, 93699), (271, 93696), (277, 93669), (288, 93606), (290, 93603),

Gene: Bonum_70 Start: 52948, Stop: 51740, Start Num: 48

Candidate Starts for Bonum_70:

(Start: 48 @52948 has 47 MA's), (Start: 97 @52726 has 1 MA's), (104, 52702), (107, 52687), (113, 52663), (114, 52660), (119, 52633), (132, 52558), (157, 52441), (185, 52345), (200, 52279), (216, 52168), (232, 52120), (235, 52099), (249, 52057), (254, 52039), (264, 51997), (272, 51943), (275, 51934), (277, 51925), (296, 51817),

Gene: Boopy_167 Start: 94586, Stop: 93594, Start Num: 31

Candidate Starts for Boopy_167:

(18, 94610), (Start: 31 @94586 has 4 MA's), (65, 94484), (81, 94412), (119, 94259), (134, 94169), (164, 94061), (168, 94052), (177, 94022), (178, 94019), (181, 94010), (191, 93965), (198, 93941), (212, 93860), (236, 93839), (252, 93797), (270, 93710), (271, 93707), (277, 93680), (288, 93617), (290, 93614),

Gene: Bramble_47 Start: 29758, Stop: 30855, Start Num: 51

Candidate Starts for Bramble_47:

(Start: 19 @29704 has 1 MA's), (Start: 51 @29758 has 3 MA's), (55, 29761), (Start: 57 @29767 has 1 MA's), (103, 29977), (104, 29983), (117, 30028), (119, 30040), (131, 30103), (136, 30136), (161, 30241), (202, 30403), (247, 30538), (254, 30562), (292, 30754), (299, 30802),

Gene: Braxoaddie_67 Start: 50055, Stop: 48892, Start Num: 43

Candidate Starts for Braxoaddie_67:

(12, 50193), (20, 50085), (Start: 43 @50055 has 19 MA's), (92, 49857), (119, 49734), (121, 49722), (153, 49596), (157, 49569), (200, 49407), (229, 49263), (243, 49224), (251, 49200), (275, 49083), (276, 49077), (299, 48951),

Gene: Buggaboo_68 Start: 53499, Stop: 52291, Start Num: 48

Candidate Starts for Buggaboo_68:

(Start: 48 @53499 has 47 MA's), (Start: 97 @53277 has 1 MA's), (104, 53253), (113, 53214), (114, 53211), (119, 53184), (123, 53166), (132, 53109), (185, 52896), (200, 52830), (216, 52719), (232, 52671), (254, 52590), (264, 52548), (272, 52494), (275, 52485), (277, 52476), (296, 52368),

Gene: Butterscotch_56 Start: 43107, Stop: 44285, Start Num: 45

Candidate Starts for Butterscotch_56:

(5, 42825), (6, 42855), (11, 42918), (Start: 45 @43107 has 27 MA's), (Start: 61 @43155 has 3 MA's), (68, 43194), (71, 43206), (91, 43305), (106, 43368), (119, 43422), (128, 43470), (146, 43536), (175, 43650), (180, 43677), (189, 43707), (199, 43752), (261, 43986), (272, 44052), (275, 44061), (277, 44070), (301, 44196), (314, 44277),

Gene: C3PO_69 Start: 50533, Stop: 49421, Start Num: 52

Candidate Starts for C3PO_69:

(Start: 52 @50533 has 10 MA's), (82, 50398), (92, 50347), (106, 50284), (119, 50233), (127, 50191), (132, 50158), (149, 50095), (151, 50086), (153, 50077), (161, 50041), (173, 49987), (211, 49804), (270, 49615), (275, 49594), (282, 49564), (294, 49492), (297, 49477), (298, 49468),

Gene: Candle_67 Start: 51720, Stop: 52889, Start Num: 49

Candidate Starts for Candle_67:

(Start: 49 @51720 has 44 MA's), (56, 51735), (63, 51777), (71, 51810), (116, 52011), (119, 52026), (147, 52158), (161, 52221), (162, 52236), (189, 52326), (194, 52353), (247, 52554), (249, 52560), (251, 52566), (273, 52677), (275, 52683), (299, 52815), (309, 52875),

Gene: Cborch11_69 Start: 50121, Stop: 51410, Start Num: 33

Candidate Starts for Cborch11_69:

(16, 50082), (Start: 27 @50106 has 1 MA's), (Start: 33 @50121 has 8 MA's), (69, 50235), (71, 50244), (73, 50253), (82, 50295), (118, 50469), (119, 50475), (128, 50526), (148, 50640), (152, 50658), (153, 50661), (155, 50676), (161, 50697), (193, 50829), (195, 50835), (244, 51018), (251, 51036), (259, 51072), (264, 51090), (274, 51150), (283, 51186), (299, 51282),

Gene: Cece_96 Start: 79474, Stop: 78539, Start Num: 40

Candidate Starts for Cece_96:

(Start: 40 @79474 has 6 MA's), (44, 79465), (66, 79390), (78, 79339), (92, 79279), (110, 79216), (117, 79189), (119, 79177), (132, 79093), (134, 79087), (140, 79084), (147, 79072), (152, 79048), (162, 78994), (178, 78940), (181, 78931), (182, 78928), (243, 78748), (244, 78745), (246, 78739), (257, 78700), (270, 78637), (271, 78634),

Gene: ChewyVIII_80 Start: 59181, Stop: 57982, Start Num: 30

Candidate Starts for ChewyVIII_80:

(9, 59355), (Start: 30 @59181 has 1 MA's), (Start: 43 @59148 has 19 MA's), (67, 59064), (114, 58863), (118, 58842), (119, 58836), (121, 58824), (132, 58761), (150, 58707), (153, 58695), (160, 58662), (173, 58614), (212, 58422), (240, 58314), (242, 58308), (264, 58227), (286, 58095), (287, 58089), (289, 58086), (306, 57990),

Gene: Chill_59 Start: 43170, Stop: 44348, Start Num: 45

Candidate Starts for Chill_59:

(5, 42888), (6, 42918), (11, 42981), (Start: 45 @43170 has 27 MA's), (Start: 61 @43218 has 3 MA's), (68, 43257), (71, 43269), (91, 43368), (106, 43431), (119, 43485), (128, 43533), (146, 43599), (175, 43713), (180, 43740), (189, 43770), (199, 43815), (261, 44049), (272, 44115), (275, 44124), (277, 44133), (301, 44259), (314, 44340),

Gene: Chilliams_102 Start: 76293, Stop: 77267, Start Num: 32

Candidate Starts for Chilliams_102:

(Start: 32 @76293 has 5 MA's), (42, 76317), (53, 76338), (76, 76437), (92, 76509), (119, 76626), (122, 76641), (149, 76746), (176, 76851), (178, 76866), (183, 76881), (210, 76998), (238, 77043), (244, 77064), (270, 77172), (277, 77202),

Gene: Chivey_43 Start: 28072, Stop: 29199, Start Num: 48

Candidate Starts for Chivey_43:

(1, 27679), (3, 27745), (4, 27760), (Start: 48 @28072 has 47 MA's), (Start: 57 @28093 has 1 MA's), (77, 28189), (103, 28303), (119, 28366), (136, 28462), (161, 28567), (199, 28717), (247, 28885), (264, 28951), (273, 29008), (289, 29092), (299, 29149),

Gene: CoffeeBean_67 Start: 50013, Stop: 48850, Start Num: 43

Candidate Starts for CoffeeBean_67:

(12, 50151), (20, 50043), (Start: 43 @50013 has 19 MA's), (92, 49815), (119, 49692), (121, 49680), (153, 49554), (157, 49527), (200, 49365), (229, 49221), (243, 49182), (251, 49158), (275, 49041), (276, 49035), (299, 48909),

Gene: Commandaria_67 Start: 53320, Stop: 52109, Start Num: 43

Candidate Starts for Commandaria_67:

(Start: 43 @53320 has 19 MA's), (90, 53140), (Start: 97 @53092 has 1 MA's), (119, 52999), (145, 52876), (146, 52867), (180, 52726), (185, 52714), (200, 52648), (250, 52420), (254, 52405), (264, 52363), (272, 52309), (274, 52303), (275, 52300), (277, 52291), (280, 52276), (296, 52183), (302, 52159),

Gene: CoolCookie_43 Start: 28850, Stop: 30004, Start Num: 48

Candidate Starts for CoolCookie_43:

(1, 28451), (Start: 48 @28850 has 47 MA's), (Start: 57 @28871 has 1 MA's), (103, 29081), (119, 29144), (136, 29240), (161, 29345), (199, 29495), (213, 29585), (225, 29621), (235, 29651), (264, 29756), (273, 29813), (289, 29897), (299, 29954),

Gene: Crestdrop_43 Start: 28106, Stop: 29230, Start Num: 48

Candidate Starts for Crestdrop_43:

(1, 27713), (3, 27779), (4, 27794), (Start: 48 @28106 has 47 MA's), (Start: 57 @28127 has 1 MA's), (103, 28337), (119, 28400), (136, 28496), (161, 28601), (199, 28751), (235, 28880), (264, 28982), (289, 29123), (299, 29180),

Gene: Cruella_69 Start: 50533, Stop: 49421, Start Num: 52

Candidate Starts for Cruella_69:

(Start: 52 @50533 has 10 MA's), (82, 50398), (92, 50347), (106, 50284), (119, 50233), (127, 50191), (132, 50158), (149, 50095), (151, 50086), (153, 50077), (161, 50041), (173, 49987), (211, 49804), (270, 49615), (275, 49594), (282, 49564), (294, 49492), (297, 49477), (298, 49468),

Gene: Cuke_76 Start: 45241, Stop: 46281, Start Num: 45

Candidate Starts for Cuke_76:

(Start: 45 @45241 has 27 MA's), (Start: 49 @45250 has 44 MA's), (56, 45265), (60, 45286), (77, 45367), (Start: 98 @45475 has 1 MA's), (111, 45526), (120, 45565), (122, 45577), (130, 45619), (152, 45700), (162, 45757), (179, 45811), (189, 45847), (195, 45877), (253, 45961), (264, 46003), (275, 46066), (282, 46096), (298, 46195), (307, 46249),

Gene: Cybele_43 Start: 28820, Stop: 29974, Start Num: 48

Candidate Starts for Cybele_43:

(1, 28421), (Start: 48 @28820 has 47 MA's), (Start: 57 @28841 has 1 MA's), (103, 29051), (119, 29114), (136, 29210), (161, 29315), (199, 29465), (213, 29555), (225, 29591), (235, 29621), (264, 29726), (273, 29783), (289, 29867), (299, 29924),

Gene: Dalilpop_70 Start: 54174, Stop: 52993, Start Num: 48

Candidate Starts for Dalilpop_70:

(Start: 48 @54174 has 47 MA's), (Start: 98 @53949 has 1 MA's), (105, 53925), (113, 53889), (119, 53859), (128, 53811), (146, 53748), (189, 53577), (200, 53529), (211, 53454), (213, 53442), (232, 53370), (251, 53301), (275, 53184), (277, 53175), (280, 53160), (302, 53043),

Gene: Damien_67 Start: 50083, Stop: 51372, Start Num: 33

Candidate Starts for Damien_67:

(16, 50044), (Start: 27 @50068 has 1 MA's), (Start: 33 @50083 has 8 MA's), (69, 50197), (73, 50215), (82, 50257), (118, 50431), (119, 50437), (128, 50488), (148, 50602), (152, 50620), (153, 50623), (155, 50638), (161, 50659), (193, 50791), (195, 50797), (228, 50935), (244, 50980), (251, 50998), (264, 51052), (274, 51112), (283, 51148), (299, 51244),

Gene: DannyDe_43 Start: 28078, Stop: 29205, Start Num: 48

Candidate Starts for DannyDe_43:

(1, 27685), (3, 27751), (4, 27766), (Start: 48 @28078 has 47 MA's), (Start: 57 @28099 has 1 MA's), (77, 28195), (103, 28309), (119, 28372), (136, 28468), (161, 28573), (199, 28723), (247, 28891), (264, 28957), (273, 29014), (289, 29098), (299, 29155),

Gene: Darwin_70 Start: 49774, Stop: 48662, Start Num: 52

Candidate Starts for Darwin_70:

(Start: 52 @49774 has 10 MA's), (92, 49588), (119, 49474), (127, 49432), (132, 49399), (149, 49336), (151, 49327), (153, 49318), (161, 49282), (173, 49228), (211, 49045), (270, 48856), (275, 48835), (282, 48805), (294, 48733), (297, 48718), (298, 48709),

Gene: Dauntless_42 Start: 28400, Stop: 29557, Start Num: 48

Candidate Starts for Dauntless_42:

(1, 28007), (4, 28088), (Start: 48 @28400 has 47 MA's), (Start: 57 @28421 has 1 MA's), (103, 28631), (119, 28694), (136, 28790), (161, 28895), (199, 29045), (245, 29237), (247, 29243), (264, 29309), (289, 29450), (299, 29507),

Gene: DaviePasture_65 Start: 43993, Stop: 45210, Start Num: 49

Candidate Starts for DaviePasture_65:

(Start: 49 @43993 has 44 MA's), (56, 44008), (83, 44137), (102, 44227), (103, 44230), (112, 44266), (119, 44299), (147, 44413), (153, 44440), (161, 44479), (162, 44494), (173, 44524), (180, 44554), (189, 44584), (200, 44632), (264, 44923), (272, 44977), (275, 44986), (277, 44995), (283, 45019), (298, 45112), (314, 45202),

Gene: Delton_58 Start: 43505, Stop: 44683, Start Num: 45

Candidate Starts for Delton_58:

(5, 43223), (6, 43253), (11, 43316), (Start: 45 @43505 has 27 MA's), (Start: 61 @43553 has 3 MA's), (68, 43592), (71, 43604), (91, 43703), (106, 43766), (119, 43820), (128, 43868), (146, 43934), (175, 44048), (180, 44075), (189, 44105), (199, 44150), (261, 44384), (272, 44450), (275, 44459), (277, 44468), (301, 44594), (314, 44675),

Gene: Djokovic_54 Start: 40486, Stop: 41631, Start Num: 49

Candidate Starts for Djokovic_54:

(Start: 22 @40426 has 4 MA's), (Start: 49 @40486 has 44 MA's), (54, 40495), (84, 40633), (89, 40657), (122, 40810), (128, 40843), (195, 41089), (196, 41092), (197, 41098), (201, 41113), (235, 41233), (251, 41281), (257, 41311), (259, 41317), (266, 41347), (271, 41380), (275, 41398), (276, 41404), (292, 41485), (297, 41515), (299, 41527), (310, 41590),

Gene: Dodo_113 Start: 77660, Stop: 76725, Start Num: 40

Candidate Starts for Dodo_113:

(Start: 40 @77660 has 6 MA's), (44, 77651), (74, 77543), (93, 77453), (110, 77402), (117, 77375), (119, 77363), (132, 77279), (134, 77273), (152, 77234), (181, 77117), (196, 77066), (243, 76934), (244, 76931), (246, 76925), (257, 76886), (271, 76820), (277, 76793),

Gene: DoobyDoo_64 Start: 43023, Stop: 44186, Start Num: 49

Candidate Starts for DoobyDoo_64:

(Start: 49 @43023 has 44 MA's), (56, 43038), (83, 43167), (102, 43257), (103, 43260), (112, 43296), (119, 43329), (147, 43443), (153, 43470), (161, 43509), (162, 43524), (173, 43554), (180, 43584), (189, 43614), (200, 43662), (235, 43797), (264, 43899), (272, 43953), (275, 43962), (277, 43971), (283, 43995), (298, 44088), (314, 44178),

Gene: DrLupo_75 Start: 50706, Stop: 51980, Start Num: 45

Candidate Starts for DrLupo_75:

(Start: 45 @50706 has 27 MA's), (56, 50730), (83, 50859), (117, 51027), (119, 51039), (128, 51093), (129, 51099), (135, 51132), (139, 51153), (143, 51177), (144, 51183), (152, 51228), (154, 51234), (158, 51267), (160, 51270), (161, 51273), (189, 51381), (212, 51516), (214, 51525), (230, 51564), (233, 51570), (239, 51600), (241, 51606), (251, 51639), (252, 51642), (264, 51693), (267, 51717), (269, 51726), (275, 51756), (299, 51885), (302, 51894), (310, 51948), (314, 51972),

Gene: Dryad_70 Start: 48069, Stop: 47071, Start Num: 50

Candidate Starts for Dryad_70:

(Start: 38 @48093 has 2 MA's), (Start: 50 @48069 has 7 MA's), (56, 48057), (70, 47985), (72, 47976), (119, 47778), (120, 47775), (153, 47619), (161, 47583), (180, 47508), (185, 47496), (199, 47433), (202, 47421), (254, 47364), (261, 47334), (268, 47292), (273, 47265), (275, 47259), (277, 47250), (289, 47178), (291, 47172),

Gene: DumpTruck_64 Start: 42784, Stop: 43998, Start Num: 49

Candidate Starts for DumpTruck_64:

(Start: 38 @42760 has 2 MA's), (Start: 49 @42784 has 44 MA's), (56, 42796), (102, 43015), (103, 43018), (114, 43060), (119, 43087), (122, 43102), (153, 43228), (162, 43282), (173, 43312), (180, 43342), (198, 43414), (214, 43513), (222, 43561), (226, 43576), (263, 43708), (272, 43765), (275, 43774), (277, 43783), (283, 43807), (298, 43900), (311, 43969), (314, 43990),

Gene: DunneganBoMo_96 Start: 79281, Stop: 80207, Start Num: 53

Candidate Starts for DunneganBoMo_96:

(42, 79260), (53, 79281), (70, 79356), (79, 79395), (119, 79569), (122, 79584), (134, 79659), (148, 79686), (149, 79689), (154, 79710), (167, 79773), (176, 79794), (178, 79809), (182, 79821), (238, 79986), (244, 80007), (269, 80106), (270, 80115), (277, 80145),

Gene: Ellewin_94 Start: 78806, Stop: 79618, Start Num: 79

Candidate Starts for Ellewin_94:

(42, 78671), (53, 78692), (70, 78767), (79, 78806), (119, 78980), (122, 78995), (134, 79070), (148, 79097), (149, 79100), (154, 79121), (167, 79184), (176, 79205), (178, 79220), (182, 79232), (238, 79397), (244, 79418), (269, 79517), (270, 79526), (277, 79556),

Gene: Emianna_66 Start: 53297, Stop: 52098, Start Num: 43

Candidate Starts for Emianna_66:

(Start: 43 @53297 has 19 MA's), (113, 53009), (114, 53006), (118, 52985), (119, 52979), (180, 52706), (185, 52694), (189, 52676), (196, 52643), (200, 52628), (213, 52541), (235, 52454), (240, 52439), (250, 52409), (251, 52406), (264, 52352), (273, 52295), (274, 52292), (275, 52289), (277, 52280), (296, 52172), (302, 52148),

Gene: Ennea_73 Start: 54279, Stop: 53080, Start Num: 38

Candidate Starts for Ennea_73:

(Start: 38 @54279 has 2 MA's), (Start: 41 @54270 has 3 MA's), (91, 54072), (112, 53979), (113, 53976), (114, 53973), (119, 53946), (123, 53928), (132, 53871), (185, 53676), (186, 53673), (189, 53658), (200, 53610), (219, 53496), (222, 53484), (235, 53436), (251, 53388), (264, 53334), (275, 53271), (277, 53262), (298, 53142),

Gene: Erk16_56 Start: 43209, Stop: 44387, Start Num: 45

Candidate Starts for Erk16_56:

(5, 42927), (6, 42957), (11, 43020), (Start: 45 @43209 has 27 MA's), (Start: 61 @43257 has 3 MA's), (68, 43296), (71, 43308), (91, 43407), (106, 43470), (119, 43524), (128, 43572), (146, 43638), (175, 43752), (180, 43779), (189, 43809), (199, 43854), (261, 44088), (272, 44154), (275, 44163), (277, 44172), (301, 44298), (314, 44379),

Gene: Erudite_42 Start: 28400, Stop: 29557, Start Num: 48

Candidate Starts for Erudite_42:

(1, 28007), (4, 28088), (Start: 48 @28400 has 47 MA's), (Start: 57 @28421 has 1 MA's), (103, 28631), (119, 28694), (136, 28790), (161, 28895), (199, 29045), (245, 29237), (247, 29243), (264, 29309), (289, 29450), (299, 29507),

Gene: Erutan_65 Start: 43665, Stop: 44828, Start Num: 49

Candidate Starts for Erutan_65:

(Start: 49 @43665 has 44 MA's), (56, 43680), (83, 43809), (102, 43899), (103, 43902), (112, 43938), (119, 43971), (147, 44085), (153, 44112), (161, 44151), (162, 44166), (173, 44196), (180, 44226), (189, 44256), (200, 44304), (235, 44439), (264, 44541), (272, 44595), (275, 44604), (277, 44613), (283, 44637), (298, 44730), (314, 44820),

Gene: Flapper_69 Start: 53365, Stop: 52184, Start Num: 48

Candidate Starts for Flapper_69:

(Start: 48 @53365 has 47 MA's), (Start: 98 @53140 has 1 MA's), (105, 53116), (113, 53080), (119, 53050), (128, 53002), (146, 52939), (189, 52768), (200, 52720), (213, 52633), (216, 52609), (232, 52561), (251, 52492), (275, 52375), (277, 52366), (280, 52351), (302, 52234),

Gene: Float294_67 Start: 53958, Stop: 52795, Start Num: 58

Candidate Starts for Float294_67:

(Start: 58 @53958 has 2 MA's), (91, 53787), (112, 53694), (113, 53691), (114, 53688), (119, 53661), (123, 53643), (132, 53586), (185, 53391), (186, 53388), (189, 53373), (200, 53325), (219, 53211), (222, 53199), (235, 53151), (251, 53103), (264, 53049), (275, 52986), (277, 52977), (298, 52857),

Gene: Forza_168 Start: 94503, Stop: 93511, Start Num: 31

Candidate Starts for Forza_168:

(18, 94527), (Start: 31 @94503 has 4 MA's), (65, 94401), (81, 94329), (119, 94176), (134, 94086), (164, 93978), (168, 93969), (177, 93939), (178, 93936), (181, 93927), (191, 93882), (198, 93858), (212, 93777), (236, 93756), (252, 93714), (270, 93627), (271, 93624), (277, 93597), (288, 93534), (290, 93531),

Gene: Fowlmouth_77 Start: 47770, Stop: 48810, Start Num: 45

Candidate Starts for Fowlmouth_77:

(29, 47731), (Start: 45 @47770 has 27 MA's), (Start: 49 @47779 has 44 MA's), (56, 47794), (60, 47815), (77, 47896), (Start: 98 @48004 has 1 MA's), (111, 48055), (120, 48094), (128, 48139), (130, 48148), (157, 48262), (162, 48286), (192, 48397), (253, 48490), (264, 48532), (275, 48595), (282, 48625), (298, 48724),

Gene: Foxboro_67 Start: 53822, Stop: 52623, Start Num: 43

Candidate Starts for Foxboro_67:

(Start: 43 @53822 has 19 MA's), (113, 53534), (114, 53531), (118, 53510), (119, 53504), (180, 53231), (185, 53219), (189, 53201), (196, 53168), (200, 53153), (213, 53066), (235, 52979), (240, 52964), (250, 52934), (251, 52931), (264, 52877), (273, 52820), (274, 52817), (275, 52814), (277, 52805), (296, 52697), (302, 52673),

Gene: FreddieHg_43 Start: 28088, Stop: 29215, Start Num: 48

Candidate Starts for FreddieHg_43:

(1, 27695), (3, 27761), (4, 27776), (Start: 48 @28088 has 47 MA's), (Start: 57 @28109 has 1 MA's), (77, 28205), (103, 28319), (119, 28382), (136, 28478), (161, 28583), (199, 28733), (247, 28901), (264, 28967), (273, 29024), (289, 29108), (299, 29165),

Gene: Fulcrum_65 Start: 43693, Stop: 44910, Start Num: 49

Candidate Starts for Fulcrum_65:

(Start: 49 @43693 has 44 MA's), (56, 43708), (83, 43837), (102, 43927), (103, 43930), (112, 43966), (119, 43999), (147, 44113), (153, 44140), (161, 44179), (162, 44194), (173, 44224), (180, 44254), (189, 44284), (198, 44326), (200, 44332), (264, 44623), (272, 44677), (275, 44686), (277, 44695), (283, 44719), (298, 44812), (314, 44902),

Gene: Fury_75 Start: 52498, Stop: 51308, Start Num: 41

Candidate Starts for Fury_75:

(2, 52828), (8, 52726), (Start: 41 @52498 has 3 MA's), (56, 52471), (75, 52378), (100, 52255), (104, 52243), (114, 52201), (119, 52174), (120, 52171), (200, 51841), (213, 51754), (235, 51661), (251, 51613), (275, 51496), (282, 51466), (291, 51409), (296, 51379), (302, 51355),

Gene: GMA2_62 Start: 65413, Stop: 64418, Start Num: 30

Candidate Starts for GMA2_62:

(Start: 30 @65413 has 1 MA's), (66, 65302), (75, 65263), (91, 65191), (119, 65080), (147, 64966), (152, 64942), (156, 64915), (160, 64906), (164, 64879), (178, 64837), (181, 64828), (198, 64762), (208, 64708), (210, 64702), (238, 64657), (249, 64627), (251, 64621), (256, 64594), (270, 64531), (271, 64528), (277, 64501), (281, 64483), (288, 64438),

Gene: GOATification_65 Start: 43693, Stop: 44910, Start Num: 49

Candidate Starts for GOATification_65:

(Start: 49 @43693 has 44 MA's), (56, 43708), (83, 43837), (102, 43927), (103, 43930), (112, 43966), (119, 43999), (147, 44113), (153, 44140), (161, 44179), (162, 44194), (173, 44224), (180, 44254), (189, 44284), (198, 44326), (200, 44332), (264, 44623), (272, 44677), (275, 44686), (277, 44695), (283, 44719), (298, 44812), (314, 44902),

Gene: GRU1_55 Start: 45213, Stop: 44032, Start Num: 48

Candidate Starts for GRU1_55:

(Start: 48 @45213 has 47 MA's), (Start: 98 @44988 has 1 MA's), (105, 44964), (113, 44928), (119, 44898), (128, 44850), (146, 44787), (189, 44616), (200, 44568), (211, 44493), (213, 44481), (232, 44409), (251, 44340), (275, 44223), (277, 44214), (280, 44199), (302, 44082),

Gene: GTE5_55 Start: 46020, Stop: 45064, Start Num: 98

Candidate Starts for GTE5_55:

(Start: 98 @46020 has 1 MA's), (100, 46011), (105, 45996), (113, 45960), (119, 45930), (128, 45882), (146, 45819), (200, 45600), (212, 45516), (213, 45513), (232, 45441), (251, 45372), (275, 45255), (277, 45246), (280, 45231), (296, 45138), (302, 45114),

Gene: GTE8_55 Start: 46534, Stop: 45335, Start Num: 43

Candidate Starts for GTE8_55:

(Start: 43 @46534 has 19 MA's), (112, 46249), (114, 46243), (118, 46222), (119, 46216), (185, 45931), (189, 45913), (196, 45880), (200, 45865), (213, 45778), (250, 45646), (251, 45643), (264, 45589), (274, 45529), (275, 45526), (277, 45517), (296, 45409), (302, 45385),

Gene: Genamy16_68 Start: 43067, Stop: 44284, Start Num: 49

Candidate Starts for Genamy16_68:

(Start: 49 @43067 has 44 MA's), (56, 43082), (83, 43211), (102, 43301), (103, 43304), (112, 43340), (119, 43373), (147, 43487), (153, 43514), (161, 43553), (162, 43568), (173, 43598), (180, 43628), (189, 43658), (200, 43706), (235, 43895), (272, 44051), (275, 44060), (277, 44069), (283, 44093), (292, 44147), (298, 44186), (314, 44276),

Gene: Gibbin_67 Start: 44498, Stop: 45715, Start Num: 49

Candidate Starts for Gibbin_67:

(Start: 49 @44498 has 44 MA's), (56, 44513), (83, 44642), (102, 44732), (103, 44735), (112, 44771), (119, 44804), (147, 44918), (153, 44945), (161, 44984), (162, 44999), (173, 45029), (180, 45059), (189, 45089), (200, 45137), (264, 45428), (272, 45482), (275, 45491), (277, 45500), (283, 45524), (298, 45617), (314, 45707),

Gene: Gibson_66 Start: 47338, Stop: 46340, Start Num: 50

Candidate Starts for Gibson_66:

(Start: 50 @47338 has 7 MA's), (56, 47326), (119, 47047), (120, 47044), (146, 46915), (153, 46888), (161, 46852), (180, 46777), (185, 46765), (199, 46702), (261, 46603), (268, 46561), (275, 46528), (277, 46519), (289, 46447), (291, 46441), (304, 46357),

Gene: Gilda_43 Start: 28844, Stop: 29998, Start Num: 48

Candidate Starts for Gilda_43:

(1, 28445), (Start: 48 @28844 has 47 MA's), (Start: 57 @28865 has 1 MA's), (103, 29075), (119, 29138), (136, 29234), (161, 29339), (199, 29489), (213, 29579), (225, 29615), (235, 29645), (264, 29750), (273, 29807), (289, 29891), (299, 29948),

Gene: Giuseppe_58 Start: 43075, Stop: 44253, Start Num: 45

Candidate Starts for Giuseppe_58:

(5, 42793), (6, 42823), (11, 42886), (Start: 45 @43075 has 27 MA's), (Start: 61 @43123 has 3 MA's), (68, 43162), (71, 43174), (91, 43273), (106, 43336), (119, 43390), (128, 43438), (146, 43504), (175, 43618), (180, 43645), (189, 43675), (199, 43720), (261, 43954), (272, 44020), (275, 44029), (277, 44038), (301, 44164), (314, 44245),

Gene: GodonK_181 Start: 91029, Stop: 90010, Start Num: 24

Candidate Starts for GodonK_181:

(Start: 24 @91029 has 1 MA's), (Start: 57 @90957 has 1 MA's), (Start: 61 @90936 has 3 MA's), (70, 90888), (75, 90867), (91, 90795), (108, 90732), (117, 90696), (119, 90684), (122, 90669), (161, 90510), (168, 90477), (171, 90468), (181, 90435), (183, 90429), (192, 90390), (197, 90372), (198, 90369), (212, 90288), (236, 90267), (244, 90243), (256, 90201), (270, 90138), (271, 90135), (277, 90108), (281, 90090),

Gene: GoldenEssence_92 Start: 77287, Stop: 78258, Start Num: 32

Candidate Starts for GoldenEssence_92:

(Start: 32 @77287 has 5 MA's), (42, 77311), (53, 77332), (76, 77431), (79, 77446), (84, 77470), (92, 77503), (119, 77620), (122, 77635), (147, 77731), (149, 77740), (176, 77845), (178, 77860), (181, 77869), (201, 77944), (208, 77986), (238, 78037), (244, 78058), (269, 78157), (270, 78166), (277, 78196),

Gene: Gretellyn_65 Start: 44537, Stop: 45700, Start Num: 49

Candidate Starts for Gretellyn_65:

(Start: 49 @44537 has 44 MA's), (56, 44552), (83, 44681), (102, 44771), (103, 44774), (112, 44810), (119, 44843), (147, 44957), (153, 44984), (161, 45023), (162, 45038), (173, 45068), (180, 45098), (189, 45128), (200, 45176), (211, 45251), (224, 45272), (235, 45311), (264, 45413), (272, 45467), (275, 45476), (277, 45485), (283, 45509), (298, 45602), (314, 45692),

Gene: GrootJr_68 Start: 52691, Stop: 51492, Start Num: 43

Candidate Starts for GrootJr_68:

(Start: 43 @52691 has 19 MA's), (113, 52403), (114, 52400), (118, 52379), (119, 52373), (180, 52100), (185, 52088), (189, 52070), (196, 52037), (200, 52022), (213, 51935), (235, 51848), (240, 51833), (250, 51803), (251, 51800), (264, 51746), (273, 51689), (274, 51686), (275, 51683), (277, 51674), (296, 51566), (302, 51542),

Gene: Gumball_57 Start: 43615, Stop: 44745, Start Num: 61

Candidate Starts for Gumball_57:

(Start: 19 @43522 has 1 MA's), (35, 43549), (36, 43552), (Start: 45 @43567 has 27 MA's), (Start: 61 @43615 has 3 MA's), (68, 43654), (71, 43666), (91, 43765), (106, 43828), (119, 43882), (128, 43930), (146, 43996), (175, 44110), (180, 44137), (189, 44167), (199, 44212), (261, 44446), (272, 44512), (275, 44521), (277, 44530), (301, 44656), (314, 44737),

Gene: GuyFagieri_66 Start: 50059, Stop: 48929, Start Num: 43

Candidate Starts for GuyFagieri_66:

(12, 50194), (20, 50089), (Start: 43 @50059 has 19 MA's), (92, 49861), (119, 49738), (121, 49726), (153, 49600), (157, 49573), (200, 49411), (217, 49318), (248, 49246), (275, 49120), (276, 49114), (299, 48988),

Gene: Hager_44 Start: 28317, Stop: 29423, Start Num: 48

Candidate Starts for Hager_44:

(Start: 48 @28317 has 47 MA's), (Start: 57 @28338 has 1 MA's), (103, 28548), (117, 28599), (119, 28611), (136, 28707), (161, 28812), (199, 28962), (264, 29175), (289, 29316), (299, 29373),

Gene: Haunter_43 Start: 28275, Stop: 29381, Start Num: 48

Candidate Starts for Haunter_43:

(Start: 48 @28275 has 47 MA's), (Start: 57 @28296 has 1 MA's), (103, 28506), (119, 28569), (136, 28665), (161, 28770), (199, 28920), (264, 29133), (273, 29190), (289, 29274), (299, 29331),

Gene: Hawkeye_60 Start: 42876, Stop: 44036, Start Num: 45

Candidate Starts for Hawkeye_60:

(29, 42849), (Start: 45 @42876 has 27 MA's), (68, 42963), (91, 43074), (119, 43191), (124, 43212), (152, 43332), (179, 43440), (180, 43446), (185, 43458), (199, 43521), (231, 43638), (251, 43695), (272, 43803), (275, 43812), (276, 43818), (277, 43821),

Gene: Helpful_60 Start: 43436, Stop: 44614, Start Num: 45

Candidate Starts for Helpful_60:

(5, 43154), (11, 43247), (Start: 45 @43436 has 27 MA's), (Start: 61 @43484 has 3 MA's), (68, 43523), (71, 43535), (91, 43634), (106, 43697), (119, 43751), (128, 43799), (146, 43865), (175, 43979), (180, 44006), (189, 44036), (199, 44081), (261, 44315), (272, 44381), (275, 44390), (277, 44399), (301, 44525), (314, 44606),

Gene: Hiddenleaf_43 Start: 28072, Stop: 29199, Start Num: 48

Candidate Starts for Hiddenleaf_43:

(1, 27679), (3, 27745), (4, 27760), (Start: 48 @28072 has 47 MA's), (Start: 57 @28093 has 1 MA's), (77, 28189), (103, 28303), (119, 28366), (136, 28462), (161, 28567), (199, 28717), (247, 28885), (264, 28951), (273, 29008), (289, 29092), (299, 29149),

Gene: HubbaBubba_62 Start: 48109, Stop: 47129, Start Num: 97

Candidate Starts for HubbaBubba_62:

(Start: 97 @48109 has 1 MA's), (104, 48085), (113, 48046), (114, 48043), (119, 48016), (123, 47998), (132, 47941), (180, 47743), (185, 47731), (200, 47665), (204, 47638), (212, 47581), (235, 47485), (250, 47440), (251, 47437), (254, 47425), (264, 47383), (275, 47320), (277, 47311), (295, 47209), (296, 47203), (302, 47179),

Gene: IDyn_65 Start: 49575, Stop: 48376, Start Num: 48

Candidate Starts for IDyn_65:

(34, 49602), (Start: 48 @49575 has 47 MA's), (Start: 97 @49356 has 1 MA's), (104, 49332), (113, 49293), (114, 49290), (119, 49263), (123, 49245), (132, 49188), (180, 48990), (185, 48978), (200,

48912), (204, 48885), (212, 48828), (235, 48732), (250, 48687), (251, 48684), (254, 48672), (264, 48630), (275, 48567), (277, 48558), (295, 48456), (296, 48450), (302, 48426),

Gene: Indlulamithi_68 Start: 48569, Stop: 49600, Start Num: 49

Candidate Starts for Indlulamithi_68:

(Start: 49 @48569 has 44 MA's), (56, 48584), (74, 48671), (77, 48686), (82, 48710), (Start: 98 @48794 has 1 MA's), (111, 48845), (122, 48896), (133, 48959), (147, 48995), (151, 49013), (152, 49019), (162, 49076), (189, 49166), (199, 49211), (207, 49250), (262, 49316), (273, 49379), (275, 49385), (282, 49415),

Gene: JDawG_42 Start: 28489, Stop: 29616, Start Num: 48

Candidate Starts for JDawG_42:

(1, 28096), (4, 28177), (Start: 48 @28489 has 47 MA's), (Start: 57 @28510 has 1 MA's), (103, 28720), (119, 28783), (136, 28879), (161, 28984), (199, 29134), (247, 29302), (264, 29368), (289, 29509), (299, 29566),

Gene: Jalebi_64 Start: 44890, Stop: 46053, Start Num: 49

Candidate Starts for Jalebi_64:

(Start: 49 @44890 has 44 MA's), (56, 44905), (83, 45034), (102, 45124), (103, 45127), (112, 45163), (119, 45196), (147, 45310), (153, 45337), (161, 45376), (162, 45391), (173, 45421), (180, 45451), (189, 45481), (200, 45529), (235, 45664), (264, 45766), (272, 45820), (275, 45829), (277, 45838), (283, 45862), (298, 45955), (314, 46045),

Gene: Jamemuya19_65 Start: 42672, Stop: 43889, Start Num: 49

Candidate Starts for Jamemuya19_65:

(Start: 49 @42672 has 44 MA's), (56, 42687), (83, 42816), (102, 42906), (103, 42909), (112, 42945), (119, 42978), (147, 43092), (153, 43119), (161, 43158), (162, 43173), (173, 43203), (180, 43233), (189, 43263), (200, 43311), (235, 43500), (272, 43656), (275, 43665), (277, 43674), (283, 43698), (292, 43752), (298, 43791), (314, 43881),

Gene: Jifall16_66 Start: 53318, Stop: 52119, Start Num: 43

Candidate Starts for Jifall16_66:

(Start: 43 @53318 has 19 MA's), (113, 53030), (114, 53027), (118, 53006), (119, 53000), (180, 52727), (185, 52715), (189, 52697), (196, 52664), (200, 52649), (213, 52562), (235, 52475), (240, 52460), (250, 52430), (251, 52427), (264, 52373), (273, 52316), (274, 52313), (275, 52310), (277, 52301), (296, 52193), (302, 52169),

Gene: JingleBells_43 Start: 28193, Stop: 29350, Start Num: 48

Candidate Starts for JingleBells_43:

(1, 27800), (4, 27881), (Start: 48 @28193 has 47 MA's), (Start: 57 @28214 has 1 MA's), (103, 28424), (119, 28487), (136, 28583), (161, 28688), (199, 28838), (245, 29030), (247, 29036), (264, 29102), (289, 29243), (299, 29300),

Gene: KSunshine22_97 Start: 80248, Stop: 81219, Start Num: 32

Candidate Starts for KSunshine22_97:

(Start: 32 @80248 has 5 MA's), (42, 80272), (53, 80293), (70, 80368), (79, 80407), (119, 80581), (122, 80596), (134, 80671), (148, 80698), (149, 80701), (154, 80722), (167, 80785), (176, 80806), (178, 80821), (182, 80833), (238, 80998), (244, 81019), (269, 81118), (270, 81127), (277, 81157),

Gene: Kabluna_69 Start: 52277, Stop: 51069, Start Num: 48

Candidate Starts for Kabluna_69:

(Start: 48 @52277 has 47 MA's), (Start: 97 @52055 has 1 MA's), (104, 52031), (107, 52016), (113, 51992), (114, 51989), (119, 51962), (132, 51887), (157, 51770), (185, 51674), (200, 51608), (216,

51497), (232, 51449), (235, 51428), (249, 51386), (254, 51368), (264, 51326), (272, 51272), (275, 51263), (277, 51254), (296, 51146),

Gene: KandZ_56 Start: 43281, Stop: 44411, Start Num: 61

Candidate Starts for KandZ_56:

(Start: 45 @43233 has 27 MA's), (Start: 61 @43281 has 3 MA's), (68, 43320), (71, 43332), (91, 43431), (106, 43494), (119, 43548), (128, 43596), (146, 43662), (175, 43776), (180, 43803), (189, 43833), (199, 43878), (261, 44112), (272, 44178), (275, 44187), (277, 44196), (301, 44322), (314, 44403),

Gene: Karate_42 Start: 28845, Stop: 29999, Start Num: 48

Candidate Starts for Karate_42:

(Start: 48 @28845 has 47 MA's), (Start: 57 @28866 has 1 MA's), (103, 29076), (119, 29139), (136, 29235), (161, 29340), (199, 29490), (225, 29616), (235, 29646), (264, 29751), (289, 29892), (299, 29949),

Gene: Kate_44 Start: 28852, Stop: 30006, Start Num: 48

Candidate Starts for Kate_44:

(1, 28453), (Start: 48 @28852 has 47 MA's), (Start: 57 @28873 has 1 MA's), (103, 29083), (119, 29146), (136, 29242), (161, 29347), (199, 29497), (213, 29587), (225, 29623), (235, 29653), (264, 29758), (273, 29815), (289, 29899), (299, 29956),

Gene: KidneyBean_67 Start: 53442, Stop: 52243, Start Num: 43

Candidate Starts for KidneyBean_67:

(Start: 43 @53442 has 19 MA's), (113, 53154), (114, 53151), (118, 53130), (119, 53124), (180, 52851), (185, 52839), (189, 52821), (196, 52788), (200, 52773), (213, 52686), (235, 52599), (240, 52584), (250, 52554), (251, 52551), (264, 52497), (273, 52440), (274, 52437), (275, 52434), (277, 52425), (296, 52317), (302, 52293),

Gene: Kimchi1738_70 Start: 50509, Stop: 49391, Start Num: 52

Candidate Starts for Kimchi1738_70:

(Start: 52 @50509 has 10 MA's), (82, 50374), (92, 50323), (119, 50209), (127, 50167), (132, 50134), (149, 50071), (151, 50062), (153, 50053), (161, 50017), (173, 49963), (211, 49780), (270, 49591), (275, 49570), (282, 49540), (294, 49468), (297, 49453), (298, 49444),

Gene: Konstantine_71 Start: 50914, Stop: 52203, Start Num: 33

Candidate Starts for Konstantine_71:

(16, 50875), (Start: 27 @50899 has 1 MA's), (Start: 33 @50914 has 8 MA's), (69, 51028), (73, 51046), (82, 51088), (118, 51262), (119, 51268), (128, 51319), (148, 51433), (152, 51451), (153, 51454), (155, 51469), (161, 51490), (193, 51622), (195, 51628), (244, 51811), (251, 51829), (264, 51883), (274, 51943), (283, 51979), (299, 52075),

Gene: Kors_47 Start: 29786, Stop: 30883, Start Num: 51

Candidate Starts for Kors_47:

(Start: 19 @29732 has 1 MA's), (Start: 51 @29786 has 3 MA's), (55, 29789), (Start: 57 @29795 has 1 MA's), (103, 30005), (104, 30011), (117, 30056), (119, 30068), (131, 30131), (136, 30164), (161, 30269), (202, 30431), (247, 30566), (254, 30590), (292, 30782), (299, 30830),

Gene: Krampus_43 Start: 28852, Stop: 30006, Start Num: 48

Candidate Starts for Krampus_43:

(1, 28453), (Start: 48 @28852 has 47 MA's), (Start: 57 @28873 has 1 MA's), (103, 29083), (119, 29146), (136, 29242), (161, 29347), (199, 29497), (213, 29587), (225, 29623), (235, 29653), (264, 29758), (273, 29815), (289, 29899), (299, 29956),

Gene: Kurt_66 Start: 53312, Stop: 52113, Start Num: 43

Candidate Starts for Kurt_66:

(Start: 43 @53312 has 19 MA's), (113, 53024), (114, 53021), (118, 53000), (119, 52994), (180, 52721), (185, 52709), (189, 52691), (196, 52658), (200, 52643), (213, 52556), (235, 52469), (240, 52454), (250, 52424), (251, 52421), (264, 52367), (273, 52310), (274, 52307), (275, 52304), (277, 52295), (296, 52187), (302, 52163),

Gene: Labelle_80 Start: 52685, Stop: 53917, Start Num: 39

Candidate Starts for Labelle_80:

(Start: 39 @52685 has 3 MA's), (62, 52739), (70, 52778), (71, 52781), (73, 52790), (80, 52823), (86, 52847), (117, 53012), (119, 53024), (134, 53105), (149, 53189), (154, 53210), (161, 53252), (195, 53390), (205, 53441), (212, 53492), (235, 53528), (251, 53576), (264, 53630), (275, 53693), (303, 53861), (312, 53903),

Gene: Lambo_63 Start: 43490, Stop: 44707, Start Num: 49

Candidate Starts for Lambo_63:

(Start: 49 @43490 has 44 MA's), (56, 43505), (83, 43634), (102, 43724), (103, 43727), (112, 43763), (119, 43796), (147, 43910), (153, 43937), (161, 43976), (162, 43991), (173, 44021), (180, 44051), (189, 44081), (200, 44129), (264, 44420), (272, 44474), (275, 44483), (277, 44492), (283, 44516), (298, 44609), (314, 44699),

Gene: LavAbarElk_65 Start: 43284, Stop: 44447, Start Num: 49

Candidate Starts for LavAbarElk_65:

(Start: 49 @43284 has 44 MA's), (56, 43299), (83, 43428), (102, 43518), (103, 43521), (112, 43557), (119, 43590), (147, 43704), (153, 43731), (161, 43770), (162, 43785), (173, 43815), (180, 43845), (189, 43875), (200, 43923), (235, 44058), (264, 44160), (272, 44214), (275, 44223), (277, 44232), (283, 44256), (298, 44349), (314, 44439),

Gene: LeoJr_102 Start: 83555, Stop: 84526, Start Num: 32

Candidate Starts for LeoJr_102:

(Start: 32 @83555 has 5 MA's), (42, 83579), (53, 83600), (79, 83714), (119, 83888), (122, 83903), (134, 83978), (148, 84005), (149, 84008), (152, 84023), (167, 84092), (176, 84113), (178, 84128), (182, 84140), (210, 84260), (212, 84281), (238, 84305), (244, 84326), (269, 84425), (270, 84434),

Gene: Leopard_73 Start: 50916, Stop: 52133, Start Num: 45

Candidate Starts for Leopard_73:

(Start: 45 @50916 has 27 MA's), (Start: 57 @50943 has 1 MA's), (64, 50997), (73, 51042), (87, 51108), (90, 51120), (Start: 97 @51168 has 1 MA's), (101, 51180), (109, 51210), (110, 51213), (117, 51240), (122, 51267), (147, 51396), (169, 51516), (173, 51522), (195, 51612), (203, 51654), (206, 51672), (209, 51690), (237, 51753), (261, 51837), (275, 51912), (276, 51918), (277, 51921), (289, 51990), (292, 51999), (300, 52044), (308, 52101),

Gene: Lila22_66 Start: 44442, Stop: 45659, Start Num: 49

Candidate Starts for Lila22_66:

(Start: 49 @44442 has 44 MA's), (56, 44457), (83, 44586), (102, 44676), (103, 44679), (112, 44715), (119, 44748), (147, 44862), (153, 44889), (161, 44928), (162, 44943), (173, 44973), (180, 45003), (189, 45033), (200, 45081), (272, 45426), (275, 45435), (277, 45444), (283, 45468), (298, 45561), (314, 45651),

Gene: LilyPad_56 Start: 41683, Stop: 42828, Start Num: 49

Candidate Starts for LilyPad_56:

(Start: 49 @41683 has 44 MA's), (54, 41692), (81, 41818), (84, 41830), (122, 42007), (153, 42112), (195, 42286), (198, 42298), (235, 42430), (251, 42478), (255, 42499), (257, 42508), (259, 42514),

(264, 42532), (266, 42544), (271, 42577), (274, 42592), (275, 42595), (276, 42601), (285, 42646),
(297, 42712), (299, 42724),

Gene: LittleFella_61 Start: 43303, Stop: 44364, Start Num: 46

Candidate Starts for LittleFella_61:

(Start: 46 @43303 has 1 MA's), (Start: 49 @43309 has 44 MA's), (54, 43318), (68, 43387), (91, 43528),
(92, 43531), (122, 43663), (128, 43696), (152, 43765), (173, 43852), (200, 43960), (271, 44113), (274,
44128), (275, 44131), (278, 44152), (297, 44248), (299, 44260), (310, 44323), (313, 44341),

Gene: Lizz_66 Start: 47161, Stop: 46163, Start Num: 50

Candidate Starts for Lizz_66:

(26, 47212), (Start: 50 @47161 has 7 MA's), (56, 47149), (119, 46870), (120, 46867), (146, 46738),
(153, 46711), (161, 46675), (180, 46600), (185, 46588), (199, 46525), (268, 46384), (275, 46351),
(277, 46342), (289, 46270), (291, 46264), (304, 46180),

Gene: Lollipop1437_70 Start: 53959, Stop: 52760, Start Num: 38

Candidate Starts for Lollipop1437_70:

(Start: 38 @53959 has 2 MA's), (Start: 41 @53950 has 3 MA's), (91, 53752), (112, 53659), (113,
53656), (114, 53653), (119, 53626), (123, 53608), (132, 53551), (185, 53356), (186, 53353), (189,
53338), (200, 53290), (219, 53176), (222, 53164), (235, 53116), (251, 53068), (264, 53014), (275,
52951), (277, 52942), (298, 52822),

Gene: LordBart_46 Start: 29704, Stop: 30792, Start Num: 57

Candidate Starts for LordBart_46:

(Start: 19 @29641 has 1 MA's), (Start: 51 @29695 has 3 MA's), (55, 29698), (Start: 57 @29704 has 1
MA's), (103, 29914), (104, 29920), (117, 29965), (119, 29977), (131, 30040), (136, 30073), (161,
30178), (202, 30340), (247, 30475), (254, 30499), (292, 30691), (299, 30739),

Gene: LuckyLeo_62 Start: 43297, Stop: 44457, Start Num: 49

Candidate Starts for LuckyLeo_62:

(Start: 49 @43297 has 44 MA's), (56, 43312), (83, 43441), (102, 43531), (114, 43576), (119, 43603),
(153, 43744), (162, 43795), (173, 43825), (180, 43855), (200, 43933), (209, 43993), (211, 44008),
(220, 44029), (235, 44068), (237, 44074), (265, 44176), (272, 44224), (275, 44233), (283, 44266),
(298, 44359), (314, 44449),

Gene: MacGully_76 Start: 53240, Stop: 52086, Start Num: 43

Candidate Starts for MacGully_76:

(20, 53291), (Start: 43 @53240 has 19 MA's), (92, 53042), (114, 52946), (119, 52919), (121, 52907),
(128, 52871), (153, 52781), (199, 52595), (200, 52592), (206, 52550), (216, 52490), (251, 52394),
(275, 52277), (276, 52271), (298, 52148), (299, 52145),

Gene: Madi_54 Start: 40504, Stop: 41709, Start Num: 22

Candidate Starts for Madi_54:

(Start: 22 @40504 has 4 MA's), (Start: 49 @40564 has 44 MA's), (54, 40573), (84, 40711), (89, 40735),
(122, 40888), (128, 40921), (195, 41167), (196, 41170), (197, 41176), (201, 41191), (235, 41311),
(251, 41359), (257, 41389), (259, 41395), (266, 41425), (271, 41458), (275, 41476), (276, 41482),
(292, 41563), (297, 41593), (299, 41605), (310, 41668),

Gene: Madruga_79 Start: 52639, Stop: 53871, Start Num: 39

Candidate Starts for Madruga_79:

(Start: 39 @52639 has 3 MA's), (62, 52693), (71, 52735), (73, 52744), (80, 52777), (86, 52801), (117,
52966), (119, 52978), (134, 53059), (149, 53143), (154, 53164), (161, 53206), (195, 53344), (205,
53395), (212, 53446), (235, 53482), (251, 53530), (264, 53584), (275, 53647), (303, 53815), (312,

53857),

Gene: Mareelih_165 Start: 94021, Stop: 93029, Start Num: 31

Candidate Starts for Mareelih_165:

(18, 94045), (Start: 31 @94021 has 4 MA's), (65, 93919), (81, 93847), (119, 93694), (134, 93604), (164, 93496), (168, 93487), (177, 93457), (178, 93454), (181, 93445), (191, 93400), (198, 93376), (212, 93295), (236, 93274), (252, 93232), (270, 93145), (271, 93142), (277, 93115), (288, 93052), (290, 93049),

Gene: Marietta_68 Start: 49875, Stop: 48676, Start Num: 48

Candidate Starts for Marietta_68:

(Start: 48 @49875 has 47 MA's), (Start: 97 @49656 has 1 MA's), (104, 49632), (113, 49593), (114, 49590), (119, 49563), (123, 49545), (132, 49488), (180, 49290), (200, 49212), (204, 49185), (212, 49128), (213, 49125), (235, 49032), (250, 48987), (251, 48984), (254, 48972), (264, 48930), (275, 48867), (277, 48858), (295, 48756), (296, 48750), (302, 48726),

Gene: Maselop_67 Start: 50089, Stop: 48926, Start Num: 43

Candidate Starts for Maselop_67:

(12, 50227), (20, 50119), (Start: 43 @50089 has 19 MA's), (92, 49891), (119, 49768), (121, 49756), (153, 49630), (157, 49603), (200, 49441), (229, 49297), (243, 49258), (251, 49234), (275, 49117), (276, 49111), (299, 48985),

Gene: Megatron06_68 Start: 50660, Stop: 51949, Start Num: 33

Candidate Starts for Megatron06_68:

(16, 50621), (Start: 27 @50645 has 1 MA's), (Start: 33 @50660 has 8 MA's), (69, 50774), (71, 50783), (73, 50792), (82, 50834), (118, 51008), (119, 51014), (128, 51065), (148, 51179), (152, 51197), (153, 51200), (155, 51215), (161, 51236), (193, 51368), (195, 51374), (228, 51512), (244, 51557), (251, 51575), (264, 51629), (274, 51689), (283, 51725), (299, 51821),

Gene: MerCougar_69 Start: 54002, Stop: 52794, Start Num: 48

Candidate Starts for MerCougar_69:

(Start: 48 @54002 has 47 MA's), (Start: 97 @53780 has 1 MA's), (104, 53756), (113, 53717), (114, 53714), (119, 53687), (132, 53612), (185, 53399), (200, 53333), (213, 53246), (216, 53222), (232, 53174), (251, 53105), (254, 53093), (264, 53051), (272, 52997), (275, 52988), (277, 52979), (296, 52871), (298, 52859),

Gene: Mima20_66 Start: 44053, Stop: 45216, Start Num: 49

Candidate Starts for Mima20_66:

(Start: 49 @44053 has 44 MA's), (56, 44068), (83, 44197), (102, 44287), (103, 44290), (112, 44326), (119, 44359), (147, 44473), (153, 44500), (161, 44539), (162, 44554), (173, 44584), (180, 44614), (189, 44644), (200, 44692), (235, 44827), (264, 44929), (272, 44983), (275, 44992), (277, 45001), (283, 45025), (298, 45118), (314, 45208),

Gene: Mimi_103 Start: 82842, Stop: 83813, Start Num: 32

Candidate Starts for Mimi_103:

(Start: 32 @82842 has 5 MA's), (42, 82866), (53, 82887), (76, 82986), (79, 83001), (84, 83025), (92, 83058), (119, 83175), (122, 83190), (147, 83286), (149, 83295), (176, 83400), (178, 83415), (181, 83424), (201, 83499), (208, 83541), (238, 83592), (244, 83613), (270, 83721), (277, 83751),

Gene: MoiGyank_68 Start: 44818, Stop: 45981, Start Num: 49

Candidate Starts for MoiGyank_68:

(Start: 49 @44818 has 44 MA's), (56, 44833), (83, 44962), (102, 45052), (103, 45055), (112, 45091), (119, 45124), (147, 45238), (153, 45265), (161, 45304), (162, 45319), (173, 45349), (180, 45379),

(189, 45409), (200, 45457), (235, 45592), (264, 45694), (272, 45748), (275, 45757), (277, 45766), (283, 45790), (298, 45883), (314, 45973),

Gene: MontyDev_71 Start: 51361, Stop: 52530, Start Num: 49

Candidate Starts for MontyDev_71:

(Start: 49 @51361 has 44 MA's), (56, 51376), (63, 51418), (71, 51451), (116, 51652), (119, 51667), (147, 51799), (161, 51862), (162, 51877), (194, 51994), (247, 52195), (249, 52201), (251, 52207), (252, 52210), (273, 52318), (275, 52324), (299, 52456), (309, 52516),

Gene: Mopey_58 Start: 43111, Stop: 44289, Start Num: 45

Candidate Starts for Mopey_58:

(5, 42829), (6, 42859), (11, 42922), (Start: 45 @43111 has 27 MA's), (Start: 61 @43159 has 3 MA's), (68, 43198), (71, 43210), (91, 43309), (106, 43372), (119, 43426), (128, 43474), (146, 43540), (175, 43654), (180, 43681), (189, 43711), (199, 43756), (261, 43990), (272, 44056), (275, 44065), (277, 44074), (301, 44200), (314, 44281),

Gene: MortySmith_41 Start: 27877, Stop: 29034, Start Num: 48

Candidate Starts for MortySmith_41:

(1, 27484), (4, 27565), (Start: 48 @27877 has 47 MA's), (Start: 57 @27898 has 1 MA's), (103, 28108), (119, 28171), (136, 28267), (161, 28372), (199, 28522), (245, 28714), (247, 28720), (264, 28786), (289, 28927), (299, 28984),

Gene: MrMiyagi_76 Start: 48172, Stop: 49212, Start Num: 45

Candidate Starts for MrMiyagi_76:

(29, 48133), (Start: 45 @48172 has 27 MA's), (Start: 49 @48181 has 44 MA's), (56, 48196), (60, 48217), (77, 48298), (Start: 98 @48406 has 1 MA's), (111, 48457), (120, 48496), (128, 48541), (130, 48550), (157, 48664), (162, 48688), (192, 48799), (253, 48892), (264, 48934), (275, 48997), (282, 49027), (298, 49126),

Gene: NadineRae_67 Start: 49484, Stop: 48285, Start Num: 48

Candidate Starts for NadineRae_67:

(Start: 48 @49484 has 47 MA's), (Start: 97 @49265 has 1 MA's), (104, 49241), (113, 49202), (114, 49199), (119, 49172), (123, 49154), (132, 49097), (180, 48899), (200, 48821), (204, 48794), (235, 48641), (250, 48596), (251, 48593), (254, 48581), (264, 48539), (275, 48476), (277, 48467), (295, 48365), (296, 48359), (302, 48335),

Gene: NarutoRun_43 Start: 28820, Stop: 29974, Start Num: 48

Candidate Starts for NarutoRun_43:

(1, 28421), (Start: 48 @28820 has 47 MA's), (Start: 57 @28841 has 1 MA's), (70, 28910), (103, 29051), (119, 29114), (136, 29210), (161, 29315), (199, 29465), (213, 29555), (225, 29591), (235, 29621), (264, 29726), (273, 29783), (289, 29867), (299, 29924),

Gene: NatB6_66 Start: 52381, Stop: 51182, Start Num: 43

Candidate Starts for NatB6_66:

(Start: 43 @52381 has 19 MA's), (113, 52093), (114, 52090), (118, 52069), (119, 52063), (180, 51790), (185, 51778), (189, 51760), (196, 51727), (200, 51712), (213, 51625), (235, 51538), (240, 51523), (250, 51493), (251, 51490), (264, 51436), (273, 51379), (274, 51376), (275, 51373), (277, 51364), (296, 51256), (302, 51232),

Gene: Neptune_43 Start: 28820, Stop: 29974, Start Num: 48

Candidate Starts for Neptune_43:

(1, 28421), (Start: 48 @28820 has 47 MA's), (Start: 57 @28841 has 1 MA's), (103, 29051), (119, 29114), (136, 29210), (161, 29315), (199, 29465), (213, 29555), (225, 29591), (235, 29621), (264,

29726), (273, 29783), (289, 29867), (299, 29924),

Gene: Nilo_71 Start: 51718, Stop: 52887, Start Num: 49

Candidate Starts for Nilo_71:

(Start: 49 @51718 has 44 MA's), (56, 51733), (63, 51775), (71, 51808), (116, 52009), (119, 52024), (147, 52156), (161, 52219), (162, 52234), (189, 52324), (194, 52351), (247, 52552), (249, 52558), (251, 52564), (273, 52675), (275, 52681), (299, 52813), (309, 52873),

Gene: NorManre_69 Start: 44890, Stop: 46107, Start Num: 49

Candidate Starts for NorManre_69:

(Start: 49 @44890 has 44 MA's), (56, 44905), (83, 45034), (102, 45124), (103, 45127), (112, 45163), (119, 45196), (147, 45310), (153, 45337), (161, 45376), (162, 45391), (173, 45421), (180, 45451), (189, 45481), (200, 45529), (264, 45820), (272, 45874), (275, 45883), (277, 45892), (283, 45916), (298, 46009), (314, 46099),

Gene: NosilaM_69 Start: 53310, Stop: 52105, Start Num: 48

Candidate Starts for NosilaM_69:

(Start: 48 @53310 has 47 MA's), (Start: 97 @53091 has 1 MA's), (104, 53067), (113, 53028), (114, 53025), (119, 52998), (185, 52710), (200, 52644), (216, 52533), (232, 52485), (254, 52404), (264, 52362), (272, 52308), (275, 52299), (277, 52290), (296, 52182),

Gene: Nova_56 Start: 43563, Stop: 44741, Start Num: 45

Candidate Starts for Nova_56:

(5, 43281), (6, 43311), (17, 43497), (Start: 45 @43563 has 27 MA's), (Start: 61 @43611 has 3 MA's), (68, 43650), (71, 43662), (91, 43761), (106, 43824), (119, 43878), (128, 43926), (146, 43992), (175, 44106), (180, 44133), (189, 44163), (199, 44208), (261, 44442), (272, 44508), (275, 44517), (277, 44526), (301, 44652), (314, 44733),

Gene: NovaSharks_67 Start: 42658, Stop: 43875, Start Num: 49

Candidate Starts for NovaSharks_67:

(Start: 49 @42658 has 44 MA's), (56, 42673), (83, 42802), (102, 42892), (103, 42895), (112, 42931), (119, 42964), (147, 43078), (153, 43105), (161, 43144), (162, 43159), (173, 43189), (180, 43219), (189, 43249), (200, 43297), (235, 43486), (272, 43642), (275, 43651), (277, 43660), (283, 43684), (292, 43738), (298, 43777), (314, 43867),

Gene: NovumRegina_66 Start: 52690, Stop: 51491, Start Num: 43

Candidate Starts for NovumRegina_66:

(Start: 43 @52690 has 19 MA's), (113, 52402), (114, 52399), (118, 52378), (119, 52372), (180, 52099), (185, 52087), (189, 52069), (196, 52036), (200, 52021), (213, 51934), (235, 51847), (240, 51832), (250, 51802), (251, 51799), (264, 51745), (273, 51688), (274, 51685), (275, 51682), (277, 51673), (296, 51565), (302, 51541),

Gene: Oaker_67 Start: 50680, Stop: 52002, Start Num: 33

Candidate Starts for Oaker_67:

(16, 50641), (Start: 27 @50665 has 1 MA's), (Start: 33 @50680 has 8 MA's), (69, 50794), (71, 50803), (73, 50812), (82, 50854), (118, 51028), (119, 51034), (128, 51085), (148, 51232), (152, 51250), (153, 51253), (155, 51268), (161, 51289), (193, 51421), (195, 51427), (244, 51610), (251, 51628), (264, 51682), (274, 51742), (283, 51778), (299, 51874),

Gene: Onyinye_74 Start: 50783, Stop: 52000, Start Num: 45

Candidate Starts for Onyinye_74:

(Start: 45 @50783 has 27 MA's), (Start: 57 @50810 has 1 MA's), (64, 50864), (73, 50909), (87, 50975), (90, 50987), (101, 51047), (109, 51077), (110, 51080), (117, 51107), (122, 51134), (147, 51263), (169,

51383), (173, 51389), (195, 51479), (203, 51521), (206, 51539), (209, 51557), (237, 51620), (261, 51704), (275, 51779), (276, 51785), (277, 51788), (289, 51857), (292, 51866), (300, 51911), (308, 51968),

Gene: OtterstedtS21_65 Start: 43824, Stop: 45041, Start Num: 49

Candidate Starts for OtterstedtS21_65:

(Start: 49 @43824 has 44 MA's), (56, 43839), (83, 43968), (102, 44058), (103, 44061), (112, 44097), (119, 44130), (147, 44244), (153, 44271), (161, 44310), (162, 44325), (173, 44355), (180, 44385), (189, 44415), (200, 44463), (264, 44754), (272, 44808), (275, 44817), (277, 44826), (283, 44850), (298, 44943), (314, 45033),

Gene: Outis_67 Start: 53139, Stop: 51931, Start Num: 48

Candidate Starts for Outis_67:

(Start: 48 @53139 has 47 MA's), (56, 53121), (Start: 97 @52917 has 1 MA's), (104, 52893), (113, 52854), (114, 52851), (119, 52824), (132, 52749), (153, 52662), (185, 52536), (200, 52470), (216, 52359), (232, 52311), (251, 52242), (264, 52188), (272, 52134), (275, 52125), (277, 52116), (296, 52008), (298, 51996),

Gene: OverHedge_43 Start: 28810, Stop: 29964, Start Num: 48

Candidate Starts for OverHedge_43:

(1, 28411), (Start: 48 @28810 has 47 MA's), (Start: 57 @28831 has 1 MA's), (103, 29041), (119, 29104), (136, 29200), (161, 29305), (199, 29455), (213, 29545), (225, 29581), (235, 29611), (264, 29716), (273, 29773), (289, 29857), (299, 29914),

Gene: P1201_73 Start: 54596, Stop: 53460, Start Num: 46

Candidate Starts for P1201_73:

(Start: 46 @54596 has 1 MA's), (106, 54338), (119, 54287), (120, 54284), (141, 54173), (200, 53918), (251, 53753), (275, 53636), (297, 53519),

Gene: PBI1_54 Start: 43038, Stop: 44216, Start Num: 45

Candidate Starts for PBI1_54:

(5, 42756), (6, 42786), (11, 42849), (Start: 45 @43038 has 27 MA's), (Start: 61 @43086 has 3 MA's), (68, 43125), (71, 43137), (91, 43236), (106, 43299), (119, 43353), (128, 43401), (146, 43467), (175, 43581), (180, 43608), (189, 43638), (199, 43683), (261, 43917), (272, 43983), (275, 43992), (277, 44001), (301, 44127), (314, 44208),

Gene: PHTowN_66 Start: 47159, Stop: 46161, Start Num: 50

Candidate Starts for PHTowN_66:

(26, 47210), (Start: 50 @47159 has 7 MA's), (56, 47147), (119, 46868), (120, 46865), (146, 46736), (153, 46709), (161, 46673), (180, 46598), (185, 46586), (199, 46523), (268, 46382), (275, 46349), (277, 46340), (289, 46268), (291, 46262), (304, 46178),

Gene: PLOT_57 Start: 43090, Stop: 44268, Start Num: 45

Candidate Starts for PLOT_57:

(5, 42808), (11, 42901), (Start: 45 @43090 has 27 MA's), (Start: 61 @43138 has 3 MA's), (68, 43177), (71, 43189), (91, 43288), (106, 43351), (119, 43405), (128, 43453), (146, 43519), (175, 43633), (180, 43660), (189, 43690), (199, 43735), (261, 43969), (272, 44035), (275, 44044), (277, 44053), (301, 44179), (314, 44260),

Gene: Panchaali_99 Start: 80252, Stop: 81178, Start Num: 53

Candidate Starts for Panchaali_99:

(Start: 32 @80207 has 5 MA's), (42, 80231), (53, 80252), (70, 80327), (79, 80366), (119, 80540), (122, 80555), (134, 80630), (148, 80657), (149, 80660), (152, 80675), (154, 80681), (167, 80744), (176,

80765), (178, 80780), (182, 80792), (208, 80906), (238, 80957), (244, 80978), (269, 81077), (270, 81086), (277, 81116),

Gene: Papyrus_69 Start: 51328, Stop: 52497, Start Num: 49

Candidate Starts for Papyrus_69:

(Start: 49 @51328 has 44 MA's), (56, 51343), (63, 51385), (71, 51418), (116, 51619), (119, 51634), (147, 51766), (161, 51829), (162, 51844), (189, 51934), (194, 51961), (247, 52162), (249, 52168), (251, 52174), (273, 52285), (275, 52291), (299, 52423), (309, 52483),

Gene: ParvusTarda_64 Start: 43199, Stop: 44413, Start Num: 49

Candidate Starts for ParvusTarda_64:

(Start: 49 @43199 has 44 MA's), (56, 43214), (83, 43343), (99, 43427), (114, 43478), (119, 43505), (147, 43619), (153, 43646), (162, 43697), (166, 43712), (173, 43727), (180, 43757), (200, 43835), (235, 44024), (265, 44132), (272, 44180), (275, 44189), (277, 44198), (283, 44222), (298, 44315), (314, 44405),

Gene: Patbob_104 Start: 83577, Stop: 84548, Start Num: 32

Candidate Starts for Patbob_104:

(Start: 32 @83577 has 5 MA's), (42, 83601), (53, 83622), (76, 83721), (79, 83736), (84, 83760), (92, 83793), (119, 83910), (122, 83925), (147, 84021), (149, 84030), (176, 84135), (178, 84150), (181, 84159), (201, 84234), (208, 84276), (238, 84327), (244, 84348), (269, 84447), (270, 84456), (277, 84486),

Gene: Patience_81 Start: 53552, Stop: 54784, Start Num: 39

Candidate Starts for Patience_81:

(Start: 39 @53552 has 3 MA's), (62, 53606), (70, 53645), (71, 53648), (73, 53657), (80, 53690), (86, 53714), (117, 53879), (119, 53891), (134, 53972), (149, 54056), (154, 54077), (161, 54119), (195, 54257), (205, 54308), (212, 54359), (235, 54395), (251, 54443), (264, 54497), (275, 54560), (303, 54728), (312, 54770),

Gene: Patio_68 Start: 53007, Stop: 51817, Start Num: 41

Candidate Starts for Patio_68:

(Start: 38 @53016 has 2 MA's), (Start: 41 @53007 has 3 MA's), (91, 52809), (112, 52716), (113, 52713), (114, 52710), (119, 52683), (123, 52665), (132, 52608), (185, 52413), (186, 52410), (189, 52395), (200, 52347), (219, 52233), (222, 52221), (235, 52173), (251, 52125), (264, 52071), (275, 52008), (277, 51999), (298, 51879),

Gene: Patos_69 Start: 44889, Stop: 46106, Start Num: 49

Candidate Starts for Patos_69:

(Start: 49 @44889 has 44 MA's), (56, 44904), (83, 45033), (102, 45123), (103, 45126), (112, 45162), (119, 45195), (147, 45309), (153, 45336), (161, 45375), (162, 45390), (173, 45420), (180, 45450), (189, 45480), (200, 45528), (264, 45819), (272, 45873), (275, 45882), (277, 45891), (283, 45915), (298, 46008), (314, 46098),

Gene: PauloDiaboli_113 Start: 76695, Stop: 75760, Start Num: 40

Candidate Starts for PauloDiaboli_113:

(Start: 40 @76695 has 6 MA's), (44, 76686), (74, 76578), (93, 76488), (110, 76437), (117, 76410), (119, 76398), (132, 76314), (134, 76308), (152, 76269), (181, 76152), (196, 76101), (243, 75969), (244, 75966), (246, 75960), (257, 75921), (271, 75855), (277, 75828),

Gene: Penelope2018_57 Start: 43108, Stop: 44286, Start Num: 45

Candidate Starts for Penelope2018_57:

(5, 42826), (11, 42919), (Start: 45 @43108 has 27 MA's), (Start: 61 @43156 has 3 MA's), (68, 43195), (71, 43207), (91, 43306), (106, 43369), (119, 43423), (128, 43471), (146, 43537), (175, 43651), (180, 43678), (189, 43708), (199, 43753), (261, 43987), (272, 44053), (275, 44062), (277, 44071), (301, 44197), (314, 44278),

Gene: PeteyPab_68 Start: 50318, Stop: 49200, Start Num: 52

Candidate Starts for PeteyPab_68:

(Start: 52 @50318 has 10 MA's), (82, 50183), (92, 50132), (106, 50069), (119, 50018), (127, 49976), (132, 49943), (136, 49922), (149, 49880), (151, 49871), (153, 49862), (161, 49826), (173, 49772), (211, 49589), (270, 49400), (275, 49379), (282, 49349), (294, 49277), (297, 49262), (298, 49253),

Gene: Phalaborwa_58 Start: 43258, Stop: 44436, Start Num: 45

Candidate Starts for Phalaborwa_58:

(Start: 45 @43258 has 27 MA's), (68, 43345), (71, 43357), (91, 43456), (106, 43519), (117, 43561), (119, 43573), (128, 43621), (146, 43687), (180, 43828), (185, 43840), (189, 43858), (199, 43903), (234, 44041), (247, 44083), (260, 44134), (261, 44137), (272, 44203), (275, 44212), (277, 44221), (301, 44347), (314, 44428),

Gene: Pharpay_43 Start: 28865, Stop: 30019, Start Num: 48

Candidate Starts for Pharpay_43:

(1, 28466), (Start: 48 @28865 has 47 MA's), (Start: 57 @28886 has 1 MA's), (70, 28955), (103, 29096), (119, 29159), (136, 29255), (161, 29360), (199, 29510), (213, 29600), (225, 29636), (235, 29666), (264, 29771), (273, 29828), (289, 29912), (299, 29969),

Gene: Phendrix_170 Start: 90108, Stop: 89107, Start Num: 32

Candidate Starts for Phendrix_170:

(Start: 32 @90108 has 5 MA's), (37, 90096), (Start: 57 @90054 has 1 MA's), (Start: 61 @90033 has 3 MA's), (88, 89904), (119, 89781), (120, 89778), (122, 89766), (161, 89607), (168, 89574), (171, 89565), (181, 89532), (183, 89526), (192, 89487), (197, 89469), (198, 89466), (210, 89406), (236, 89364), (244, 89340), (249, 89331), (256, 89298), (270, 89235), (271, 89232), (277, 89205), (281, 89187),

Gene: Phomeo_67 Start: 53314, Stop: 52115, Start Num: 43

Candidate Starts for Phomeo_67:

(Start: 43 @53314 has 19 MA's), (113, 53026), (114, 53023), (118, 53002), (119, 52996), (180, 52723), (185, 52711), (189, 52693), (196, 52660), (200, 52645), (213, 52558), (235, 52471), (240, 52456), (250, 52426), (251, 52423), (264, 52369), (273, 52312), (274, 52309), (275, 52306), (277, 52297), (296, 52189), (302, 52165),

Gene: Phrampa_98 Start: 84980, Stop: 85951, Start Num: 32

Candidate Starts for Phrampa_98:

(Start: 32 @84980 has 5 MA's), (42, 85004), (53, 85025), (76, 85124), (79, 85139), (84, 85163), (92, 85196), (119, 85313), (122, 85328), (134, 85403), (149, 85433), (154, 85454), (176, 85538), (178, 85553), (181, 85562), (182, 85565), (201, 85637), (208, 85679), (238, 85730), (244, 85751), (270, 85859), (277, 85889),

Gene: Phreeze_66 Start: 49680, Stop: 50969, Start Num: 33

Candidate Starts for Phreeze_66:

(16, 49641), (Start: 27 @49665 has 1 MA's), (Start: 33 @49680 has 8 MA's), (69, 49794), (71, 49803), (73, 49812), (82, 49854), (118, 50028), (119, 50034), (128, 50085), (148, 50199), (152, 50217), (153, 50220), (155, 50235), (161, 50256), (193, 50388), (195, 50394), (228, 50532), (244, 50577), (251, 50595), (264, 50649), (274, 50709), (283, 50745), (299, 50841),

Gene: PhunaPhoke_43 Start: 28838, Stop: 29992, Start Num: 48

Candidate Starts for PhunaPhoke_43:

(1, 28439), (Start: 48 @28838 has 47 MA's), (Start: 57 @28859 has 1 MA's), (103, 29069), (119, 29132), (136, 29228), (161, 29333), (199, 29483), (213, 29573), (225, 29609), (235, 29639), (264, 29744), (273, 29801), (289, 29885), (299, 29942),

Gene: Pleakley_75 Start: 52499, Stop: 51309, Start Num: 41

Candidate Starts for Pleakley_75:

(2, 52829), (8, 52727), (Start: 41 @52499 has 3 MA's), (56, 52472), (75, 52379), (100, 52256), (104, 52244), (114, 52202), (119, 52175), (120, 52172), (200, 51842), (213, 51755), (235, 51662), (251, 51614), (275, 51497), (282, 51467), (291, 51410), (296, 51380), (302, 51356),

Gene: Polyuyki_67 Start: 50081, Stop: 48915, Start Num: 43

Candidate Starts for Polyuyki_67:

(12, 50219), (20, 50111), (Start: 43 @50081 has 19 MA's), (92, 49883), (119, 49760), (132, 49685), (153, 49622), (157, 49595), (184, 49502), (187, 49487), (191, 49463), (199, 49436), (200, 49433), (251, 49223), (262, 49175), (275, 49106), (276, 49100), (299, 48974),

Gene: PotatoChip_69 Start: 50320, Stop: 49202, Start Num: 52

Candidate Starts for PotatoChip_69:

(Start: 52 @50320 has 10 MA's), (82, 50185), (92, 50134), (106, 50071), (119, 50020), (127, 49978), (132, 49945), (136, 49924), (149, 49882), (151, 49873), (153, 49864), (161, 49828), (173, 49774), (211, 49591), (270, 49402), (275, 49381), (282, 49351), (294, 49279), (297, 49264), (298, 49255),

Gene: Potty_43 Start: 28843, Stop: 29997, Start Num: 48

Candidate Starts for Potty_43:

(1, 28444), (Start: 48 @28843 has 47 MA's), (Start: 57 @28864 has 1 MA's), (103, 29074), (119, 29137), (136, 29233), (161, 29338), (199, 29488), (213, 29578), (225, 29614), (235, 29644), (264, 29749), (273, 29806), (289, 29890), (299, 29947),

Gene: Poultruss_42 Start: 29185, Stop: 30312, Start Num: 48

Candidate Starts for Poultruss_42:

(Start: 48 @29185 has 47 MA's), (Start: 57 @29206 has 1 MA's), (103, 29416), (119, 29479), (136, 29575), (161, 29680), (199, 29830), (247, 29998), (264, 30064), (273, 30121), (289, 30205), (299, 30262),

Gene: Prager_57 Start: 43127, Stop: 44305, Start Num: 45

Candidate Starts for Prager_57:

(5, 42845), (6, 42875), (11, 42938), (Start: 45 @43127 has 27 MA's), (Start: 61 @43175 has 3 MA's), (68, 43214), (71, 43226), (91, 43325), (106, 43388), (119, 43442), (128, 43490), (146, 43556), (175, 43670), (180, 43697), (189, 43727), (199, 43772), (261, 44006), (272, 44072), (275, 44081), (277, 44090), (301, 44216), (314, 44297),

Gene: Predator_68 Start: 49458, Stop: 50774, Start Num: 27

Candidate Starts for Predator_68:

(13, 49386), (14, 49425), (16, 49434), (Start: 27 @49458 has 1 MA's), (Start: 33 @49473 has 8 MA's), (69, 49578), (70, 49584), (73, 49596), (90, 49686), (119, 49818), (122, 49833), (128, 49869), (138, 49932), (142, 49971), (145, 49980), (152, 50022), (157, 50052), (161, 50061), (170, 50106), (190, 50172), (195, 50199), (199, 50214), (207, 50274), (228, 50337), (244, 50382), (259, 50436), (264, 50454), (274, 50514), (283, 50550), (295, 50625), (299, 50646), (301, 50652), (305, 50691), (313, 50727), (315, 50739),

Gene: Puissant_69 Start: 49917, Stop: 51227, Start Num: 34

Candidate Starts for Puissant_69:

(10, 49746), (14, 49866), (16, 49875), (Start: 27 @49899 has 1 MA's), (34, 49917), (69, 50019), (73, 50037), (118, 50253), (119, 50259), (126, 50289), (128, 50310), (148, 50457), (152, 50475), (153, 50478), (155, 50493), (157, 50505), (161, 50514), (193, 50646), (195, 50652), (207, 50727), (215, 50778), (244, 50835), (274, 50967), (283, 51003), (295, 51078),

Gene: Pumpernickel_110 Start: 78248, Stop: 77310, Start Num: 40

Candidate Starts for Pumpernickel_110:

(Start: 40 @78248 has 6 MA's), (75, 78125), (85, 78077), (95, 78032), (110, 77990), (113, 77981), (117, 77963), (119, 77951), (132, 77867), (140, 77858), (147, 77846), (152, 77822), (174, 77735), (176, 77729), (181, 77705), (240, 77531), (244, 77519), (257, 77474), (277, 77381),

Gene: Racecar_104 Start: 83495, Stop: 84466, Start Num: 32

Candidate Starts for Racecar_104:

(Start: 32 @83495 has 5 MA's), (42, 83519), (53, 83540), (76, 83639), (79, 83654), (84, 83678), (92, 83711), (119, 83828), (122, 83843), (147, 83939), (149, 83948), (176, 84053), (178, 84068), (181, 84077), (201, 84152), (208, 84194), (238, 84245), (244, 84266), (270, 84374), (277, 84404),

Gene: Rachella_43 Start: 28867, Stop: 30000, Start Num: 57

Candidate Starts for Rachella_43:

(1, 28447), (Start: 48 @28846 has 47 MA's), (Start: 57 @28867 has 1 MA's), (70, 28936), (103, 29077), (119, 29140), (136, 29236), (161, 29341), (199, 29491), (213, 29581), (225, 29617), (235, 29647), (264, 29752), (273, 29809), (289, 29893), (299, 29950),

Gene: Ranch_65 Start: 42668, Stop: 43885, Start Num: 49

Candidate Starts for Ranch_65:

(Start: 49 @42668 has 44 MA's), (56, 42683), (83, 42812), (102, 42902), (103, 42905), (112, 42941), (119, 42974), (147, 43088), (153, 43115), (161, 43154), (162, 43169), (173, 43199), (180, 43229), (189, 43259), (198, 43301), (264, 43598), (272, 43652), (275, 43661), (277, 43670), (283, 43694), (298, 43787), (314, 43877),

Gene: RazorC_65 Start: 42812, Stop: 44029, Start Num: 49

Candidate Starts for RazorC_65:

(Start: 49 @42812 has 44 MA's), (56, 42827), (83, 42956), (102, 43046), (103, 43049), (112, 43085), (119, 43118), (147, 43232), (153, 43259), (161, 43298), (162, 43313), (173, 43343), (180, 43373), (189, 43403), (200, 43451), (235, 43640), (272, 43796), (275, 43805), (277, 43814), (283, 43838), (292, 43892), (298, 43931), (314, 44021),

Gene: RedRaider_73 Start: 55335, Stop: 54136, Start Num: 38

Candidate Starts for RedRaider_73:

(Start: 38 @55335 has 2 MA's), (Start: 41 @55326 has 3 MA's), (56, 55299), (91, 55128), (112, 55035), (113, 55032), (114, 55029), (119, 55002), (123, 54984), (132, 54927), (185, 54732), (189, 54714), (200, 54666), (204, 54639), (222, 54540), (235, 54492), (251, 54444), (264, 54390), (275, 54327), (277, 54318), (298, 54198),

Gene: ReginaGlobina_102 Start: 83120, Stop: 84091, Start Num: 32

Candidate Starts for ReginaGlobina_102:

(Start: 32 @83120 has 5 MA's), (42, 83144), (53, 83165), (79, 83279), (119, 83453), (122, 83468), (134, 83543), (148, 83570), (149, 83573), (152, 83588), (167, 83657), (176, 83678), (178, 83693), (182, 83705), (210, 83825), (212, 83846), (238, 83870), (244, 83891), (269, 83990), (270, 83999),

Gene: Rie18_43 Start: 28391, Stop: 29497, Start Num: 48

Candidate Starts for Rie18_43:

(Start: 48 @28391 has 47 MA's), (Start: 57 @28412 has 1 MA's), (103, 28622), (119, 28685), (136, 28781), (161, 28886), (199, 29036), (264, 29249), (289, 29390), (299, 29447),

Gene: RikSengupta_46 Start: 29769, Stop: 30920, Start Num: 19

Candidate Starts for RikSengupta_46:

(Start: 19 @29769 has 1 MA's), (Start: 51 @29823 has 3 MA's), (55, 29826), (Start: 57 @29832 has 1 MA's), (103, 30042), (104, 30048), (117, 30093), (119, 30105), (131, 30168), (136, 30201), (161, 30306), (202, 30468), (247, 30603), (254, 30627), (292, 30819), (299, 30867),

Gene: Riparian_71 Start: 51165, Stop: 52334, Start Num: 49

Candidate Starts for Riparian_71:

(Start: 49 @51165 has 44 MA's), (56, 51180), (63, 51222), (71, 51255), (116, 51456), (119, 51471), (147, 51603), (161, 51666), (162, 51681), (189, 51771), (194, 51798), (247, 51999), (249, 52005), (251, 52011), (273, 52122), (275, 52128), (299, 52260), (309, 52320),

Gene: Rockabye_108 Start: 76731, Stop: 77705, Start Num: 32

Candidate Starts for Rockabye_108:

(Start: 32 @76731 has 5 MA's), (42, 76755), (53, 76776), (76, 76875), (92, 76947), (119, 77064), (122, 77079), (149, 77184), (176, 77289), (178, 77304), (183, 77319), (238, 77481), (244, 77502), (270, 77610), (277, 77640),

Gene: Rooney_66 Start: 47314, Stop: 46316, Start Num: 50

Candidate Starts for Rooney_66:

(Start: 50 @47314 has 7 MA's), (56, 47302), (119, 47023), (120, 47020), (146, 46891), (153, 46864), (161, 46828), (180, 46753), (185, 46741), (199, 46678), (261, 46579), (268, 46537), (275, 46504), (277, 46495), (289, 46423), (291, 46417), (304, 46333),

Gene: Rope_69 Start: 51321, Stop: 52490, Start Num: 49

Candidate Starts for Rope_69:

(Start: 49 @51321 has 44 MA's), (56, 51336), (63, 51378), (71, 51411), (116, 51612), (119, 51627), (147, 51759), (161, 51822), (162, 51837), (189, 51927), (194, 51954), (247, 52155), (249, 52161), (251, 52167), (273, 52278), (275, 52284), (299, 52416), (309, 52476),

Gene: Rumi_66 Start: 42355, Stop: 43572, Start Num: 49

Candidate Starts for Rumi_66:

(Start: 49 @42355 has 44 MA's), (56, 42370), (83, 42499), (102, 42589), (103, 42592), (112, 42628), (119, 42661), (147, 42775), (153, 42802), (161, 42841), (162, 42856), (173, 42886), (180, 42916), (189, 42946), (200, 42994), (235, 43183), (272, 43339), (275, 43348), (277, 43357), (283, 43381), (292, 43435), (298, 43474), (314, 43564),

Gene: SJReid_110 Start: 75794, Stop: 76723, Start Num: 53

Candidate Starts for SJReid_110:

(Start: 32 @75749 has 5 MA's), (42, 75773), (53, 75794), (70, 75869), (76, 75893), (78, 75902), (92, 75965), (119, 76082), (125, 76106), (128, 76139), (147, 76193), (149, 76202), (176, 76307), (178, 76322), (183, 76337), (238, 76499), (244, 76520), (270, 76628), (277, 76658),

Gene: Sadboi_66 Start: 44538, Stop: 45701, Start Num: 49

Candidate Starts for Sadboi_66:

(Start: 49 @44538 has 44 MA's), (56, 44553), (83, 44682), (102, 44772), (103, 44775), (112, 44811), (119, 44844), (147, 44958), (153, 44985), (161, 45024), (162, 45039), (173, 45069), (180, 45099), (189, 45129), (200, 45177), (211, 45252), (224, 45273), (235, 45312), (264, 45414), (272, 45468), (275, 45477), (277, 45486), (283, 45510), (298, 45603), (314, 45693),

Gene: Sampudon_65 Start: 44890, Stop: 46053, Start Num: 49

Candidate Starts for Sampudon_65:

(Start: 49 @44890 has 44 MA's), (56, 44905), (83, 45034), (102, 45124), (103, 45127), (112, 45163), (119, 45196), (147, 45310), (153, 45337), (161, 45376), (162, 45391), (173, 45421), (180, 45451), (189, 45481), (200, 45529), (235, 45664), (264, 45766), (272, 45820), (275, 45829), (277, 45838), (283, 45862), (298, 45955), (314, 46045),

Gene: Scuba_76 Start: 52584, Stop: 51394, Start Num: 41

Candidate Starts for Scuba_76:

(7, 52815), (8, 52812), (Start: 41 @52584 has 3 MA's), (47, 52575), (56, 52557), (75, 52464), (100, 52341), (107, 52314), (114, 52287), (119, 52260), (200, 51927), (213, 51840), (235, 51747), (251, 51699), (275, 51582), (280, 51558), (291, 51495), (296, 51465), (302, 51441),

Gene: Send513_69 Start: 51699, Stop: 52868, Start Num: 49

Candidate Starts for Send513_69:

(Start: 49 @51699 has 44 MA's), (56, 51714), (63, 51756), (71, 51789), (116, 51990), (119, 52005), (147, 52137), (161, 52200), (162, 52215), (194, 52332), (247, 52533), (249, 52539), (251, 52545), (273, 52656), (275, 52662), (299, 52794), (309, 52854),

Gene: ShakeNBake_66 Start: 47186, Stop: 46188, Start Num: 50

Candidate Starts for ShakeNBake_66:

(26, 47237), (Start: 50 @47186 has 7 MA's), (56, 47174), (119, 46895), (120, 46892), (146, 46763), (153, 46736), (161, 46700), (180, 46625), (185, 46613), (199, 46550), (268, 46409), (275, 46376), (277, 46367), (289, 46295), (291, 46289), (304, 46205),

Gene: Sienna_54 Start: 40504, Stop: 41709, Start Num: 22

Candidate Starts for Sienna_54:

(Start: 22 @40504 has 4 MA's), (Start: 49 @40564 has 44 MA's), (54, 40573), (84, 40711), (89, 40735), (122, 40888), (128, 40921), (195, 41167), (196, 41170), (197, 41176), (201, 41191), (235, 41311), (251, 41359), (257, 41389), (259, 41395), (266, 41425), (271, 41458), (275, 41476), (276, 41482), (292, 41563), (297, 41593), (299, 41605), (310, 41668),

Gene: SilentWarrior_43 Start: 28085, Stop: 29212, Start Num: 48

Candidate Starts for SilentWarrior_43:

(1, 27692), (3, 27758), (4, 27773), (Start: 48 @28085 has 47 MA's), (Start: 57 @28106 has 1 MA's), (77, 28202), (103, 28316), (119, 28379), (136, 28475), (161, 28580), (199, 28730), (247, 28898), (264, 28964), (289, 29105), (299, 29162),

Gene: SirHarley_59 Start: 43598, Stop: 44728, Start Num: 61

Candidate Starts for SirHarley_59:

(Start: 19 @43505 has 1 MA's), (35, 43532), (36, 43535), (Start: 45 @43550 has 27 MA's), (Start: 61 @43598 has 3 MA's), (68, 43637), (71, 43649), (91, 43748), (106, 43811), (119, 43865), (128, 43913), (146, 43979), (175, 44093), (180, 44120), (189, 44150), (199, 44195), (261, 44429), (272, 44495), (275, 44504), (277, 44513), (301, 44639), (314, 44720),

Gene: Sixama_166 Start: 94053, Stop: 93025, Start Num: 15

Candidate Starts for Sixama_166:

(14, 94059), (Start: 15 @94053 has 1 MA's), (Start: 32 @94014 has 5 MA's), (37, 94002), (59, 93948), (93, 93786), (Start: 98 @93765 has 1 MA's), (119, 93690), (156, 93528), (159, 93522), (164, 93492), (181, 93441), (191, 93399), (192, 93396), (198, 93375), (236, 93273), (269, 93153), (270, 93144), (271, 93141), (277, 93114), (288, 93048), (293, 93036),

Gene: Skysand_68 Start: 53458, Stop: 52295, Start Num: 58

Candidate Starts for Skysand_68:

(Start: 58 @53458 has 2 MA's), (91, 53287), (112, 53194), (113, 53191), (114, 53188), (119, 53161), (123, 53143), (132, 53086), (185, 52891), (186, 52888), (189, 52873), (200, 52825), (219, 52711), (222, 52699), (235, 52651), (251, 52603), (264, 52549), (275, 52486), (277, 52477), (298, 52357),

Gene: Snakehole_43 Start: 28023, Stop: 29177, Start Num: 48

Candidate Starts for Snakehole_43:

(1, 27624), (Start: 48 @28023 has 47 MA's), (Start: 57 @28044 has 1 MA's), (103, 28254), (119, 28317), (136, 28413), (161, 28518), (199, 28668), (225, 28794), (235, 28824), (264, 28929), (273, 28986), (289, 29070), (299, 29127),

Gene: Sparcetus_46 Start: 29700, Stop: 30797, Start Num: 51

Candidate Starts for Sparcetus_46:

(21, 29652), (Start: 51 @29700 has 3 MA's), (55, 29703), (Start: 57 @29709 has 1 MA's), (103, 29919), (104, 29925), (117, 29970), (119, 29982), (131, 30045), (136, 30078), (161, 30183), (202, 30345), (247, 30480), (254, 30504), (292, 30696), (299, 30744),

Gene: StarStruck_67 Start: 53139, Stop: 51931, Start Num: 48

Candidate Starts for StarStruck_67:

(Start: 48 @53139 has 47 MA's), (56, 53121), (Start: 97 @52917 has 1 MA's), (104, 52893), (113, 52854), (114, 52851), (119, 52824), (132, 52749), (153, 52662), (185, 52536), (200, 52470), (216, 52359), (232, 52311), (251, 52242), (264, 52188), (272, 52134), (275, 52125), (277, 52116), (296, 52008), (298, 51996),

Gene: Stickynote_69 Start: 50521, Stop: 49409, Start Num: 52

Candidate Starts for Stickynote_69:

(Start: 52 @50521 has 10 MA's), (92, 50335), (119, 50221), (127, 50179), (132, 50146), (149, 50083), (151, 50074), (153, 50065), (161, 50029), (173, 49975), (211, 49792), (270, 49603), (275, 49582), (282, 49552), (294, 49480), (297, 49465), (298, 49456),

Gene: Stormer_65 Start: 42359, Stop: 43576, Start Num: 49

Candidate Starts for Stormer_65:

(Start: 49 @42359 has 44 MA's), (56, 42374), (83, 42503), (102, 42593), (103, 42596), (112, 42632), (119, 42665), (147, 42779), (153, 42806), (161, 42845), (162, 42860), (173, 42890), (180, 42920), (189, 42950), (200, 42998), (235, 43187), (272, 43343), (275, 43352), (277, 43361), (283, 43385), (292, 43439), (298, 43478), (314, 43568),

Gene: Sukkupi_67 Start: 51527, Stop: 50328, Start Num: 48

Candidate Starts for Sukkupi_67:

(Start: 48 @51527 has 47 MA's), (Start: 97 @51308 has 1 MA's), (104, 51284), (112, 51248), (113, 51245), (114, 51242), (119, 51215), (123, 51197), (132, 51140), (180, 50942), (200, 50864), (213, 50777), (235, 50684), (240, 50669), (250, 50639), (251, 50636), (254, 50624), (264, 50582), (275, 50519), (277, 50510), (295, 50408), (296, 50402),

Gene: SuperSulley_68 Start: 53499, Stop: 52291, Start Num: 48

Candidate Starts for SuperSulley_68:

(Start: 48 @53499 has 47 MA's), (Start: 97 @53277 has 1 MA's), (104, 53253), (113, 53214), (114, 53211), (119, 53184), (123, 53166), (132, 53109), (185, 52896), (200, 52830), (216, 52719), (232, 52671), (254, 52590), (264, 52548), (272, 52494), (275, 52485), (277, 52476), (296, 52368),

Gene: Suzy_54 Start: 41757, Stop: 42902, Start Num: 49

Candidate Starts for Suzy_54:

(Start: 49 @41757 has 44 MA's), (54, 41766), (84, 41904), (122, 42081), (128, 42114), (195, 42360), (196, 42363), (197, 42369), (201, 42384), (206, 42420), (234, 42495), (235, 42504), (251, 42552), (257, 42582), (259, 42588), (266, 42618), (271, 42651), (275, 42669), (276, 42675), (292, 42756), (297, 42786), (299, 42798), (310, 42861),

Gene: TMaxx_39 Start: 25180, Stop: 24239, Start Num: 48

Candidate Starts for TMaxx_39:

(Start: 48 @25180 has 47 MA's), (117, 24883), (119, 24871), (172, 24664), (177, 24643), (196, 24586), (198, 24577), (201, 24565), (238, 24472), (255, 24415), (269, 24352), (270, 24343), (284, 24289),

Gene: Talia1610_103 Start: 82860, Stop: 83831, Start Num: 32

Candidate Starts for Talia1610_103:

(Start: 32 @82860 has 5 MA's), (42, 82884), (53, 82905), (76, 83004), (79, 83019), (84, 83043), (92, 83076), (119, 83193), (122, 83208), (147, 83304), (149, 83313), (176, 83418), (178, 83433), (181, 83442), (201, 83517), (208, 83559), (238, 83610), (244, 83631), (270, 83739), (277, 83769),

Gene: Tedro_43 Start: 28325, Stop: 29431, Start Num: 48

Candidate Starts for Tedro_43:

(1, 27932), (4, 28013), (Start: 48 @28325 has 47 MA's), (Start: 57 @28346 has 1 MA's), (103, 28556), (119, 28619), (136, 28715), (161, 28820), (199, 28970), (264, 29183), (273, 29240), (289, 29324), (299, 29381),

Gene: Terapin_55 Start: 40488, Stop: 41633, Start Num: 49

Candidate Starts for Terapin_55:

(Start: 22 @40428 has 4 MA's), (Start: 49 @40488 has 44 MA's), (54, 40497), (84, 40635), (89, 40659), (122, 40812), (128, 40845), (195, 41091), (196, 41094), (197, 41100), (201, 41115), (235, 41235), (251, 41283), (257, 41313), (259, 41319), (266, 41349), (271, 41382), (275, 41400), (276, 41406), (292, 41487), (297, 41517), (299, 41529), (310, 41592),

Gene: Thoth_57 Start: 43106, Stop: 44284, Start Num: 45

Candidate Starts for Thoth_57:

(5, 42824), (6, 42854), (11, 42917), (Start: 45 @43106 has 27 MA's), (Start: 61 @43154 has 3 MA's), (68, 43193), (71, 43205), (91, 43304), (106, 43367), (119, 43421), (128, 43469), (146, 43535), (175, 43649), (180, 43676), (189, 43706), (199, 43751), (261, 43985), (272, 44051), (275, 44060), (277, 44069), (301, 44195), (314, 44276),

Gene: Thumb_68 Start: 50115, Stop: 51404, Start Num: 33

Candidate Starts for Thumb_68:

(16, 50076), (Start: 27 @50100 has 1 MA's), (Start: 33 @50115 has 8 MA's), (69, 50229), (71, 50238), (73, 50247), (82, 50289), (118, 50463), (119, 50469), (128, 50520), (148, 50634), (152, 50652), (153, 50655), (155, 50670), (161, 50691), (193, 50823), (195, 50829), (228, 50967), (244, 51012), (251, 51030), (264, 51084), (274, 51144), (283, 51180), (299, 51276),

Gene: Tillicus_61 Start: 43238, Stop: 44398, Start Num: 49

Candidate Starts for Tillicus_61:

(Start: 49 @43238 has 44 MA's), (56, 43253), (83, 43382), (99, 43466), (114, 43517), (119, 43544), (147, 43658), (153, 43685), (161, 43721), (162, 43736), (166, 43751), (173, 43766), (180, 43796), (200, 43874), (209, 43934), (218, 43961), (235, 44009), (237, 44015), (265, 44117), (272, 44165), (275, 44174), (283, 44207), (298, 44300), (314, 44390),

Gene: TinyMiny_46 Start: 29721, Stop: 30818, Start Num: 51

Candidate Starts for TinyMiny_46:

(Start: 19 @29667 has 1 MA's), (Start: 51 @29721 has 3 MA's), (55, 29724), (Start: 57 @29730 has 1 MA's), (103, 29940), (104, 29946), (117, 29991), (119, 30003), (131, 30066), (136, 30099), (161, 30204), (202, 30366), (247, 30501), (254, 30525), (292, 30717), (299, 30765),

Gene: Tongui_44 Start: 28445, Stop: 29551, Start Num: 48

Candidate Starts for Tongui_44:

(Start: 48 @28445 has 47 MA's), (Start: 57 @28466 has 1 MA's), (103, 28676), (119, 28739), (136, 28835), (161, 28940), (199, 29090), (264, 29303), (289, 29444), (299, 29501),

Gene: Tracker_66 Start: 52125, Stop: 50926, Start Num: 43

Candidate Starts for Tracker_66:

(Start: 43 @52125 has 19 MA's), (113, 51837), (114, 51834), (118, 51813), (119, 51807), (180, 51534), (185, 51522), (189, 51504), (196, 51471), (200, 51456), (213, 51369), (235, 51282), (249, 51240), (250, 51237), (251, 51234), (264, 51180), (273, 51123), (274, 51120), (275, 51117), (277, 51108), (296, 51000), (302, 50976),

Gene: Troll4_57 Start: 43237, Stop: 44415, Start Num: 45

Candidate Starts for Troll4_57:

(5, 42955), (6, 42985), (11, 43048), (Start: 45 @43237 has 27 MA's), (Start: 61 @43285 has 3 MA's), (68, 43324), (71, 43336), (91, 43435), (106, 43498), (119, 43552), (128, 43600), (146, 43666), (175, 43780), (180, 43807), (189, 43837), (199, 43882), (261, 44116), (272, 44182), (275, 44191), (277, 44200), (301, 44326), (314, 44407),

Gene: Turuncu_69 Start: 52823, Stop: 51867, Start Num: 98

Candidate Starts for Turuncu_69:

(Start: 98 @52823 has 1 MA's), (105, 52799), (113, 52763), (119, 52733), (128, 52685), (146, 52622), (200, 52403), (213, 52316), (216, 52292), (232, 52244), (251, 52175), (275, 52058), (277, 52049), (280, 52034), (302, 51917),

Gene: Visconti_58 Start: 43117, Stop: 44295, Start Num: 45

Candidate Starts for Visconti_58:

(5, 42835), (6, 42865), (11, 42928), (Start: 45 @43117 has 27 MA's), (Start: 61 @43165 has 3 MA's), (68, 43204), (71, 43216), (91, 43315), (106, 43378), (119, 43432), (128, 43480), (146, 43546), (175, 43660), (180, 43687), (189, 43717), (199, 43762), (261, 43996), (272, 44062), (275, 44071), (277, 44080), (301, 44206), (314, 44287),

Gene: WaddleDee_96 Start: 78581, Stop: 79393, Start Num: 79

Candidate Starts for WaddleDee_96:

(42, 78446), (53, 78467), (70, 78542), (79, 78581), (119, 78755), (122, 78770), (134, 78845), (148, 78872), (149, 78875), (154, 78896), (167, 78959), (176, 78980), (178, 78995), (182, 79007), (238, 79172), (244, 79193), (269, 79292), (270, 79301), (277, 79331),

Gene: WaldoWhy_59 Start: 43170, Stop: 44348, Start Num: 45

Candidate Starts for WaldoWhy_59:

(5, 42888), (6, 42918), (11, 42981), (Start: 45 @43170 has 27 MA's), (Start: 61 @43218 has 3 MA's), (68, 43257), (71, 43269), (91, 43368), (106, 43431), (119, 43485), (128, 43533), (146, 43599), (175, 43713), (180, 43740), (189, 43770), (199, 43815), (261, 44049), (272, 44115), (275, 44124), (277, 44133), (301, 44259), (314, 44340),

Gene: Weiss13_69 Start: 51402, Stop: 52571, Start Num: 49

Candidate Starts for Weiss13_69:

(Start: 49 @51402 has 44 MA's), (56, 51417), (63, 51459), (71, 51492), (116, 51693), (119, 51708), (147, 51840), (161, 51903), (162, 51918), (189, 52008), (194, 52035), (247, 52236), (249, 52242),

(251, 52248), (273, 52359), (275, 52365), (299, 52497), (309, 52557),

Gene: Wentworth_66 Start: 47288, Stop: 46290, Start Num: 50

Candidate Starts for Wentworth_66:

(26, 47339), (Start: 50 @47288 has 7 MA's), (56, 47276), (119, 46997), (120, 46994), (137, 46898), (153, 46838), (161, 46802), (180, 46727), (185, 46715), (196, 46664), (199, 46652), (268, 46511), (275, 46478), (277, 46469), (289, 46397), (291, 46391), (295, 46367),

Gene: Wheezy_66 Start: 52339, Stop: 51140, Start Num: 43

Candidate Starts for Wheezy_66:

(Start: 43 @52339 has 19 MA's), (113, 52051), (114, 52048), (118, 52027), (119, 52021), (180, 51748), (185, 51736), (189, 51718), (196, 51685), (200, 51670), (213, 51583), (235, 51496), (250, 51451), (251, 51448), (273, 51337), (274, 51334), (275, 51331), (277, 51322), (291, 51244), (296, 51214), (302, 51190),

Gene: WhoseManz_67 Start: 49542, Stop: 48343, Start Num: 48

Candidate Starts for WhoseManz_67:

(Start: 48 @49542 has 47 MA's), (Start: 97 @49323 has 1 MA's), (104, 49299), (113, 49260), (114, 49257), (119, 49230), (123, 49212), (132, 49155), (180, 48957), (200, 48879), (204, 48852), (212, 48795), (213, 48792), (235, 48699), (250, 48654), (251, 48651), (254, 48639), (264, 48597), (275, 48534), (277, 48525), (295, 48423), (296, 48417), (302, 48393),

Gene: Wilkos_68 Start: 47443, Stop: 46445, Start Num: 50

Candidate Starts for Wilkos_68:

(26, 47494), (Start: 50 @47443 has 7 MA's), (56, 47431), (119, 47152), (120, 47149), (146, 47020), (153, 46993), (161, 46957), (180, 46882), (185, 46870), (196, 46819), (199, 46807), (268, 46666), (275, 46633), (277, 46624), (289, 46552), (291, 46546), (295, 46522),

Gene: Wojtek_61 Start: 42920, Stop: 44134, Start Num: 49

Candidate Starts for Wojtek_61:

(Start: 49 @42920 has 44 MA's), (56, 42935), (83, 43064), (99, 43148), (114, 43199), (119, 43226), (147, 43340), (153, 43367), (162, 43418), (166, 43433), (173, 43448), (180, 43478), (200, 43556), (235, 43745), (265, 43853), (272, 43901), (275, 43910), (283, 43943), (298, 44036), (314, 44126),

Gene: Wollypog_46 Start: 33478, Stop: 34599, Start Num: 52

Candidate Starts for Wollypog_46:

(Start: 52 @33478 has 10 MA's), (94, 33679), (99, 33697), (115, 33751), (119, 33769), (132, 33844), (180, 34045), (184, 34054), (213, 34210), (223, 34234), (235, 34246), (237, 34252), (249, 34288), (289, 34498), (299, 34549),

Gene: Xenia2_63 Start: 42310, Stop: 43470, Start Num: 49

Candidate Starts for Xenia2_63:

(Start: 38 @42286 has 2 MA's), (Start: 49 @42310 has 44 MA's), (56, 42322), (83, 42451), (102, 42541), (103, 42544), (114, 42586), (119, 42613), (122, 42628), (134, 42694), (153, 42754), (162, 42808), (173, 42838), (180, 42868), (198, 42940), (214, 43033), (221, 43042), (237, 43087), (263, 43180), (272, 43237), (275, 43246), (277, 43255), (283, 43279), (298, 43372),

Gene: Yara_62 Start: 46145, Stop: 45150, Start Num: 52

Candidate Starts for Yara_62:

(Start: 52 @46145 has 10 MA's), (56, 46136), (119, 45857), (120, 45854), (153, 45698), (161, 45662), (165, 45635), (180, 45587), (185, 45575), (196, 45524), (199, 45512), (264, 45401), (268, 45371), (275, 45338), (277, 45329), (289, 45257), (295, 45227),

Gene: Yelo_68 Start: 51781, Stop: 52950, Start Num: 49

Candidate Starts for Yelo_68:

(Start: 49 @51781 has 44 MA's), (56, 51796), (63, 51838), (71, 51871), (116, 52072), (119, 52087), (137, 52186), (147, 52219), (161, 52282), (162, 52297), (189, 52387), (194, 52414), (247, 52615), (249, 52621), (251, 52627), (273, 52738), (275, 52744), (299, 52876), (309, 52936),

Gene: Yikes_67 Start: 44984, Stop: 46147, Start Num: 49

Candidate Starts for Yikes_67:

(Start: 49 @44984 has 44 MA's), (56, 44999), (83, 45128), (102, 45218), (103, 45221), (112, 45257), (119, 45290), (147, 45404), (153, 45431), (161, 45470), (162, 45485), (173, 45515), (180, 45545), (189, 45575), (200, 45623), (211, 45698), (224, 45719), (235, 45758), (264, 45860), (272, 45914), (275, 45923), (277, 45932), (283, 45956), (298, 46049), (314, 46139),

Gene: Yndexa_67 Start: 51527, Stop: 50328, Start Num: 48

Candidate Starts for Yndexa_67:

(Start: 48 @51527 has 47 MA's), (Start: 97 @51308 has 1 MA's), (104, 51284), (112, 51248), (113, 51245), (114, 51242), (119, 51215), (123, 51197), (132, 51140), (180, 50942), (200, 50864), (213, 50777), (235, 50684), (240, 50669), (250, 50639), (251, 50636), (254, 50624), (264, 50582), (275, 50519), (277, 50510), (295, 50408), (296, 50402),

Gene: Zany_63 Start: 44385, Stop: 45548, Start Num: 49

Candidate Starts for Zany_63:

(Start: 49 @44385 has 44 MA's), (56, 44400), (83, 44529), (102, 44619), (103, 44622), (112, 44658), (119, 44691), (147, 44805), (153, 44832), (161, 44871), (162, 44886), (173, 44916), (180, 44946), (189, 44976), (200, 45024), (235, 45159), (264, 45261), (272, 45315), (275, 45324), (277, 45333), (283, 45357), (298, 45450), (314, 45540),

Gene: Zenon_71 Start: 51725, Stop: 52894, Start Num: 49

Candidate Starts for Zenon_71:

(Start: 49 @51725 has 44 MA's), (56, 51740), (63, 51782), (71, 51815), (116, 52016), (119, 52031), (147, 52163), (161, 52226), (162, 52241), (194, 52358), (247, 52559), (249, 52565), (251, 52571), (273, 52682), (275, 52688), (299, 52820), (309, 52880),

Gene: Zion_69 Start: 50318, Stop: 49200, Start Num: 52

Candidate Starts for Zion_69:

(Start: 52 @50318 has 10 MA's), (82, 50183), (92, 50132), (106, 50069), (119, 50018), (127, 49976), (132, 49943), (136, 49922), (149, 49880), (151, 49871), (153, 49862), (161, 49826), (173, 49772), (211, 49589), (270, 49400), (275, 49379), (282, 49349), (294, 49277), (297, 49262), (298, 49253),

Gene: Zooman_97 Start: 74278, Stop: 73343, Start Num: 40

Candidate Starts for Zooman_97:

(Start: 40 @74278 has 6 MA's), (70, 74176), (71, 74173), (74, 74161), (81, 74125), (93, 74071), (110, 74020), (117, 73993), (119, 73981), (132, 73897), (134, 73891), (147, 73876), (152, 73852), (174, 73765), (181, 73735), (243, 73552), (244, 73549), (257, 73504), (271, 73438), (277, 73411),