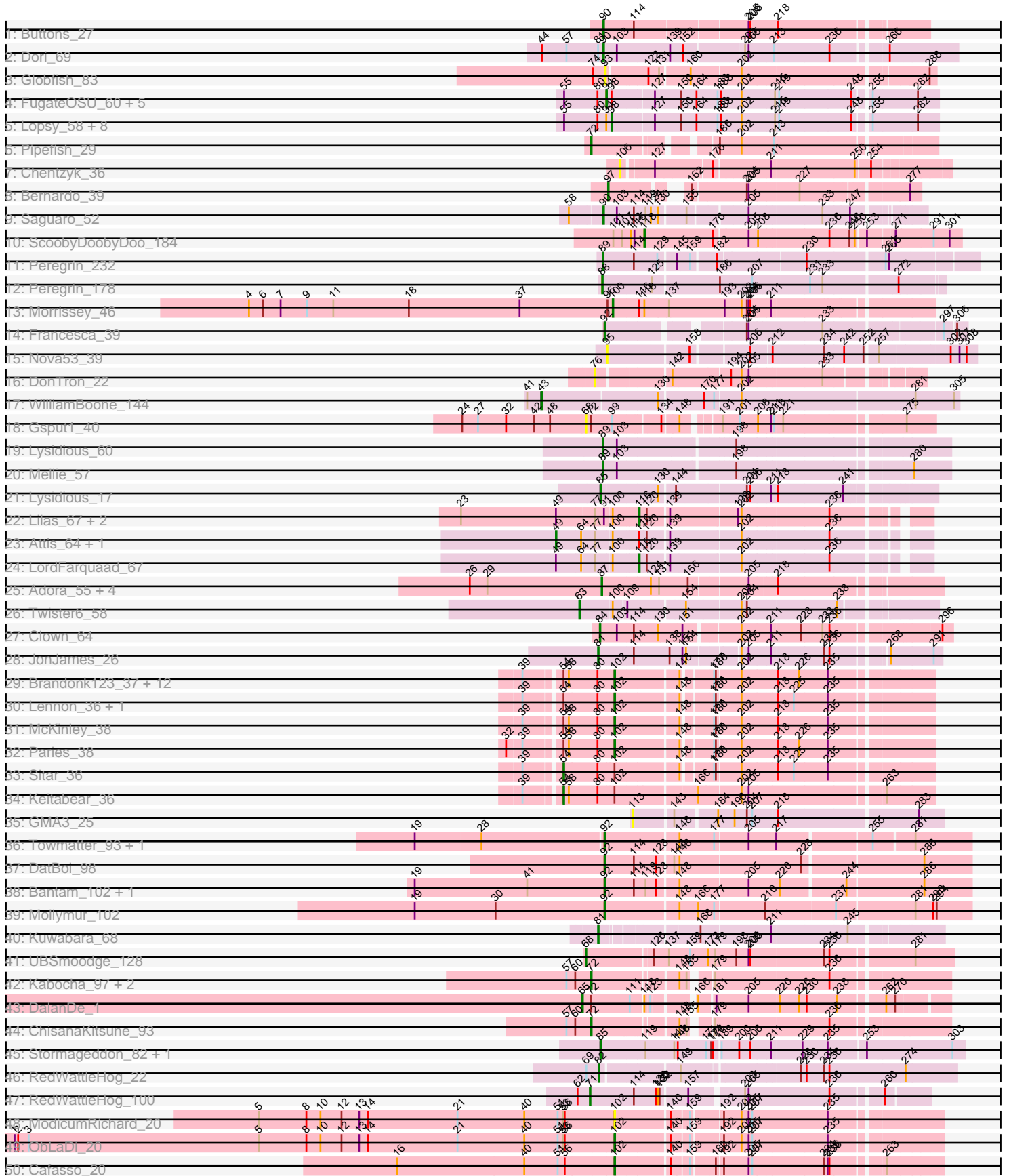
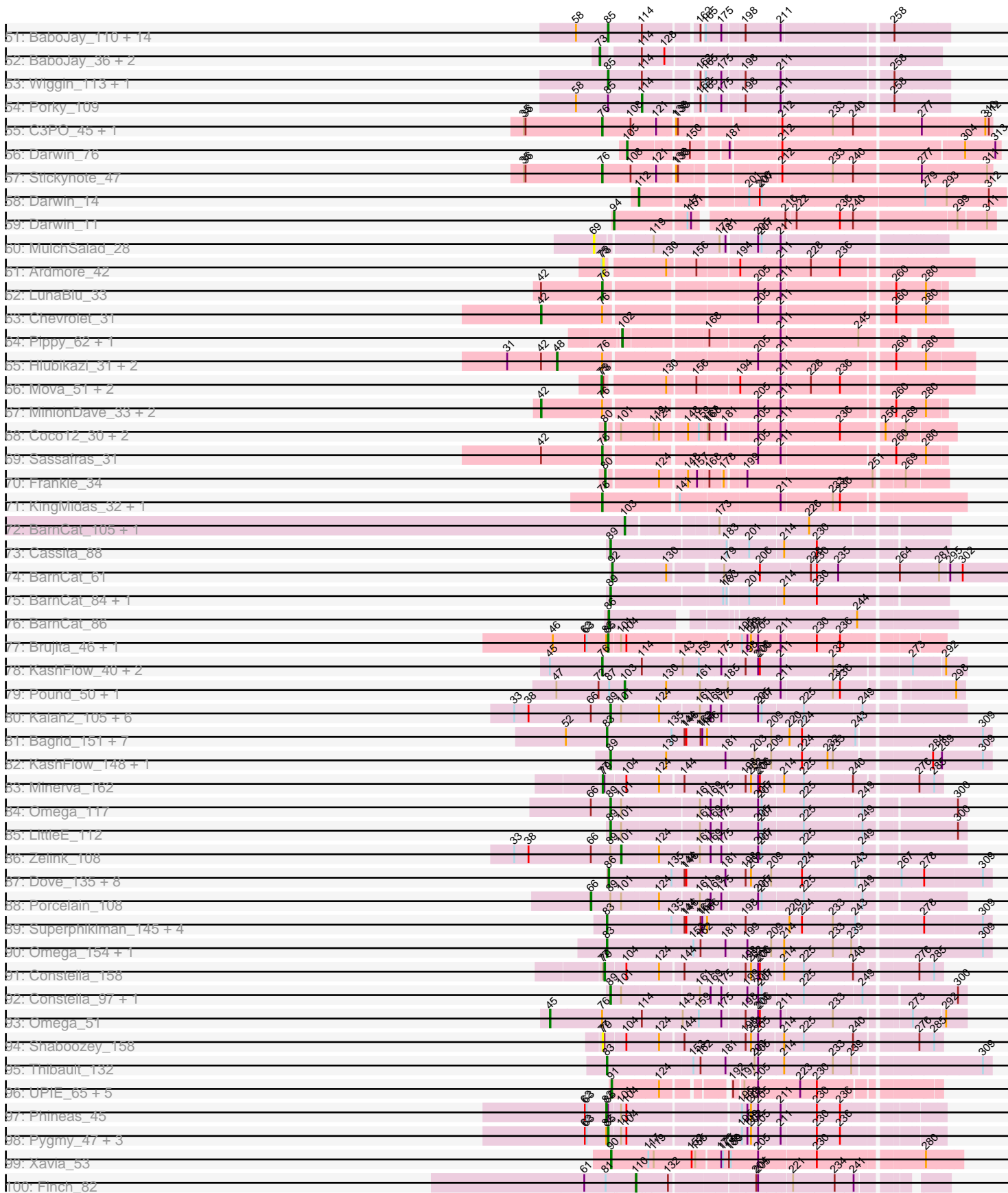


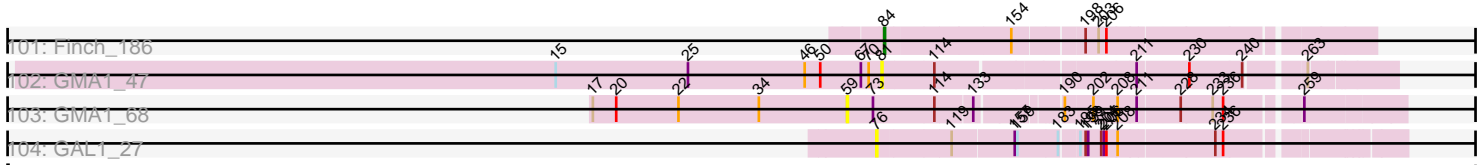
Pham 215832



Pham 215832



Pham 215832



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 215832 Report

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

Pham number 215832 has 212 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Buttons_27
- Track 2 : Dori_69
- Track 3 : Globfish_83
- Track 4 : FugateOSU_60, Orfeu_58, Placalicious_60, Jesabah_60, LostAndPhound_60, Toni_59
- Track 5 : Lopsy_58, Buckeye_60, LeiMonet_62, Mesmerelda_61, Coletti_62, Podrick_58, Adriana_61, Matalotodo_59, KingTut_52
- Track 6 : Pipefish_29
- Track 7 : Chentzyk_36
- Track 8 : Bernardo_39
- Track 9 : Saguaro_52
- Track 10 : ScoobyDoobyDoo_184
- Track 11 : Peregrin_232
- Track 12 : Peregrin_178
- Track 13 : Morrissey_46
- Track 14 : Francesca_39
- Track 15 : Nova53_39
- Track 16 : DonTron_22
- Track 17 : WilliamBoone_144
- Track 18 : Gspu1_40
- Track 19 : Lysidious_60
- Track 20 : Mellie_57
- Track 21 : Lysidious_17
- Track 22 : Lilas_67, EnalisNailo_66, Bradissa_67
- Track 23 : Attis_64, SoilAssassin_64
- Track 24 : LordFarquaad_67
- Track 25 : Adora_55, Shlim410_56, Hortense_58, Howe_58, Twinkle_57
- Track 26 : Twister6_58
- Track 27 : Clown_64
- Track 28 : JonJames_26
- Track 29 : Brandonk123_37, Love_39, BobBob_33, Fosterous_34, Nordenberg_30, Sedona_36, Galadriel_36, Vivi2_38, Rofo_36, Charming_36, Angelicage_34, Tangent_36, Bibwit_35
- Track 30 : Lennon_36, Affeca_34
- Track 31 : McKinley_38
- Track 32 : Paries_38
- Track 33 : Sitar_36

- Track 34 : Keitabear_36
- Track 35 : GMA3_25
- Track 36 : Towmatter_93, Daredevil_91
- Track 37 : DatBoi_98
- Track 38 : Bantam_102, SpeedDemon_1040
- Track 39 : Mollymur_102
- Track 40 : Kuwabara_68
- Track 41 : UBSmoodge_128
- Track 42 : Kabocha_97, Chidiebere_96, Schomber_94
- Track 43 : DalanDe_1
- Track 44 : ChisanaKitsune_93
- Track 45 : Stormageddon_82, RedWattleHog_85
- Track 46 : RedWattleHog_22
- Track 47 : RedWattleHog_100
- Track 48 : ModicumRichard_20
- Track 49 : ObLaDi_20
- Track 50 : Cafasso_20
- Track 51 : BaboJay_110, JeTaime_109, Nimrod_111, Kimchi_115, Teaspoon_111, Goku_110, 244_112, Stank_113, Icee_112, BigBubba_112, Filch_113, TBrady12_114, Xandras_110, Goldilocks_114, Holt_116
- Track 52 : BaboJay_36, Goku_37, Eureka_37
- Track 53 : Wiggin_113, Marshmallow_109
- Track 54 : Porky_109
- Track 55 : C3PO_45, Cruella_45
- Track 56 : Darwin_76
- Track 57 : Stickynote_47
- Track 58 : Darwin_14
- Track 59 : Darwin_11
- Track 60 : MulchSalad_28
- Track 61 : Ardmore_42
- Track 62 : LunaBlu_33
- Track 63 : Chevrolet_31
- Track 64 : Pippy_62, Maravista_65
- Track 65 : Hlubikazi_31, Mandlovu_31, Strokeseat_31
- Track 66 : Mova_51, Bobi_53, Mutaforma13_54
- Track 67 : MinionDave_33, Galactic_32, Ramsey_33
- Track 68 : Coco12_30, Starcevich_34, JalFarm20_33
- Track 69 : Sassafras_31
- Track 70 : Frankie_34
- Track 71 : KingMidas_32, Leozinho_32
- Track 72 : BarnCat_105, LeeroyJenkins_114
- Track 73 : Cassita_88
- Track 74 : BarnCat_61
- Track 75 : BarnCat_84, LeeroyJenkins_94
- Track 76 : BarnCat_86
- Track 77 : Brujita_46, Island3_46
- Track 78 : KashFlow_40, Hannaconda_43, Shaboozey_39
- Track 79 : Pound_50, Bombitas_45
- Track 80 : Kalah2_105, Phoebus_113, Dallas_113, EricMillard_105, Hughesyang_111, ThreeRngTarjay_109, DmpstrDiver_113
- Track 81 : Bagrid_151, Optimus_141, Duke13_146, HokkenD_142, BAKA_150, Gonephishing_141, Klein_147, EricMillard_142
- Track 82 : KashFlow_148, Nekros_146

- Track 83 : Minerva_162
- Track 84 : Omega_117
- Track 85 : LittleE_112
- Track 86 : Zelink_108
- Track 87 : Dove_135, Wanda_148, Zelink_143, Kalah2_140, Minerva_148, Hughesyang_148, ThreeRngTarjay_144, Bobby_139, Phoebus_149
- Track 88 : Porcelain_108
- Track 89 : Superphikiman_145, Ariel_147, Courthouse_143, Hannaconda_141, Beem_151
- Track 90 : Omega_154, LittleE_150
- Track 91 : Constella_158
- Track 92 : Constella_97, Thibault_95
- Track 93 : Omega_51
- Track 94 : Shaboozey_158
- Track 95 : Thibault_132
- Track 96 : UPIE_65, JoeDirt_64, Rose5_65, Enceladus_63, Poochiewood_65, Wamburggrxpress_65
- Track 97 : Phineas_45
- Track 98 : Pygmy_47, Bogie_47, Shipwreck_47, HUHilltop_45
- Track 99 : Xavia_53
- Track 100 : Finch_82
- Track 101 : Finch_186
- Track 102 : GMA1_47
- Track 103 : GMA1_68
- Track 104 : GAL1_27

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

The start number called the most often in the published annotations is 85, it was called in 26 of the 189 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_112, BaboJay_110, BigBubba_112, Bogie_47, Brujita_46, Filch_113, Goku_110, Goldilocks_114, HUHilltop_45, Holt_116, Icee_112, Island3_46, JeTaime_109, Kimchi_115, Lysidious_17, Marshmallow_109, Nimrod_111, Pygmy_47, RedWattleHog_85, Shipwreck_47, Stank_113, Stormageddon_82, TBrady12_114, Teaspoon_111, Wiggin_113, Xandras_110,

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

- Phineas_45, Porky_109,

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

- Adora_55, Adriana_61, Affeca_34, Angelicage_34, Ardmore_42, Ariel_147, Attis_64, BAKA_150, BaboJay_36, Bagrid_151, Bantam_102, BarnCat_105, BarnCat_61, BarnCat_84, BarnCat_86, Beem_151, Bernardo_39, Bibwit_35, BobBob_33, Bobby_139, Bobi_53, Bombitas_45, Bradissa_67, Brandonk123_37, Buckeye_60, Buttons_27, C3PO_45, Cafasso_20, Cassita_88, Charming_36, Chentzyk_36, Chevrolet_31, Chidiebere_96, ChisanaKitsune_93, Clown_64, Coco12_30, Coletti_62, Constella_158, Constella_97, Courthouse_143, Cruella_45, DalanDe_1, Dallas_113, Daredevil_91, Darwin_11, Darwin_14, Darwin_76,

DatBoi_98, DmpstrDiver_113, DonTron_22, Dori_69, Dove_135, Duke13_146, EnalisNailo_66, Enceladus_63, EricMillard_105, EricMillard_142, Eureka_37, Finch_186, Finch_82, Fosterous_34, Francesca_39, Frankie_34, FugateOSU_60, GAL1_27, GMA1_47, GMA1_68, GMA3_25, Galactic_32, Galadriel_36, Globfish_83, Goku_37, Gonephishing_141, Gsput1_40, Hannaconda_141, Hannaconda_43, Hlubikazi_31, HokkenD_142, Hortense_58, Howe_58, Hughesyang_111, Hughesyang_148, JalFarm20_33, Jesabah_60, JoeDirt_64, JonJames_26, Kabocha_97, Kalah2_105, Kalah2_140, KashFlow_148, KashFlow_40, Keitabear_36, KingMidas_32, KingTut_52, Klein_147, Kuwabara_68, LeeroyJenkins_114, LeeroyJenkins_94, LeiMonet_62, Lennon_36, Leozinho_32, Lilas_67, LittleE_112, LittleE_150, Lopsy_58, LordFarquaad_67, LostAndPhound_60, Love_39, LunaBlu_33, Lysidious_60, Mandlovu_31, Maravista_65, Matalotodo_59, McKinley_38, Mellie_57, Mesmerelda_61, Minerva_148, Minerva_162, MinionDave_33, ModicumRichard_20, Mollymur_102, Morrissey_46, Mova_51, MulchSalad_28, Mutaforma13_54, Nekros_146, Nordenberg_30, Nova53_39, ObLaDi_20, Omega_117, Omega_154, Omega_51, Optimus_141, Orfeu_58, Paries_38, Peregrin_178, Peregrin_232, Phoebus_113, Phoebus_149, Pipefish_29, Pippy_62, Placalicious_60, Podrick_58, Poochiewood_65, Porcelain_108, Pound_50, Ramsey_33, RedWattleHog_100, RedWattleHog_22, Rofo_36, Rose5_65, Saguaro_52, Sassafras_31, Schomber_94, ScoobyDoobyDoo_184, Sedona_36, Shaboozey_158, Shaboozey_39, Shlim410_56, Sitar_36, SoilAssassin_64, SpeedDemon_1040, Starceвич_34, Stickynote_47, Strokeseat_31, Superphikiman_145, Tangent_36, Thibault_132, Thibault_95, ThreeRngTarjay_109, ThreeRngTarjay_144, Toni_59, Towmatter_93, Twinkle_57, Twister6_58, UBSmoodge_128, UPIE_65, Vivi2_38, Wamburggrxpress_65, Wanda_148, WilliamBoone_144, Xavia_53, Zelink_108, Zelink_143,

Summary by start number:

Start 42:

- Found in 10 of 212 (4.7%) of genes in pham
- Manual Annotations of this start: 4 of 189
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Chevrolet_31 (F1), Galactic_32 (F1), MinionDave_33 (F1), Ramsey_33 (F1),

Start 43:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WilliamBoone_144 (CQ1),

Start 45:

- Found in 4 of 212 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Omega_51 (J),

Start 48:

- Found in 4 of 212 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 189
- Called 75.0% of time when present

- Phage (with cluster) where this start called: Hlubikazi_31 (F1), Mandlovu_31 (F1), Strokeseat_31 (F1),

Start 49:

- Found in 6 of 212 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Attis_64 (CZ2), SoilAssassin_64 (CZ2),

Start 54:

- Found in 19 of 212 (9.0%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Keitabear_36 (DE1), Sitar_36 (DE1),

Start 59:

- Found in 1 of 212 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA1_68 (singleton),

Start 63:

- Found in 8 of 212 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Twister6_58 (DC1),

Start 65:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DalanDe_1 (DQ),

Start 66:

- Found in 10 of 212 (4.7%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Porcelain_108 (J),

Start 68:

- Found in 2 of 212 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gspu1_40 (CU2), UBSmoodge_128 (DQ),

Start 69:

- Found in 2 of 212 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: MulchSalad_28 (F),

Start 71:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RedWattleHog_100 (DX),

Start 72:

- Found in 9 of 212 (4.2%) of genes in pham
- Manual Annotations of this start: 5 of 189
- Called 55.6% of time when present
- Phage (with cluster) where this start called: Chidiebere_96 (DQ), ChisanaKitsune_93 (DQ), Kabocha_97 (DQ), Pipefish_29 (B3), Schomber_94 (DQ),

Start 73:

- Found in 4 of 212 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 189
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BaboJay_36 (E), Eureka_37 (E), Goku_37 (E),

Start 75:

- Found in 4 of 212 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 189
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Bobi_53 (F1), Mova_51 (F1), Mutaforma13_54 (F1),

Start 76:

- Found in 20 of 212 (9.4%) of genes in pham
- Manual Annotations of this start: 9 of 189
- Called 60.0% of time when present
- Phage (with cluster) where this start called: C3PO_45 (EN), Cruella_45 (EN), DonTron_22 (CP), GAL1_27 (singleton), Hannaconda_43 (J), KashFlow_40 (J), KingMidas_32 (F1), Leozinho_32 (F1), LunaBlu_33 (F1), Sassafras_31 (F1), Shaboozey_39 (J), Stickynote_47 (EN),

Start 77:

- Found in 9 of 212 (4.2%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Minerva_162 (J), Shaboozey_158 (J),

Start 78:

- Found in 4 of 212 (1.9%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Ardmore_42 (F1),

Start 79:

- Found in 3 of 212 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Constella_158 (J),

Start 80:

- Found in 38 of 212 (17.9%) of genes in pham
- Manual Annotations of this start: 4 of 189
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Coco12_30 (F1), Frankie_34 (F1), JalFarm20_33 (F1), Starcevich_34 (F1),

Start 81:

- Found in 5 of 212 (2.4%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 60.0% of time when present
- Phage (with cluster) where this start called: GMA1_47 (singleton), JonJames_26 (DD), Kuwabara_68 (DN4),

Start 82:

- Found in 8 of 212 (3.8%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Phineas_45 (P1), RedWattleHog_22 (DX),

Start 83:

- Found in 16 of 212 (7.5%) of genes in pham
- Manual Annotations of this start: 14 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel_147 (J), BAKA_150 (J), Bagrid_151 (J), Beem_151 (J), Courthouse_143 (J), Duke13_146 (J), EricMillard_142 (J), Gonephishing_141 (J), Hannaconda_141 (J), HokkenD_142 (J), Klein_147 (J), LittleE_150 (J), Omega_154 (J), Optimus_141 (J), Superphikiman_145 (J), Thibault_132 (J),

Start 84:

- Found in 2 of 212 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clown_64 (DC2), Finch_186 (singleton),

Start 85:

- Found in 28 of 212 (13.2%) of genes in pham
- Manual Annotations of this start: 26 of 189
- Called 92.9% of time when present
- Phage (with cluster) where this start called: 244_112 (E), BaboJay_110 (E), BigBubba_112 (E), Bogie_47 (P1), Brujita_46 (I1), Filch_113 (E), Goku_110 (E), Goldilocks_114 (E), HUHilltop_45 (P1), Holt_116 (E), Icee_112 (E), Island3_46 (I1), JeTaimé_109 (E), Kimchi_115 (E), Lysidious_17 (CV), Marshmallow_109 (E), Nimrod_111 (E), Pygmy_47 (P1), RedWattleHog_85 (DX), Shipwreck_47 (P1), Stank_113 (E), Stormageddon_82 (DX), TBrady12_114 (E), Teaspoon_111 (E), Wiggin_113 (E), Xandras_110 (E),

Start 86:

- Found in 10 of 212 (4.7%) of genes in pham
- Manual Annotations of this start: 10 of 189
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BarnCat_86 (GB), Bobby_139 (J), Dove_135 (J), Hughesyang_148 (J), Kalah2_140 (J), Minerva_148 (J), Phoebus_149 (J), ThreeRngTarjay_144 (J), Wanda_148 (J), Zelink_143 (J),

Start 87:

- Found in 7 of 212 (3.3%) of genes in pham
- Manual Annotations of this start: 5 of 189
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Adora_55 (CZ4), Hortense_58 (CZ4), Howe_58 (CZ4), Shlim410_56 (CZ4), Twinkle_57 (CZ4),

Start 88:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Peregrin_178 (CB),

Start 89:

- Found in 21 of 212 (9.9%) of genes in pham
- Manual Annotations of this start: 18 of 189
- Called 90.5% of time when present
- Phage (with cluster) where this start called: BarnCat_84 (GB), Cassita_88 (GB), Constella_97 (J), Dallas_113 (J), DmpstrDiver_113 (J), EricMillard_105 (J), Hughesyang_111 (J), Kalah2_105 (J), KashFlow_148 (J), LeeroyJenkins_94 (GB), LittleE_112 (J), Lysidious_60 (CV), Mellie_57 (CV), Nekros_146 (J), Omega_117 (J), Peregrin_232 (CB), Phoebus_113 (J), Thibault_95 (J), ThreeRngTarjay_109 (J),

Start 90:

- Found in 4 of 212 (1.9%) of genes in pham
- Manual Annotations of this start: 4 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buttons_27 (A1), Dori_69 (AD), Saguaro_52 (B7), Xavia_53 (P3),

Start 91:

- Found in 9 of 212 (4.2%) of genes in pham
- Manual Annotations of this start: 5 of 189
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Enceladus_63 (L1), JoeDirt_64 (L1), Poochiewood_65 (L1), Rose5_65 (L1), UPIE_65 (L1), Wamburgxpress_65 (L1),

Start 92:

- Found in 8 of 212 (3.8%) of genes in pham
- Manual Annotations of this start: 7 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_102 (DL), BarnCat_61 (GB), Daredevil_91 (DL), DatBoi_98 (DL), Francesca_39 (CG), Mollymur_102 (DL), SpeedDemon_1040 (DL), Towmatter_93 (DL),

Start 93:

- Found in 1 of 212 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Globfish_83 (AY),

Start 94:

- Found in 16 of 212 (7.5%) of genes in pham
- Manual Annotations of this start: 6 of 189
- Called 43.8% of time when present
- Phage (with cluster) where this start called: Darwin_11 (EN), FugateOSU_60 (B1), Jesabah_60 (B1), LostAndPhound_60 (B1), Orfeu_58 (B1), Placalicious_60 (B1), Toni_59 (B1),

Start 95:

- Found in 1 of 212 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nova53_39 (CG),

Start 97:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bernardo_39 (B3),

Start 98:

- Found in 15 of 212 (7.1%) of genes in pham
- Manual Annotations of this start: 6 of 189
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Adriana_61 (B1), Buckeye_60 (B1), Coletti_62 (B1), KingTut_52 (B1), LeiMonet_62 (B1), Lopsy_58 (B1), Matalotodo_59 (B1), Mesmerelda_61 (B1), Podrick_58 (B1),

Start 100:

- Found in 8 of 212 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Morrissey_46 (CD),

Start 101:

- Found in 24 of 212 (11.3%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 4.2% of time when present
- Phage (with cluster) where this start called: Zelink_108 (J),

Start 102:

- Found in 24 of 212 (11.3%) of genes in pham
- Manual Annotations of this start: 21 of 189
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Affeca_34 (DE1), Angelicage_34 (DE1), Bibwit_35 (DE1), BobBob_33 (DE1), Brandonk123_37 (DE1), Cafasso_20 (DZ), Charming_36 (DE1), Fosterous_34 (DE1), Galadriel_36 (DE1), Lennon_36 (DE1), Love_39 (DE1), Maravista_65 (F1), McKinley_38 (DE1), ModicumRichard_20 (DZ), Nordenberg_30 (DE1), ObLaDi_20 (DZ), Paries_38 (DE1), Pippy_62 (F1), Rofo_36 (DE1), Sedona_36 (DE1), Tangent_36 (DE1), Vivi2_38 (DE1),

Start 103:

- Found in 9 of 212 (4.2%) of genes in pham
- Manual Annotations of this start: 4 of 189
- Called 44.4% of time when present
- Phage (with cluster) where this start called: BarnCat_105 (GB), Bombitas_45 (J), LeeroyJenkins_114 (GB), Pound_50 (J),

Start 105:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Darwin_76 (EN),

Start 106:

- Found in 1 of 212 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chentzyk_36 (B3),

Start 110:

- Found in 1 of 212 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finch_82 (singleton),

Start 112:

- Found in 2 of 212 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Darwin_14 (EN),

Start 113:

- Found in 1 of 212 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA3_25 (DF2),

Start 114:

- Found in 36 of 212 (17.0%) of genes in pham
- Manual Annotations of this start: 1 of 189
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Porky_109 (E),

Start 116:

- Found in 7 of 212 (3.3%) of genes in pham
- Manual Annotations of this start: 4 of 189
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Bradissa_67 (CY1), EnalisNailo_66 (CY1), Lilas_67 (CY1), LordFarquaad_67 (CZ2),

Start 118:

- Found in 3 of 212 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 189

- Called 33.3% of time when present
- Phage (with cluster) where this start called: ScoobyDoobyDoo_184 (C2),

Summary by clusters:

There are 38 clusters represented in this pham: singleton, CZ2, DD, DL, CZ4, EN, DZ, DX, DQ, CU2, I1, DF2, A1, DN4, C2, CQ1, P3, CY1, P1, E, AD, F, CB, J, CG, CD, GB, L1, AY, CP, DC2, CV, DC1, F1, DE1, B7, B1, B3,

Info for manual annotations of cluster A1:

- Start number 90 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster AD:

- Start number 90 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster B1:

- Start number 94 was manually annotated 5 times for cluster B1.
- Start number 98 was manually annotated 6 times for cluster B1.

Info for manual annotations of cluster B3:

- Start number 72 was manually annotated 1 time for cluster B3.
- Start number 97 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B7:

- Start number 90 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster C2:

- Start number 118 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CB:

- Start number 88 was manually annotated 1 time for cluster CB.
- Start number 89 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CD:

- Start number 100 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CG:

- Start number 92 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster CQ1:

- Start number 43 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CV:

- Start number 85 was manually annotated 1 time for cluster CV.
- Start number 89 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 116 was manually annotated 3 times for cluster CY1.

Info for manual annotations of cluster CZ2:

- Start number 49 was manually annotated 2 times for cluster CZ2.
- Start number 116 was manually annotated 1 time for cluster CZ2.

Info for manual annotations of cluster CZ4:

- Start number 87 was manually annotated 5 times for cluster CZ4.

Info for manual annotations of cluster DC1:

- Start number 63 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 84 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DD:

- Start number 81 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DE1:

- Start number 54 was manually annotated 2 times for cluster DE1.
- Start number 102 was manually annotated 17 times for cluster DE1.

Info for manual annotations of cluster DL:

- Start number 92 was manually annotated 5 times for cluster DL.

Info for manual annotations of cluster DN4:

- Start number 81 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DQ:

- Start number 65 was manually annotated 1 time for cluster DQ.
- Start number 68 was manually annotated 1 time for cluster DQ.
- Start number 72 was manually annotated 4 times for cluster DQ.

Info for manual annotations of cluster DX:

- Start number 71 was manually annotated 1 time for cluster DX.
- Start number 82 was manually annotated 1 time for cluster DX.
- Start number 85 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster DZ:

- Start number 102 was manually annotated 2 times for cluster DZ.

Info for manual annotations of cluster E:

- Start number 73 was manually annotated 3 times for cluster E.
- Start number 85 was manually annotated 17 times for cluster E.
- Start number 114 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster EN:

- Start number 76 was manually annotated 3 times for cluster EN.
- Start number 94 was manually annotated 1 time for cluster EN.
- Start number 105 was manually annotated 1 time for cluster EN.
- Start number 112 was manually annotated 1 time for cluster EN.

Info for manual annotations of cluster F1:

- Start number 42 was manually annotated 4 times for cluster F1.

- Start number 48 was manually annotated 3 times for cluster F1.
- Start number 75 was manually annotated 3 times for cluster F1.
- Start number 76 was manually annotated 4 times for cluster F1.
- Start number 80 was manually annotated 4 times for cluster F1.
- Start number 102 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster GB:

- Start number 86 was manually annotated 1 time for cluster GB.
- Start number 89 was manually annotated 3 times for cluster GB.
- Start number 92 was manually annotated 1 time for cluster GB.
- Start number 103 was manually annotated 2 times for cluster GB.

Info for manual annotations of cluster I1:

- Start number 85 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster J:

- Start number 45 was manually annotated 1 time for cluster J.
- Start number 66 was manually annotated 1 time for cluster J.
- Start number 76 was manually annotated 2 times for cluster J.
- Start number 77 was manually annotated 1 time for cluster J.
- Start number 79 was manually annotated 1 time for cluster J.
- Start number 83 was manually annotated 14 times for cluster J.
- Start number 86 was manually annotated 9 times for cluster J.
- Start number 89 was manually annotated 12 times for cluster J.
- Start number 101 was manually annotated 1 time for cluster J.
- Start number 103 was manually annotated 2 times for cluster J.

Info for manual annotations of cluster L1:

- Start number 91 was manually annotated 5 times for cluster L1.

Info for manual annotations of cluster P1:

- Start number 82 was manually annotated 1 time for cluster P1.
- Start number 85 was manually annotated 4 times for cluster P1.

Info for manual annotations of cluster P3:

- Start number 90 was manually annotated 1 time for cluster P3.

Gene Information:

Gene: 244_112 Start: 62827, Stop: 63327, Start Num: 85

Candidate Starts for 244_112:

(58, 62773), (Start: 85 @62827 has 26 MA's), (Start: 114 @62881 has 1 MA's), (162, 62962), (165, 62965), (175, 62989), (198, 63022), (211, 63079), (258, 63241),

Gene: Adora_55 Start: 40141, Stop: 40647, Start Num: 87

Candidate Starts for Adora_55:

(26, 39916), (29, 39946), (Start: 87 @40141 has 5 MA's), (124, 40216), (131, 40228), (156, 40270), (205, 40357), (218, 40396),

Gene: Adriana_61 Start: 53245, Stop: 52730, Start Num: 98

Candidate Starts for Adriana_61:

(55, 53323), (Start: 80 @53269 has 4 MA's), (Start: 94 @53254 has 6 MA's), (Start: 98 @53245 has 6 MA's), (127, 53179), (150, 53134), (164, 53110), (183, 53074), (188, 53068), (202, 53035), (215, 52981), (219, 52978), (248, 52861), (255, 52840), (282, 52765),

Gene: Affeca_34 Start: 32900, Stop: 32427, Start Num: 102

Candidate Starts for Affeca_34:

(39, 33038), (Start: 54 @32984 has 2 MA's), (Start: 80 @32927 has 4 MA's), (Start: 102 @32900 has 21 MA's), (148, 32801), (177, 32759), (180, 32756), (202, 32720), (218, 32663), (225, 32639), (235, 32582),

Gene: Angelicage_34 Start: 33318, Stop: 32845, Start Num: 102

Candidate Starts for Angelicage_34:

(39, 33456), (Start: 54 @33402 has 2 MA's), (58, 33393), (Start: 80 @33345 has 4 MA's), (Start: 102 @33318 has 21 MA's), (148, 33219), (177, 33177), (180, 33174), (202, 33138), (218, 33081), (226, 33048), (235, 33000),

Gene: Ardmore_42 Start: 34484, Stop: 35032, Start Num: 78

Candidate Starts for Ardmore_42:

(Start: 75 @34481 has 3 MA's), (78, 34484), (130, 34574), (156, 34616), (194, 34676), (211, 34742), (228, 34784), (236, 34832),

Gene: Ariel_147 Start: 75437, Stop: 76039, Start Num: 83

Candidate Starts for Ariel_147:

(Start: 83 @75437 has 14 MA's), (135, 75542), (144, 75563), (146, 75566), (162, 75590), (163, 75593), (166, 75599), (198, 75659), (220, 75728), (224, 75746), (233, 75797), (243, 75833), (278, 75929), (309, 76025),

Gene: Attis_64 Start: 43105, Stop: 43650, Start Num: 49

Candidate Starts for Attis_64:

(Start: 49 @43105 has 2 MA's), (64, 43147), (Start: 77 @43168 has 1 MA's), (Start: 100 @43192 has 1 MA's), (Start: 116 @43231 has 4 MA's), (120, 43243), (139, 43273), (202, 43378), (236, 43516),

Gene: BAKA_150 Start: 78761, Stop: 79363, Start Num: 83

Candidate Starts for BAKA_150:

(52, 78692), (Start: 83 @78761 has 14 MA's), (135, 78866), (144, 78887), (146, 78890), (162, 78914), (163, 78917), (166, 78923), (209, 79025), (220, 79052), (224, 79070), (243, 79157), (309, 79349),

Gene: BaboJay_110 Start: 64000, Stop: 64500, Start Num: 85

Candidate Starts for BaboJay_110:

(58, 63946), (Start: 85 @64000 has 26 MA's), (Start: 114 @64054 has 1 MA's), (162, 64135), (165, 64138), (175, 64162), (198, 64195), (211, 64252), (258, 64414),

Gene: BaboJay_36 Start: 33175, Stop: 32675, Start Num: 73

Candidate Starts for BaboJay_36:

(Start: 73 @33175 has 3 MA's), (Start: 114 @33118 has 1 MA's), (128, 33082),

Gene: Bagrid_151 Start: 79456, Stop: 80058, Start Num: 83

Candidate Starts for Bagrid_151:

(52, 79387), (Start: 83 @79456 has 14 MA's), (135, 79561), (144, 79582), (146, 79585), (162, 79609), (163, 79612), (166, 79618), (209, 79720), (220, 79747), (224, 79765), (243, 79852), (309, 80044),

Gene: Bantam_102 Start: 67594, Stop: 68172, Start Num: 92

Candidate Starts for Bantam_102:

(19, 67276), (41, 67462), (Start: 92 @67594 has 7 MA's), (Start: 114 @67642 has 1 MA's), (119, 67660), (128, 67678), (148, 67711), (205, 67813), (220, 67864), (244, 67966), (286, 68092),

Gene: BarnCat_105 Start: 54966, Stop: 54505, Start Num: 103

Candidate Starts for BarnCat_105:

(Start: 103 @54966 has 4 MA's), (173, 54837), (226, 54714),

Gene: BarnCat_61 Start: 35513, Stop: 34857, Start Num: 92

Candidate Starts for BarnCat_61:

(Start: 92 @35513 has 7 MA's), (130, 35426), (179, 35345), (206, 35288), (228, 35210), (230, 35201), (235, 35165), (264, 35069), (287, 35006), (295, 34991), (302, 34970),

Gene: BarnCat_84 Start: 47542, Stop: 47033, Start Num: 89

Candidate Starts for BarnCat_84:

(Start: 89 @47542 has 18 MA's), (177, 47371), (183, 47365), (201, 47335), (214, 47281), (230, 47233),

Gene: BarnCat_86 Start: 49536, Stop: 49024, Start Num: 86

Candidate Starts for BarnCat_86:

(Start: 86 @49536 has 10 MA's), (244, 49179),

Gene: Beem_151 Start: 80198, Stop: 80800, Start Num: 83

Candidate Starts for Beem_151:

(Start: 83 @80198 has 14 MA's), (135, 80303), (144, 80324), (146, 80327), (162, 80351), (163, 80354), (166, 80360), (198, 80420), (220, 80489), (224, 80507), (233, 80558), (243, 80594), (278, 80690), (309, 80786),

Gene: Bernardo_39 Start: 36994, Stop: 37440, Start Num: 97

Candidate Starts for Bernardo_39:

(Start: 97 @36994 has 1 MA's), (162, 37090), (204, 37174), (205, 37177), (227, 37255), (277, 37423),

Gene: Bibwit_35 Start: 32719, Stop: 32246, Start Num: 102

Candidate Starts for Bibwit_35:

(39, 32857), (Start: 54 @32803 has 2 MA's), (58, 32794), (Start: 80 @32746 has 4 MA's), (Start: 102 @32719 has 21 MA's), (148, 32620), (177, 32578), (180, 32575), (202, 32539), (218, 32482), (226, 32449), (235, 32401),

Gene: BigBubba_112 Start: 62473, Stop: 62973, Start Num: 85

Candidate Starts for BigBubba_112:

(58, 62419), (Start: 85 @62473 has 26 MA's), (Start: 114 @62527 has 1 MA's), (162, 62608), (165, 62611), (175, 62635), (198, 62668), (211, 62725), (258, 62887),

Gene: BobBob_33 Start: 31999, Stop: 31526, Start Num: 102

Candidate Starts for BobBob_33:

(39, 32137), (Start: 54 @32083 has 2 MA's), (58, 32074), (Start: 80 @32026 has 4 MA's), (Start: 102 @31999 has 21 MA's), (148, 31900), (177, 31858), (180, 31855), (202, 31819), (218, 31762), (226, 31729), (235, 31681),

Gene: Bobby_139 Start: 80254, Stop: 80853, Start Num: 86

Candidate Starts for Bobby_139:

(Start: 86 @80254 has 10 MA's), (135, 80356), (144, 80377), (146, 80380), (181, 80443), (198, 80473), (202, 80482), (209, 80515), (224, 80560), (243, 80647), (267, 80707), (278, 80743), (309, 80839),

Gene: Bobi_53 Start: 37484, Stop: 38035, Start Num: 75

Candidate Starts for Bobi_53:

(Start: 75 @37484 has 3 MA's), (78, 37487), (130, 37577), (156, 37619), (194, 37679), (211, 37745), (228, 37787), (236, 37835),

Gene: Bogie_47 Start: 33238, Stop: 33729, Start Num: 85

Candidate Starts for Bogie_47:

(62, 33199), (Start: 63 @33202 has 1 MA's), (Start: 82 @33235 has 2 MA's), (Start: 85 @33238 has 26 MA's), (Start: 101 @33256 has 1 MA's), (104, 33265), (195, 33430), (199, 33439), (202, 33445), (205, 33457), (211, 33493), (230, 33544), (236, 33583),

Gene: Bombitas_45 Start: 41655, Stop: 42164, Start Num: 103

Candidate Starts for Bombitas_45:

(47, 41544), (Start: 72 @41613 has 5 MA's), (Start: 87 @41631 has 5 MA's), (Start: 103 @41655 has 4 MA's), (130, 41721), (161, 41775), (185, 41820), (211, 41907), (233, 41985), (236, 41997), (298, 42150),

Gene: Bradissa_67 Start: 46915, Stop: 47334, Start Num: 116

Candidate Starts for Bradissa_67:

(23, 46627), (Start: 49 @46789 has 2 MA's), (Start: 77 @46852 has 1 MA's), (Start: 91 @46867 has 5 MA's), (Start: 100 @46876 has 1 MA's), (Start: 116 @46915 has 4 MA's), (120, 46927), (139, 46957), (199, 47056), (202, 47062), (236, 47200),

Gene: Brandonk123_37 Start: 33065, Stop: 32592, Start Num: 102

Candidate Starts for Brandonk123_37:

(39, 33203), (Start: 54 @33149 has 2 MA's), (58, 33140), (Start: 80 @33092 has 4 MA's), (Start: 102 @33065 has 21 MA's), (148, 32966), (177, 32924), (180, 32921), (202, 32885), (218, 32828), (226, 32795), (235, 32747),

Gene: Brujita_46 Start: 33137, Stop: 33628, Start Num: 85

Candidate Starts for Brujita_46:

(46, 33044), (62, 33098), (Start: 63 @33101 has 1 MA's), (Start: 82 @33134 has 2 MA's), (Start: 85 @33137 has 26 MA's), (Start: 101 @33155 has 1 MA's), (104, 33164), (195, 33329), (199, 33338), (202, 33344), (205, 33356), (211, 33392), (230, 33443), (236, 33482),

Gene: Buckeye_60 Start: 52975, Stop: 52460, Start Num: 98

Candidate Starts for Buckeye_60:

(55, 53053), (Start: 80 @52999 has 4 MA's), (Start: 94 @52984 has 6 MA's), (Start: 98 @52975 has 6 MA's), (127, 52909), (150, 52864), (164, 52840), (183, 52804), (188, 52798), (202, 52765), (215, 52711), (219, 52708), (248, 52591), (255, 52570), (282, 52495),

Gene: Buttons_27 Start: 21411, Stop: 21896, Start Num: 90

Candidate Starts for Buttons_27:

(Start: 90 @21411 has 4 MA's), (Start: 114 @21459 has 1 MA's), (205, 21630), (206, 21633), (218, 21672),

Gene: C3PO_45 Start: 42754, Stop: 42164, Start Num: 76

Candidate Starts for C3PO_45:

(35, 42886), (36, 42883), (Start: 76 @42754 has 9 MA's), (108, 42706), (121, 42667), (136, 42643), (138, 42640), (212, 42496), (233, 42418), (240, 42385), (277, 42277), (310, 42175), (312, 42169),

Gene: Cafasso_20 Start: 18713, Stop: 18225, Start Num: 102

Candidate Starts for Cafasso_20:

(16, 19079), (40, 18863), (51, 18806), (56, 18794), (Start: 102 @18713 has 21 MA's), (140, 18629), (159, 18605), (180, 18569), (192, 18560), (205, 18521), (207, 18515), (234, 18401), (235, 18395), (236, 18392), (263, 18314),

Gene: Cassita_88 Start: 48685, Stop: 48176, Start Num: 89

Candidate Starts for Cassita_88:

(Start: 89 @48685 has 18 MA's), (183, 48508), (201, 48478), (214, 48424), (230, 48376),

Gene: Charming_36 Start: 32566, Stop: 32093, Start Num: 102

Candidate Starts for Charming_36:

(39, 32704), (Start: 54 @32650 has 2 MA's), (58, 32641), (Start: 80 @32593 has 4 MA's), (Start: 102 @32566 has 21 MA's), (148, 32467), (177, 32425), (180, 32422), (202, 32386), (218, 32329), (226, 32296), (235, 32248),

Gene: Chentzyk_36 Start: 34824, Stop: 35315, Start Num: 106

Candidate Starts for Chentzyk_36:

(106, 34824), (127, 34869), (176, 34959), (211, 35046), (250, 35178), (254, 35202),

Gene: Chevrolet_31 Start: 27455, Stop: 28054, Start Num: 42

Candidate Starts for Chevrolet_31:

(Start: 42 @27455 has 4 MA's), (Start: 76 @27557 has 9 MA's), (205, 27779), (211, 27815), (260, 27980), (280, 28025),

Gene: Chidiebere_96 Start: 69963, Stop: 70481, Start Num: 72

Candidate Starts for Chidiebere_96:

(57, 69921), (60, 69936), (Start: 72 @69963 has 5 MA's), (148, 70086), (155, 70095), (179, 70119), (236, 70299),

Gene: ChisanaKitsune_93 Start: 68907, Stop: 69425, Start Num: 72

Candidate Starts for ChisanaKitsune_93:

(57, 68865), (60, 68880), (Start: 72 @68907 has 5 MA's), (148, 69030), (155, 69039), (179, 69063), (236, 69243),

Gene: Clown_64 Start: 45007, Stop: 45525, Start Num: 84

Candidate Starts for Clown_64:

(Start: 84 @45007 has 2 MA's), (Start: 103 @45031 has 4 MA's), (Start: 114 @45058 has 1 MA's), (130, 45097), (151, 45136), (202, 45214), (211, 45262), (228, 45304), (233, 45340), (236, 45352), (296, 45511),

Gene: Coco12_30 Start: 26826, Stop: 26320, Start Num: 80

Candidate Starts for Coco12_30:

(Start: 80 @26826 has 4 MA's), (Start: 101 @26811 has 1 MA's), (119, 26760), (124, 26751), (148, 26709), (159, 26694), (167, 26682), (168, 26679), (181, 26658), (205, 26619), (211, 26583), (236, 26493), (256, 26427), (269, 26397),

Gene: Coletti_62 Start: 53240, Stop: 52725, Start Num: 98

Candidate Starts for Coletti_62:

(55, 53318), (Start: 80 @53264 has 4 MA's), (Start: 94 @53249 has 6 MA's), (Start: 98 @53240 has 6 MA's), (127, 53174), (150, 53129), (164, 53105), (183, 53069), (188, 53063), (202, 53030), (215, 52976), (219, 52973), (248, 52856), (255, 52835), (282, 52760),

Gene: Constella_158 Start: 86054, Stop: 86563, Start Num: 79

Candidate Starts for Constella_158:

(Start: 77 @86051 has 1 MA's), (Start: 79 @86054 has 1 MA's), (104, 86087), (124, 86138), (144, 86174), (198, 86264), (202, 86273), (205, 86285), (206, 86288), (214, 86321), (225, 86351), (240, 86432), (276, 86525), (285, 86549),

Gene: Constella_97 Start: 58172, Stop: 58714, Start Num: 89

Candidate Starts for Constella_97:

(Start: 89 @58172 has 18 MA's), (Start: 101 @58190 has 1 MA's), (161, 58310), (169, 58325), (175, 58343), (199, 58382), (205, 58400), (207, 58406), (225, 58466), (249, 58559), (300, 58700),

Gene: Courthouse_143 Start: 75295, Stop: 75897, Start Num: 83

Candidate Starts for Courthouse_143:

(Start: 83 @75295 has 14 MA's), (135, 75400), (144, 75421), (146, 75424), (162, 75448), (163, 75451), (166, 75457), (198, 75517), (220, 75586), (224, 75604), (233, 75655), (243, 75691), (278, 75787), (309, 75883),

Gene: Cruella_45 Start: 42754, Stop: 42164, Start Num: 76

Candidate Starts for Cruella_45:

(35, 42886), (36, 42883), (Start: 76 @42754 has 9 MA's), (108, 42706), (121, 42667), (136, 42643), (138, 42640), (212, 42496), (233, 42418), (240, 42385), (277, 42277), (310, 42175), (312, 42169),

Gene: DalanDe_1 Start: 1, Stop: 522, Start Num: 65

Candidate Starts for DalanDe_1:

(Start: 65 @1 has 1 MA's), (Start: 72 @16 has 5 MA's), (111, 76), (Start: 118 @94 has 1 MA's), (123, 100), (166, 154), (181, 175), (205, 226), (220, 271), (226, 301), (230, 313), (238, 364), (262, 430), (270, 442),

Gene: Dallas_113 Start: 64402, Stop: 64944, Start Num: 89

Candidate Starts for Dallas_113:

(33, 64240), (38, 64264), (Start: 66 @64369 has 1 MA's), (Start: 89 @64402 has 18 MA's), (Start: 101 @64420 has 1 MA's), (124, 64477), (161, 64540), (169, 64555), (175, 64573), (205, 64630), (207, 64636), (225, 64696), (249, 64789),

Gene: Daredevil_91 Start: 63069, Stop: 63638, Start Num: 92

Candidate Starts for Daredevil_91:

(19, 62760), (28, 62871), (Start: 92 @63069 has 7 MA's), (148, 63186), (177, 63237), (205, 63291), (217, 63336), (255, 63480), (281, 63546),

Gene: Darwin_76 Start: 54919, Stop: 54362, Start Num: 105

Candidate Starts for Darwin_76:

(Start: 105 @54919 has 1 MA's), (150, 54829), (187, 54778), (212, 54700), (304, 54418), (313, 54370),

Gene: Darwin_14 Start: 7286, Stop: 7858, Start Num: 112

Candidate Starts for Darwin_14:

(Start: 112 @7286 has 1 MA's), (201, 7448), (206, 7466), (207, 7469), (279, 7727), (293, 7763), (312, 7832),

Gene: Darwin_11 Start: 6015, Stop: 6593, Start Num: 94

Candidate Starts for Darwin_11:

(Start: 94 @6015 has 6 MA's), (147, 6126), (151, 6132), (216, 6267), (222, 6282), (236, 6351), (240, 6372), (299, 6534), (311, 6579),

Gene: DatBoi_98 Start: 66730, Stop: 67308, Start Num: 92

Candidate Starts for DatBoi_98:

(Start: 92 @66730 has 7 MA's), (Start: 114 @66778 has 1 MA's), (128, 66814), (143, 66838), (148, 66847), (228, 67036), (286, 67228),

Gene: DmpstrDiver_113 Start: 63822, Stop: 64364, Start Num: 89

Candidate Starts for DmpstrDiver_113:

(33, 63660), (38, 63684), (Start: 66 @63789 has 1 MA's), (Start: 89 @63822 has 18 MA's), (Start: 101 @63840 has 1 MA's), (124, 63897), (161, 63960), (169, 63975), (175, 63993), (205, 64050), (207, 64056), (225, 64116), (249, 64209),

Gene: DonTron_22 Start: 10785, Stop: 11264, Start Num: 76

Candidate Starts for DonTron_22:

(Start: 76 @10785 has 9 MA's), (142, 10896), (194, 10980), (202, 10998), (205, 11010), (233, 11124),

Gene: Dori_69 Start: 53193, Stop: 53732, Start Num: 90

Candidate Starts for Dori_69:

(44, 53091), (57, 53133), (Start: 81 @53184 has 2 MA's), (Start: 90 @53193 has 4 MA's), (Start: 103 @53214 has 4 MA's), (139, 53301), (152, 53322), (203, 53409), (205, 53415), (213, 53454), (236, 53541), (266, 53619),

Gene: Dove_135 Start: 75231, Stop: 75830, Start Num: 86

Candidate Starts for Dove_135:

(Start: 86 @75231 has 10 MA's), (135, 75333), (144, 75354), (146, 75357), (181, 75420), (198, 75450), (202, 75459), (209, 75492), (224, 75537), (243, 75624), (267, 75684), (278, 75720), (309, 75816),

Gene: Duke13_146 Start: 77046, Stop: 77648, Start Num: 83

Candidate Starts for Duke13_146:

(52, 76977), (Start: 83 @77046 has 14 MA's), (135, 77151), (144, 77172), (146, 77175), (162, 77199), (163, 77202), (166, 77208), (209, 77310), (220, 77337), (224, 77355), (243, 77442), (309, 77634),

Gene: EnalisNailo_66 Start: 46449, Stop: 46868, Start Num: 116

Candidate Starts for EnalisNailo_66:

(23, 46161), (Start: 49 @46323 has 2 MA's), (Start: 77 @46386 has 1 MA's), (Start: 91 @46401 has 5 MA's), (Start: 100 @46410 has 1 MA's), (Start: 116 @46449 has 4 MA's), (120, 46461), (139, 46491), (199, 46590), (202, 46596), (236, 46734),

Gene: Enceladus_63 Start: 44580, Stop: 45038, Start Num: 91

Candidate Starts for Enceladus_63:

(Start: 91 @44580 has 5 MA's), (124, 44652), (192, 44742), (197, 44754), (205, 44775), (223, 44838), (230, 44865),

Gene: EricMillard_105 Start: 63462, Stop: 64004, Start Num: 89

Candidate Starts for EricMillard_105:

(33, 63300), (38, 63324), (Start: 66 @63429 has 1 MA's), (Start: 89 @63462 has 18 MA's), (Start: 101 @63480 has 1 MA's), (124, 63537), (161, 63600), (169, 63615), (175, 63633), (205, 63690), (207, 63696), (225, 63756), (249, 63849),

Gene: EricMillard_142 Start: 78398, Stop: 79000, Start Num: 83

Candidate Starts for EricMillard_142:

(52, 78329), (Start: 83 @78398 has 14 MA's), (135, 78503), (144, 78524), (146, 78527), (162, 78551), (163, 78554), (166, 78560), (209, 78662), (220, 78689), (224, 78707), (243, 78794), (309, 78986),

Gene: Eureka_37 Start: 33608, Stop: 33108, Start Num: 73

Candidate Starts for Eureka_37:

(Start: 73 @33608 has 3 MA's), (Start: 114 @33551 has 1 MA's), (128, 33515),

Gene: Filch_113 Start: 63036, Stop: 63536, Start Num: 85

Candidate Starts for Filch_113:

(58, 62982), (Start: 85 @63036 has 26 MA's), (Start: 114 @63090 has 1 MA's), (162, 63171), (165, 63174), (175, 63198), (198, 63231), (211, 63288), (258, 63450),

Gene: Finch_82 Start: 71334, Stop: 71777, Start Num: 110

Candidate Starts for Finch_82:

(61, 71253), (Start: 81 @71289 has 2 MA's), (Start: 110 @71334 has 1 MA's), (132, 71382), (204, 71505), (205, 71508), (221, 71559), (234, 71625), (241, 71655),

Gene: Finch_186 Start: 111122, Stop: 111628, Start Num: 84

Candidate Starts for Finch_186:

(Start: 84 @111122 has 2 MA's), (154, 111254), (198, 111326), (203, 111341), (206, 111350),

Gene: Fosterous_34 Start: 32991, Stop: 32518, Start Num: 102

Candidate Starts for Fosterous_34:

(39, 33129), (Start: 54 @33075 has 2 MA's), (58, 33066), (Start: 80 @33018 has 4 MA's), (Start: 102 @32991 has 21 MA's), (148, 32892), (177, 32850), (180, 32847), (202, 32811), (218, 32754), (226, 32721), (235, 32673),

Gene: Francesca_39 Start: 21303, Stop: 21839, Start Num: 92

Candidate Starts for Francesca_39:

(Start: 92 @21303 has 7 MA's), (204, 21498), (205, 21501), (233, 21618), (297, 21804), (306, 21822),

Gene: Frankie_34 Start: 27904, Stop: 27416, Start Num: 80

Candidate Starts for Frankie_34:

(Start: 80 @27904 has 4 MA's), (124, 27829), (148, 27787), (157, 27775), (168, 27757), (178, 27739), (199, 27712), (251, 27517), (269, 27478),

Gene: FugateOSU_60 Start: 53224, Stop: 52700, Start Num: 94

Candidate Starts for FugateOSU_60:

(55, 53293), (Start: 80 @53239 has 4 MA's), (Start: 94 @53224 has 6 MA's), (Start: 98 @53215 has 6 MA's), (127, 53149), (150, 53104), (164, 53080), (183, 53044), (188, 53038), (202, 53005), (215, 52951), (219, 52948), (248, 52831), (255, 52810), (282, 52735),

Gene: GAL1_27 Start: 22156, Stop: 22695, Start Num: 76

Candidate Starts for GAL1_27:

(Start: 76 @22156 has 9 MA's), (119, 22234), (157, 22300), (159, 22303), (183, 22348), (195, 22366), (198, 22372), (199, 22375), (204, 22390), (205, 22393), (206, 22396), (208, 22408), (234, 22510), (236, 22519),

Gene: GMA1_47 Start: 30722, Stop: 31246, Start Num: 81

Candidate Starts for GMA1_47:

(15, 30347), (25, 30500), (46, 30635), (50, 30653), (67, 30698), (70, 30707), (Start: 81 @30722 has 2 MA's), (Start: 114 @30779 has 1 MA's), (211, 30986), (230, 31037), (240, 31097), (263, 31154),

Gene: GMA1_68 Start: 40382, Stop: 40945, Start Num: 59

Candidate Starts for GMA1_68:

(17, 40088), (20, 40115), (22, 40187), (34, 40280), (59, 40382), (Start: 73 @40412 has 3 MA's), (Start: 114 @40481 has 1 MA's), (133, 40520), (190, 40598), (202, 40628), (208, 40655), (211, 40676), (228, 40718), (233, 40754), (236, 40766), (259, 40838),

Gene: GMA3_25 Start: 35593, Stop: 36075, Start Num: 113

Candidate Starts for GMA3_25:

(113, 35593), (143, 35656), (184, 35722), (196, 35743), (204, 35764), (207, 35773), (218, 35809), (283, 36034),

Gene: Galactic_32 Start: 27751, Stop: 28350, Start Num: 42

Candidate Starts for Galactic_32:

(Start: 42 @27751 has 4 MA's), (Start: 76 @27853 has 9 MA's), (205, 28075), (211, 28111), (260, 28276), (280, 28321),

Gene: Galadriel_36 Start: 33480, Stop: 33007, Start Num: 102

Candidate Starts for Galadriel_36:

(39, 33618), (Start: 54 @33564 has 2 MA's), (58, 33555), (Start: 80 @33507 has 4 MA's), (Start: 102 @33480 has 21 MA's), (148, 33381), (177, 33339), (180, 33336), (202, 33300), (218, 33243), (226, 33210), (235, 33162),

Gene: Globfish_83 Start: 46529, Stop: 47017, Start Num: 93

Candidate Starts for Globfish_83:

(74, 46508), (93, 46529), (122, 46586), (131, 46604), (160, 46646), (202, 46721), (288, 47006),

Gene: Goku_37 Start: 33337, Stop: 32837, Start Num: 73

Candidate Starts for Goku_37:

(Start: 73 @33337 has 3 MA's), (Start: 114 @33280 has 1 MA's), (128, 33244),

Gene: Goku_110 Start: 63579, Stop: 64079, Start Num: 85

Candidate Starts for Goku_110:

(58, 63525), (Start: 85 @63579 has 26 MA's), (Start: 114 @63633 has 1 MA's), (162, 63714), (165, 63717), (175, 63741), (198, 63774), (211, 63831), (258, 63993),

Gene: Goldilocks_114 Start: 63260, Stop: 63760, Start Num: 85

Candidate Starts for Goldilocks_114:

(58, 63206), (Start: 85 @63260 has 26 MA's), (Start: 114 @63314 has 1 MA's), (162, 63395), (165, 63398), (175, 63422), (198, 63455), (211, 63512), (258, 63674),

Gene: Gonephishing_141 Start: 75522, Stop: 76124, Start Num: 83

Candidate Starts for Gonephishing_141:

(52, 75453), (Start: 83 @75522 has 14 MA's), (135, 75627), (144, 75648), (146, 75651), (162, 75675), (163, 75678), (166, 75684), (209, 75786), (220, 75813), (224, 75831), (243, 75918), (309, 76110),

Gene: Gspu1_40 Start: 30337, Stop: 30849, Start Num: 68

Candidate Starts for Gspu1_40:

(24, 30127), (27, 30154), (32, 30202), (Start: 42 @30250 has 4 MA's), (Start: 48 @30277 has 3 MA's), (Start: 68 @30337 has 1 MA's), (Start: 72 @30346 has 5 MA's), (99, 30382), (134, 30451), (148, 30475), (191, 30523), (201, 30550), (208, 30580), (211, 30601), (213, 30604), (221, 30616), (275, 30802),

Gene: HUHilltop_45 Start: 31495, Stop: 31986, Start Num: 85

Candidate Starts for HUHilltop_45:

(62, 31456), (Start: 63 @31459 has 1 MA's), (Start: 82 @31492 has 2 MA's), (Start: 85 @31495 has 26 MA's), (Start: 101 @31513 has 1 MA's), (104, 31522), (195, 31687), (199, 31696), (202, 31702), (205, 31714), (211, 31750), (230, 31801), (236, 31840),

Gene: Hannaconda_43 Start: 36122, Stop: 36664, Start Num: 76

Candidate Starts for Hannaconda_43:

(Start: 45 @36035 has 1 MA's), (Start: 76 @36122 has 9 MA's), (Start: 114 @36185 has 1 MA's), (143, 36251), (159, 36275), (175, 36308), (198, 36341), (205, 36362), (206, 36365), (211, 36398), (233, 36476), (273, 36587), (292, 36635),

Gene: Hannaconda_141 Start: 76044, Stop: 76646, Start Num: 83

Candidate Starts for Hannaconda_141:

(Start: 83 @76044 has 14 MA's), (135, 76149), (144, 76170), (146, 76173), (162, 76197), (163, 76200), (166, 76206), (198, 76266), (220, 76335), (224, 76353), (233, 76404), (243, 76440), (278, 76536), (309, 76632),

Gene: Hlubikazi_31 Start: 27761, Stop: 28381, Start Num: 48

Candidate Starts for Hlubikazi_31:

(31, 27677), (Start: 42 @27734 has 4 MA's), (Start: 48 @27761 has 3 MA's), (Start: 76 @27836 has 9 MA's), (205, 28058), (211, 28094), (260, 28259), (280, 28304),

Gene: HokkenD_142 Start: 79202, Stop: 79804, Start Num: 83

Candidate Starts for HokkenD_142:

(52, 79133), (Start: 83 @79202 has 14 MA's), (135, 79307), (144, 79328), (146, 79331), (162, 79355), (163, 79358), (166, 79364), (209, 79466), (220, 79493), (224, 79511), (243, 79598), (309, 79790),

Gene: Holt_116 Start: 63658, Stop: 64158, Start Num: 85

Candidate Starts for Holt_116:

(58, 63604), (Start: 85 @63658 has 26 MA's), (Start: 114 @63712 has 1 MA's), (162, 63793), (165, 63796), (175, 63820), (198, 63853), (211, 63910), (258, 64072),

Gene: Hortense_58 Start: 41496, Stop: 42002, Start Num: 87

Candidate Starts for Hortense_58:

(26, 41271), (29, 41301), (Start: 87 @41496 has 5 MA's), (124, 41571), (131, 41583), (156, 41625), (205, 41712), (218, 41751),

Gene: Howe_58 Start: 41496, Stop: 42002, Start Num: 87

Candidate Starts for Howe_58:

(26, 41271), (29, 41301), (Start: 87 @41496 has 5 MA's), (124, 41571), (131, 41583), (156, 41625), (205, 41712), (218, 41751),

Gene: Hughesyang_111 Start: 64353, Stop: 64895, Start Num: 89

Candidate Starts for Hughesyang_111:

(33, 64191), (38, 64215), (Start: 66 @64320 has 1 MA's), (Start: 89 @64353 has 18 MA's), (Start: 101 @64371 has 1 MA's), (124, 64428), (161, 64491), (169, 64506), (175, 64524), (205, 64581), (207, 64587), (225, 64647), (249, 64740),

Gene: Hughesyang_148 Start: 79867, Stop: 80466, Start Num: 86

Candidate Starts for Hughesyang_148:

(Start: 86 @79867 has 10 MA's), (135, 79969), (144, 79990), (146, 79993), (181, 80056), (198, 80086), (202, 80095), (209, 80128), (224, 80173), (243, 80260), (267, 80320), (278, 80356), (309, 80452),

Gene: Icee_112 Start: 62768, Stop: 63268, Start Num: 85

Candidate Starts for Icee_112:

(58, 62714), (Start: 85 @62768 has 26 MA's), (Start: 114 @62822 has 1 MA's), (162, 62903), (165, 62906), (175, 62930), (198, 62963), (211, 63020), (258, 63182),

Gene: Island3_46 Start: 33137, Stop: 33628, Start Num: 85

Candidate Starts for Island3_46:

(46, 33044), (62, 33098), (Start: 63 @33101 has 1 MA's), (Start: 82 @33134 has 2 MA's), (Start: 85 @33137 has 26 MA's), (Start: 101 @33155 has 1 MA's), (104, 33164), (195, 33329), (199, 33338), (202, 33344), (205, 33356), (211, 33392), (230, 33443), (236, 33482),

Gene: JalFarm20_33 Start: 27847, Stop: 27341, Start Num: 80

Candidate Starts for JalFarm20_33:

(Start: 80 @27847 has 4 MA's), (Start: 101 @27832 has 1 MA's), (119, 27781), (124, 27772), (148, 27730), (159, 27715), (167, 27703), (168, 27700), (181, 27679), (205, 27640), (211, 27604), (236, 27514), (256, 27448), (269, 27418),

Gene: JeTaime_109 Start: 62868, Stop: 63383, Start Num: 85

Candidate Starts for JeTaime_109:

(58, 62814), (Start: 85 @62868 has 26 MA's), (Start: 114 @62922 has 1 MA's), (162, 63003), (165, 63006), (175, 63030), (198, 63063), (211, 63120), (258, 63282),

Gene: Jesabah_60 Start: 53289, Stop: 52765, Start Num: 94

Candidate Starts for Jesabah_60:

(55, 53358), (Start: 80 @53304 has 4 MA's), (Start: 94 @53289 has 6 MA's), (Start: 98 @53280 has 6 MA's), (127, 53214), (150, 53169), (164, 53145), (183, 53109), (188, 53103), (202, 53070), (215, 53016), (219, 53013), (248, 52896), (255, 52875), (282, 52800),

Gene: JoeDirt_64 Start: 45013, Stop: 45471, Start Num: 91

Candidate Starts for JoeDirt_64:

(Start: 91 @45013 has 5 MA's), (124, 45085), (192, 45175), (197, 45187), (205, 45208), (223, 45271), (230, 45298),

Gene: JonJames_26 Start: 9049, Stop: 9558, Start Num: 81

Candidate Starts for JonJames_26:

(Start: 81 @9049 has 2 MA's), (Start: 114 @9103 has 1 MA's), (138, 9160), (151, 9181), (154, 9184), (202, 9256), (205, 9268), (211, 9304), (234, 9385), (236, 9394), (268, 9472), (291, 9544),

Gene: Kabocha_97 Start: 70776, Stop: 71294, Start Num: 72

Candidate Starts for Kabocha_97:

(57, 70734), (60, 70749), (Start: 72 @70776 has 5 MA's), (148, 70899), (155, 70908), (179, 70932), (236, 71112),

Gene: Kalah2_105 Start: 63688, Stop: 64230, Start Num: 89

Candidate Starts for Kalah2_105:

(33, 63526), (38, 63550), (Start: 66 @63655 has 1 MA's), (Start: 89 @63688 has 18 MA's), (Start: 101 @63706 has 1 MA's), (124, 63763), (161, 63826), (169, 63841), (175, 63859), (205, 63916), (207, 63922), (225, 63982), (249, 64075),

Gene: Kalah2_140 Start: 78988, Stop: 79587, Start Num: 86

Candidate Starts for Kalah2_140:

(Start: 86 @78988 has 10 MA's), (135, 79090), (144, 79111), (146, 79114), (181, 79177), (198, 79207), (202, 79216), (209, 79249), (224, 79294), (243, 79381), (267, 79441), (278, 79477), (309, 79573),

Gene: KashFlow_40 Start: 35743, Stop: 36285, Start Num: 76

Candidate Starts for KashFlow_40:

(Start: 45 @35656 has 1 MA's), (Start: 76 @35743 has 9 MA's), (Start: 114 @35806 has 1 MA's), (143, 35872), (159, 35896), (175, 35929), (198, 35962), (205, 35983), (206, 35986), (211, 36019), (233,

36097), (273, 36208), (292, 36256),

Gene: KashFlow_148 Start: 78305, Stop: 78904, Start Num: 89

Candidate Starts for KashFlow_148:

(Start: 89 @78305 has 18 MA's), (130, 78395), (181, 78491), (203, 78536), (209, 78563), (224, 78608), (232, 78650), (233, 78659), (284, 78806), (289, 78821), (309, 78890),

Gene: Keitabear_36 Start: 34510, Stop: 33947, Start Num: 54

Candidate Starts for Keitabear_36:

(39, 34564), (Start: 54 @34510 has 2 MA's), (58, 34501), (Start: 80 @34453 has 4 MA's), (Start: 102 @34426 has 21 MA's), (166, 34306), (202, 34243), (205, 34231), (263, 34024),

Gene: Kimchi_115 Start: 63385, Stop: 63885, Start Num: 85

Candidate Starts for Kimchi_115:

(58, 63331), (Start: 85 @63385 has 26 MA's), (Start: 114 @63439 has 1 MA's), (162, 63520), (165, 63523), (175, 63547), (198, 63580), (211, 63637), (258, 63799),

Gene: KingMidas_32 Start: 28828, Stop: 29370, Start Num: 76

Candidate Starts for KingMidas_32:

(Start: 76 @28828 has 9 MA's), (141, 28942), (211, 29095), (233, 29173), (236, 29185),

Gene: KingTut_52 Start: 48894, Stop: 48379, Start Num: 98

Candidate Starts for KingTut_52:

(55, 48972), (Start: 80 @48918 has 4 MA's), (Start: 94 @48903 has 6 MA's), (Start: 98 @48894 has 6 MA's), (127, 48828), (150, 48783), (164, 48759), (183, 48723), (188, 48717), (202, 48684), (215, 48630), (219, 48627), (248, 48510), (255, 48489), (282, 48414),

Gene: Klein_147 Start: 77536, Stop: 78138, Start Num: 83

Candidate Starts for Klein_147:

(52, 77467), (Start: 83 @77536 has 14 MA's), (135, 77641), (144, 77662), (146, 77665), (162, 77689), (163, 77692), (166, 77698), (209, 77800), (220, 77827), (224, 77845), (243, 77932), (309, 78124),

Gene: Kuwabara_68 Start: 41993, Stop: 42493, Start Num: 81

Candidate Starts for Kuwabara_68:

(Start: 81 @41993 has 2 MA's), (168, 42122), (211, 42230), (245, 42350),

Gene: LeeroyJenkins_114 Start: 56842, Stop: 56381, Start Num: 103

Candidate Starts for LeeroyJenkins_114:

(Start: 103 @56842 has 4 MA's), (173, 56713), (226, 56590),

Gene: LeeroyJenkins_94 Start: 49860, Stop: 49351, Start Num: 89

Candidate Starts for LeeroyJenkins_94:

(Start: 89 @49860 has 18 MA's), (177, 49689), (183, 49683), (201, 49653), (214, 49599), (230, 49551),

Gene: LeiMonet_62 Start: 52626, Stop: 52111, Start Num: 98

Candidate Starts for LeiMonet_62:

(55, 52704), (Start: 80 @52650 has 4 MA's), (Start: 94 @52635 has 6 MA's), (Start: 98 @52626 has 6 MA's), (127, 52560), (150, 52515), (164, 52491), (183, 52455), (188, 52449), (202, 52416), (215, 52362), (219, 52359), (248, 52242), (255, 52221), (282, 52146),

Gene: Lennon_36 Start: 34213, Stop: 33740, Start Num: 102

Candidate Starts for Lennon_36:

(39, 34351), (Start: 54 @34297 has 2 MA's), (Start: 80 @34240 has 4 MA's), (Start: 102 @34213 has 21 MA's), (148, 34114), (177, 34072), (180, 34069), (202, 34033), (218, 33976), (225, 33952), (235, 33895),

Gene: Leozinho_32 Start: 27392, Stop: 27934, Start Num: 76

Candidate Starts for Leozinho_32:

(Start: 76 @27392 has 9 MA's), (141, 27506), (211, 27659), (233, 27737), (236, 27749),

Gene: Lilas_67 Start: 47987, Stop: 48406, Start Num: 116

Candidate Starts for Lilas_67:

(23, 47699), (Start: 49 @47861 has 2 MA's), (Start: 77 @47924 has 1 MA's), (Start: 91 @47939 has 5 MA's), (Start: 100 @47948 has 1 MA's), (Start: 116 @47987 has 4 MA's), (120, 47999), (139, 48029), (199, 48128), (202, 48134), (236, 48272),

Gene: LittleE_112 Start: 62894, Stop: 63436, Start Num: 89

Candidate Starts for LittleE_112:

(Start: 89 @62894 has 18 MA's), (Start: 101 @62912 has 1 MA's), (161, 63032), (169, 63047), (175, 63065), (205, 63122), (207, 63128), (225, 63188), (249, 63281), (300, 63422),

Gene: LittleE_150 Start: 78544, Stop: 79146, Start Num: 83

Candidate Starts for LittleE_150:

(Start: 83 @78544 has 14 MA's), (153, 78682), (162, 78694), (181, 78736), (199, 78769), (209, 78808), (214, 78829), (233, 78904), (239, 78934), (309, 79132),

Gene: Lopsy_58 Start: 51828, Stop: 51313, Start Num: 98

Candidate Starts for Lopsy_58:

(55, 51906), (Start: 80 @51852 has 4 MA's), (Start: 94 @51837 has 6 MA's), (Start: 98 @51828 has 6 MA's), (127, 51762), (150, 51717), (164, 51693), (183, 51657), (188, 51651), (202, 51618), (215, 51564), (219, 51561), (248, 51444), (255, 51423), (282, 51348),

Gene: LordFarquaad_67 Start: 43212, Stop: 43631, Start Num: 116

Candidate Starts for LordFarquaad_67:

(Start: 49 @43086 has 2 MA's), (64, 43128), (Start: 77 @43149 has 1 MA's), (Start: 100 @43173 has 5 MA's), (Start: 116 @43212 has 4 MA's), (120, 43224), (139, 43254), (202, 43359), (236, 43497),

Gene: LostAndPhound_60 Start: 52723, Stop: 52199, Start Num: 94

Candidate Starts for LostAndPhound_60:

(55, 52792), (Start: 80 @52738 has 4 MA's), (Start: 94 @52723 has 6 MA's), (Start: 98 @52714 has 6 MA's), (127, 52648), (150, 52603), (164, 52579), (183, 52543), (188, 52537), (202, 52504), (215, 52450), (219, 52447), (248, 52330), (255, 52309), (282, 52234),

Gene: Love_39 Start: 33996, Stop: 33523, Start Num: 102

Candidate Starts for Love_39:

(39, 34134), (Start: 54 @34080 has 2 MA's), (58, 34071), (Start: 80 @34023 has 4 MA's), (Start: 102 @33996 has 21 MA's), (148, 33897), (177, 33855), (180, 33852), (202, 33816), (218, 33759), (226, 33726), (235, 33678),

Gene: LunaBlu_33 Start: 28027, Stop: 28524, Start Num: 76

Candidate Starts for LunaBlu_33:

(Start: 42 @27925 has 4 MA's), (Start: 76 @28027 has 9 MA's), (205, 28249), (211, 28285), (260, 28450), (280, 28495),

Gene: Lysidious_60 Start: 40309, Stop: 40836, Start Num: 89

Candidate Starts for Lysidious_60:

(Start: 89 @40309 has 18 MA's), (Start: 103 @40330 has 4 MA's), (198, 40510),

Gene: Lysidious_17 Start: 10274, Stop: 10777, Start Num: 85

Candidate Starts for Lysidious_17:

(Start: 85 @10274 has 26 MA's), (130, 10364), (144, 10388), (204, 10493), (206, 10499), (211, 10532), (218, 10538), (241, 10643),

Gene: Mandlovu_31 Start: 27703, Stop: 28323, Start Num: 48

Candidate Starts for Mandlovu_31:

(31, 27619), (Start: 42 @27676 has 4 MA's), (Start: 48 @27703 has 3 MA's), (Start: 76 @27778 has 9 MA's), (205, 28000), (211, 28036), (260, 28201), (280, 28246),

Gene: Maravista_65 Start: 42918, Stop: 43388, Start Num: 102

Candidate Starts for Maravista_65:

(Start: 102 @42918 has 21 MA's), (168, 43035), (211, 43143), (245, 43263),

Gene: Marshmallow_109 Start: 63582, Stop: 64082, Start Num: 85

Candidate Starts for Marshmallow_109:

(Start: 85 @63582 has 26 MA's), (Start: 114 @63636 has 1 MA's), (162, 63717), (165, 63720), (175, 63744), (198, 63777), (211, 63834), (258, 63996),

Gene: Matalotodo_59 Start: 52707, Stop: 52192, Start Num: 98

Candidate Starts for Matalotodo_59:

(55, 52785), (Start: 80 @52731 has 4 MA's), (Start: 94 @52716 has 6 MA's), (Start: 98 @52707 has 6 MA's), (127, 52641), (150, 52596), (164, 52572), (183, 52536), (188, 52530), (202, 52497), (215, 52443), (219, 52440), (248, 52323), (255, 52302), (282, 52227),

Gene: McKinley_38 Start: 34022, Stop: 33549, Start Num: 102

Candidate Starts for McKinley_38:

(39, 34160), (Start: 54 @34106 has 2 MA's), (58, 34097), (Start: 80 @34049 has 4 MA's), (Start: 102 @34022 has 21 MA's), (148, 33923), (177, 33881), (180, 33878), (202, 33842), (218, 33785), (235, 33704),

Gene: Mellie_57 Start: 38319, Stop: 38846, Start Num: 89

Candidate Starts for Mellie_57:

(Start: 89 @38319 has 18 MA's), (Start: 103 @38340 has 4 MA's), (198, 38520), (280, 38784),

Gene: Mesmerelda_61 Start: 52711, Stop: 52196, Start Num: 98

Candidate Starts for Mesmerelda_61:

(55, 52789), (Start: 80 @52735 has 4 MA's), (Start: 94 @52720 has 6 MA's), (Start: 98 @52711 has 6 MA's), (127, 52645), (150, 52600), (164, 52576), (183, 52540), (188, 52534), (202, 52501), (215, 52447), (219, 52444), (248, 52327), (255, 52306), (282, 52231),

Gene: Minerva_162 Start: 85665, Stop: 86177, Start Num: 77

Candidate Starts for Minerva_162:

(Start: 77 @85665 has 1 MA's), (Start: 79 @85668 has 1 MA's), (104, 85701), (124, 85752), (144, 85788), (198, 85878), (202, 85887), (205, 85899), (206, 85902), (214, 85935), (225, 85965), (240, 86046), (276, 86139), (285, 86163),

Gene: Minerva_148 Start: 78849, Stop: 79448, Start Num: 86

Candidate Starts for Minerva_148:

(Start: 86 @78849 has 10 MA's), (135, 78951), (144, 78972), (146, 78975), (181, 79038), (198, 79068), (202, 79077), (209, 79110), (224, 79155), (243, 79242), (267, 79302), (278, 79338), (309, 79434),

Gene: MinionDave_33 Start: 28083, Stop: 28682, Start Num: 42

Candidate Starts for MinionDave_33:

(Start: 42 @28083 has 4 MA's), (Start: 76 @28185 has 9 MA's), (205, 28407), (211, 28443), (260, 28608), (280, 28653),

Gene: ModicumRichard_20 Start: 18713, Stop: 18225, Start Num: 102

Candidate Starts for ModicumRichard_20:

(5, 19316), (8, 19235), (10, 19211), (12, 19175), (13, 19145), (14, 19130), (21, 18977), (40, 18863), (51, 18806), (53, 18797), (56, 18794), (Start: 102 @18713 has 21 MA's), (140, 18629), (159, 18605), (192, 18560), (202, 18533), (205, 18521), (207, 18515), (235, 18395),

Gene: Mollymur_102 Start: 68397, Stop: 68978, Start Num: 92

Candidate Starts for Mollymur_102:

(19, 68076), (30, 68211), (Start: 92 @68397 has 7 MA's), (148, 68514), (166, 68541), (177, 68565), (210, 68646), (237, 68757), (281, 68886), (290, 68916), (294, 68922),

Gene: Morrissey_46 Start: 35134, Stop: 34631, Start Num: 100

Candidate Starts for Morrissey_46:

(4, 35755), (6, 35731), (7, 35701), (9, 35656), (11, 35611), (18, 35482), (37, 35293), (96, 35143), (Start: 100 @35134 has 1 MA's), (Start: 116 @35095 has 4 MA's), (Start: 118 @35086 has 1 MA's), (137, 35047), (193, 34954), (202, 34927), (204, 34918), (205, 34915), (206, 34912), (211, 34879),

Gene: Mova_51 Start: 35948, Stop: 36499, Start Num: 75

Candidate Starts for Mova_51:

(Start: 75 @35948 has 3 MA's), (78, 35951), (130, 36041), (156, 36083), (194, 36143), (211, 36209), (228, 36251), (236, 36299),

Gene: MulchSalad_28 Start: 23891, Stop: 24409, Start Num: 69

Candidate Starts for MulchSalad_28:

(69, 23891), (119, 23975), (173, 24071), (181, 24077), (205, 24119), (207, 24125), (211, 24155),

Gene: Mutaforma13_54 Start: 38739, Stop: 39290, Start Num: 75

Candidate Starts for Mutaforma13_54:

(Start: 75 @38739 has 3 MA's), (78, 38742), (130, 38832), (156, 38874), (194, 38934), (211, 39000), (228, 39042), (236, 39090),

Gene: Nekros_146 Start: 78699, Stop: 79298, Start Num: 89

Candidate Starts for Nekros_146:

(Start: 89 @78699 has 18 MA's), (130, 78789), (181, 78885), (203, 78930), (209, 78957), (224, 79002), (232, 79044), (233, 79053), (284, 79200), (289, 79215), (309, 79284),

Gene: Nimrod_111 Start: 63730, Stop: 64230, Start Num: 85

Candidate Starts for Nimrod_111:

(58, 63676), (Start: 85 @63730 has 26 MA's), (Start: 114 @63784 has 1 MA's), (162, 63865), (165, 63868), (175, 63892), (198, 63925), (211, 63982), (258, 64144),

Gene: Nordenberg_30 Start: 32192, Stop: 31719, Start Num: 102

Candidate Starts for Nordenberg_30:

(39, 32330), (Start: 54 @32276 has 2 MA's), (58, 32267), (Start: 80 @32219 has 4 MA's), (Start: 102 @32192 has 21 MA's), (148, 32093), (177, 32051), (180, 32048), (202, 32012), (218, 31955), (226,

31922), (235, 31874),

Gene: Nova53_39 Start: 21310, Stop: 21888, Start Num: 95

Candidate Starts for Nova53_39:

(95, 21310), (158, 21442), (206, 21532), (212, 21565), (234, 21646), (242, 21679), (252, 21712), (257, 21730), (302, 21844), (307, 21859), (308, 21871),

Gene: ObLaDi_20 Start: 18692, Stop: 18204, Start Num: 102

Candidate Starts for ObLaDi_20:

(1, 19712), (2, 19706), (3, 19688), (5, 19295), (8, 19214), (10, 19190), (12, 19154), (13, 19124), (14, 19109), (21, 18956), (40, 18842), (51, 18785), (53, 18776), (56, 18773), (Start: 102 @18692 has 21 MA's), (140, 18608), (159, 18584), (192, 18539), (202, 18512), (205, 18500), (207, 18494), (235, 18374),

Gene: Omega_117 Start: 63909, Stop: 64451, Start Num: 89

Candidate Starts for Omega_117:

(Start: 66 @63876 has 1 MA's), (Start: 89 @63909 has 18 MA's), (Start: 101 @63927 has 1 MA's), (161, 64047), (169, 64062), (175, 64080), (205, 64137), (207, 64143), (225, 64203), (249, 64296), (300, 64437),

Gene: Omega_154 Start: 79628, Stop: 80230, Start Num: 83

Candidate Starts for Omega_154:

(Start: 83 @79628 has 14 MA's), (153, 79766), (162, 79778), (181, 79820), (199, 79853), (209, 79892), (214, 79913), (233, 79988), (239, 80018), (309, 80216),

Gene: Omega_51 Start: 42659, Stop: 43288, Start Num: 45

Candidate Starts for Omega_51:

(Start: 45 @42659 has 1 MA's), (Start: 76 @42746 has 9 MA's), (Start: 114 @42809 has 1 MA's), (143, 42875), (159, 42899), (175, 42932), (198, 42965), (205, 42986), (206, 42989), (211, 43022), (233, 43100), (273, 43211), (292, 43259),

Gene: Optimus_141 Start: 76720, Stop: 77322, Start Num: 83

Candidate Starts for Optimus_141:

(52, 76651), (Start: 83 @76720 has 14 MA's), (135, 76825), (144, 76846), (146, 76849), (162, 76873), (163, 76876), (166, 76882), (209, 76984), (220, 77011), (224, 77029), (243, 77116), (309, 77308),

Gene: Orfeu_58 Start: 52711, Stop: 52187, Start Num: 94

Candidate Starts for Orfeu_58:

(55, 52780), (Start: 80 @52726 has 4 MA's), (Start: 94 @52711 has 6 MA's), (Start: 98 @52702 has 6 MA's), (127, 52636), (150, 52591), (164, 52567), (183, 52531), (188, 52525), (202, 52492), (215, 52438), (219, 52435), (248, 52318), (255, 52297), (282, 52222),

Gene: Paries_38 Start: 33658, Stop: 33185, Start Num: 102

Candidate Starts for Paries_38:

(32, 33820), (39, 33796), (Start: 54 @33742 has 2 MA's), (58, 33733), (Start: 80 @33685 has 4 MA's), (Start: 102 @33658 has 21 MA's), (148, 33559), (177, 33517), (180, 33514), (202, 33478), (218, 33421), (226, 33388), (235, 33340),

Gene: Peregrin_232 Start: 114891, Stop: 115472, Start Num: 89

Candidate Starts for Peregrin_232:

(Start: 89 @114891 has 18 MA's), (Start: 114 @114942 has 1 MA's), (129, 114978), (145, 115002), (159, 115023), (182, 115062), (230, 115197), (261, 115323), (265, 115329),

Gene: Peregrin_178 Start: 94313, Stop: 94846, Start Num: 88

Candidate Starts for Peregrin_178:

(Start: 88 @94313 has 1 MA's), (125, 94391), (186, 94499), (207, 94553), (231, 94640), (233, 94661), (272, 94781),

Gene: Phineas_45 Start: 31827, Stop: 32321, Start Num: 82

Candidate Starts for Phineas_45:

(62, 31791), (Start: 63 @31794 has 1 MA's), (Start: 82 @31827 has 2 MA's), (Start: 85 @31830 has 26 MA's), (Start: 101 @31848 has 1 MA's), (104, 31857), (195, 32022), (199, 32031), (202, 32037), (205, 32049), (211, 32085), (230, 32136), (236, 32175),

Gene: Phoebus_113 Start: 65664, Stop: 66206, Start Num: 89

Candidate Starts for Phoebus_113:

(33, 65502), (38, 65526), (Start: 66 @65631 has 1 MA's), (Start: 89 @65664 has 18 MA's), (Start: 101 @65682 has 1 MA's), (124, 65739), (161, 65802), (169, 65817), (175, 65835), (205, 65892), (207, 65898), (225, 65958), (249, 66051),

Gene: Phoebus_149 Start: 81221, Stop: 81820, Start Num: 86

Candidate Starts for Phoebus_149:

(Start: 86 @81221 has 10 MA's), (135, 81323), (144, 81344), (146, 81347), (181, 81410), (198, 81440), (202, 81449), (209, 81482), (224, 81527), (243, 81614), (267, 81674), (278, 81710), (309, 81806),

Gene: Pipefish_29 Start: 27509, Stop: 27015, Start Num: 72

Candidate Starts for Pipefish_29:

(Start: 72 @27509 has 5 MA's), (186, 27344), (202, 27311), (213, 27260),

Gene: Pippy_62 Start: 40280, Stop: 40750, Start Num: 102

Candidate Starts for Pippy_62:

(Start: 102 @40280 has 21 MA's), (168, 40397), (211, 40505), (245, 40625),

Gene: Placalicious_60 Start: 53221, Stop: 52697, Start Num: 94

Candidate Starts for Placalicious_60:

(55, 53290), (Start: 80 @53236 has 4 MA's), (Start: 94 @53221 has 6 MA's), (Start: 98 @53212 has 6 MA's), (127, 53146), (150, 53101), (164, 53077), (183, 53041), (188, 53035), (202, 53002), (215, 52948), (219, 52945), (248, 52828), (255, 52807), (282, 52732),

Gene: Podrick_58 Start: 51964, Stop: 51449, Start Num: 98

Candidate Starts for Podrick_58:

(55, 52042), (Start: 80 @51988 has 4 MA's), (Start: 94 @51973 has 6 MA's), (Start: 98 @51964 has 6 MA's), (127, 51898), (150, 51853), (164, 51829), (183, 51793), (188, 51787), (202, 51754), (215, 51700), (219, 51697), (248, 51580), (255, 51559), (282, 51484),

Gene: Pochiewood_65 Start: 45021, Stop: 45479, Start Num: 91

Candidate Starts for Pochiewood_65:

(Start: 91 @45021 has 5 MA's), (124, 45093), (192, 45183), (197, 45195), (205, 45216), (223, 45279), (230, 45306),

Gene: Porcelain_108 Start: 60257, Stop: 60832, Start Num: 66

Candidate Starts for Porcelain_108:

(Start: 66 @60257 has 1 MA's), (Start: 89 @60290 has 18 MA's), (Start: 101 @60308 has 1 MA's), (124, 60365), (161, 60428), (169, 60443), (175, 60461), (205, 60518), (207, 60524), (225, 60584), (249, 60677),

Gene: Porky_109 Start: 62562, Stop: 63008, Start Num: 114

Candidate Starts for Porky_109:

(58, 62454), (Start: 85 @62508 has 26 MA's), (Start: 114 @62562 has 1 MA's), (162, 62643), (165, 62646), (175, 62670), (198, 62703), (211, 62760), (258, 62922),

Gene: Pound_50 Start: 43906, Stop: 44415, Start Num: 103

Candidate Starts for Pound_50:

(47, 43795), (Start: 72 @43864 has 5 MA's), (Start: 87 @43882 has 5 MA's), (Start: 103 @43906 has 4 MA's), (130, 43972), (161, 44026), (185, 44071), (211, 44158), (233, 44236), (236, 44248), (298, 44401),

Gene: Pygmy_47 Start: 33294, Stop: 33785, Start Num: 85

Candidate Starts for Pygmy_47:

(62, 33255), (Start: 63 @33258 has 1 MA's), (Start: 82 @33291 has 2 MA's), (Start: 85 @33294 has 26 MA's), (Start: 101 @33312 has 1 MA's), (104, 33321), (195, 33486), (199, 33495), (202, 33501), (205, 33513), (211, 33549), (230, 33600), (236, 33639),

Gene: Ramsey_33 Start: 27746, Stop: 28345, Start Num: 42

Candidate Starts for Ramsey_33:

(Start: 42 @27746 has 4 MA's), (Start: 76 @27848 has 9 MA's), (205, 28070), (211, 28106), (260, 28271), (280, 28316),

Gene: RedWattleHog_22 Start: 25760, Stop: 26308, Start Num: 82

Candidate Starts for RedWattleHog_22:

(69, 25739), (Start: 82 @25760 has 2 MA's), (149, 25880), (228, 26048), (230, 26057), (234, 26087), (236, 26096), (274, 26222),

Gene: RedWattleHog_85 Start: 77917, Stop: 78504, Start Num: 85

Candidate Starts for RedWattleHog_85:

(Start: 85 @77917 has 26 MA's), (119, 77989), (143, 78037), (146, 78043), (171, 78091), (174, 78100), (176, 78103), (189, 78112), (200, 78142), (206, 78160), (211, 78193), (229, 78238), (235, 78280), (253, 78340), (303, 78484),

Gene: RedWattleHog_100 Start: 85618, Stop: 86124, Start Num: 71

Candidate Starts for RedWattleHog_100:

(62, 85600), (Start: 71 @85618 has 1 MA's), (Start: 114 @85687 has 1 MA's), (128, 85723), (130, 85726), (132, 85729), (157, 85768), (203, 85846), (205, 85852), (236, 85981), (260, 86056),

Gene: Rofo_36 Start: 33056, Stop: 32583, Start Num: 102

Candidate Starts for Rofo_36:

(39, 33194), (Start: 54 @33140 has 2 MA's), (58, 33131), (Start: 80 @33083 has 4 MA's), (Start: 102 @33056 has 21 MA's), (148, 32957), (177, 32915), (180, 32912), (202, 32876), (218, 32819), (226, 32786), (235, 32738),

Gene: Rose5_65 Start: 45033, Stop: 45491, Start Num: 91

Candidate Starts for Rose5_65:

(Start: 91 @45033 has 5 MA's), (124, 45105), (192, 45195), (197, 45207), (205, 45228), (223, 45291), (230, 45318),

Gene: Saguaro_52 Start: 46118, Stop: 45648, Start Num: 90

Candidate Starts for Saguaro_52:

(58, 46169), (Start: 90 @46118 has 4 MA's), (Start: 103 @46097 has 4 MA's), (Start: 114 @46070 has 1 MA's), (119, 46052), (124, 46043), (130, 46031), (155, 45992), (205, 45905), (233, 45791), (247,

45746),

Gene: Sassafras_31 Start: 27690, Stop: 28187, Start Num: 76

Candidate Starts for Sassafras_31:

(Start: 42 @27588 has 4 MA's), (Start: 76 @27690 has 9 MA's), (205, 27912), (211, 27948), (260, 28113), (280, 28158),

Gene: Schomber_94 Start: 69164, Stop: 69682, Start Num: 72

Candidate Starts for Schomber_94:

(57, 69122), (60, 69137), (Start: 72 @69164 has 5 MA's), (148, 69287), (155, 69296), (179, 69320), (236, 69500),

Gene: ScoobyDoobyDoo_184 Start: 103006, Stop: 103509, Start Num: 118

Candidate Starts for ScoobyDoobyDoo_184:

(Start: 101 @102958 has 1 MA's), (107, 102973), (Start: 112 @102985 has 1 MA's), (115, 102991), (Start: 118 @103006 has 1 MA's), (176, 103123), (205, 103174), (208, 103189), (236, 103300), (246, 103333), (250, 103342), (253, 103357), (271, 103399), (291, 103462), (301, 103489),

Gene: Sedona_36 Start: 34162, Stop: 33689, Start Num: 102

Candidate Starts for Sedona_36:

(39, 34300), (Start: 54 @34246 has 2 MA's), (58, 34237), (Start: 80 @34189 has 4 MA's), (Start: 102 @34162 has 21 MA's), (148, 34063), (177, 34021), (180, 34018), (202, 33982), (218, 33925), (226, 33892), (235, 33844),

Gene: Shaboozey_39 Start: 35483, Stop: 36025, Start Num: 76

Candidate Starts for Shaboozey_39:

(Start: 45 @35396 has 1 MA's), (Start: 76 @35483 has 9 MA's), (Start: 114 @35546 has 1 MA's), (143, 35612), (159, 35636), (175, 35669), (198, 35702), (205, 35723), (206, 35726), (211, 35759), (233, 35837), (273, 35948), (292, 35996),

Gene: Shaboozey_158 Start: 83054, Stop: 83566, Start Num: 77

Candidate Starts for Shaboozey_158:

(Start: 77 @83054 has 1 MA's), (Start: 79 @83057 has 1 MA's), (104, 83090), (124, 83141), (144, 83177), (198, 83267), (202, 83276), (205, 83288), (214, 83324), (225, 83354), (240, 83435), (276, 83528), (285, 83552),

Gene: Shipwreck_47 Start: 33269, Stop: 33760, Start Num: 85

Candidate Starts for Shipwreck_47:

(62, 33230), (Start: 63 @33233 has 1 MA's), (Start: 82 @33266 has 2 MA's), (Start: 85 @33269 has 26 MA's), (Start: 101 @33287 has 1 MA's), (104, 33296), (195, 33461), (199, 33470), (202, 33476), (205, 33488), (211, 33524), (230, 33575), (236, 33614),

Gene: Shlim410_56 Start: 41496, Stop: 42002, Start Num: 87

Candidate Starts for Shlim410_56:

(26, 41271), (29, 41301), (Start: 87 @41496 has 5 MA's), (124, 41571), (131, 41583), (156, 41625), (205, 41712), (218, 41751),

Gene: Sitar_36 Start: 34297, Stop: 33740, Start Num: 54

Candidate Starts for Sitar_36:

(39, 34351), (Start: 54 @34297 has 2 MA's), (Start: 80 @34240 has 4 MA's), (Start: 102 @34213 has 21 MA's), (148, 34114), (177, 34072), (180, 34069), (202, 34033), (218, 33976), (225, 33952), (235, 33895),

Gene: SoilAssassin_64 Start: 43104, Stop: 43649, Start Num: 49
Candidate Starts for SoilAssassin_64:
(Start: 49 @43104 has 2 MA's), (64, 43146), (Start: 77 @43167 has 1 MA's), (Start: 100 @43191 has 1 MA's), (Start: 116 @43230 has 4 MA's), (120, 43242), (139, 43272), (202, 43377), (236, 43515),

Gene: SpeedDemon_1040 Start: 70108, Stop: 70686, Start Num: 92
Candidate Starts for SpeedDemon_1040:
(19, 69790), (41, 69976), (Start: 92 @70108 has 7 MA's), (Start: 114 @70156 has 1 MA's), (119, 70174), (128, 70192), (148, 70225), (205, 70327), (220, 70378), (244, 70480), (286, 70606),

Gene: Stank_113 Start: 63457, Stop: 63957, Start Num: 85
Candidate Starts for Stank_113:
(58, 63403), (Start: 85 @63457 has 26 MA's), (Start: 114 @63511 has 1 MA's), (162, 63592), (165, 63595), (175, 63619), (198, 63652), (211, 63709), (258, 63871),

Gene: Starcevich_34 Start: 27605, Stop: 27099, Start Num: 80
Candidate Starts for Starcevich_34:
(Start: 80 @27605 has 4 MA's), (Start: 101 @27590 has 1 MA's), (119, 27539), (124, 27530), (148, 27488), (159, 27473), (167, 27461), (168, 27458), (181, 27437), (205, 27398), (211, 27362), (236, 27272), (256, 27206), (269, 27176),

Gene: Stickynote_47 Start: 43021, Stop: 42431, Start Num: 76
Candidate Starts for Stickynote_47:
(35, 43153), (36, 43150), (Start: 76 @43021 has 9 MA's), (108, 42973), (121, 42934), (136, 42910), (138, 42907), (212, 42763), (233, 42685), (240, 42652), (277, 42544), (311, 42439),

Gene: Stormageddon_82 Start: 77898, Stop: 78485, Start Num: 85
Candidate Starts for Stormageddon_82:
(Start: 85 @77898 has 26 MA's), (119, 77970), (143, 78018), (146, 78024), (171, 78072), (174, 78081), (176, 78084), (189, 78093), (200, 78123), (206, 78141), (211, 78174), (229, 78219), (235, 78261), (253, 78321), (303, 78465),

Gene: Strokeseat_31 Start: 27760, Stop: 28380, Start Num: 48
Candidate Starts for Strokeseat_31:
(31, 27676), (Start: 42 @27733 has 4 MA's), (Start: 48 @27760 has 3 MA's), (Start: 76 @27835 has 9 MA's), (205, 28057), (211, 28093), (260, 28258), (280, 28303),

Gene: Superphikiman_145 Start: 75577, Stop: 76179, Start Num: 83
Candidate Starts for Superphikiman_145:
(Start: 83 @75577 has 14 MA's), (135, 75682), (144, 75703), (146, 75706), (162, 75730), (163, 75733), (166, 75739), (198, 75799), (220, 75868), (224, 75886), (233, 75937), (243, 75973), (278, 76069), (309, 76165),

Gene: TBrady12_114 Start: 62894, Stop: 63394, Start Num: 85
Candidate Starts for TBrady12_114:
(58, 62840), (Start: 85 @62894 has 26 MA's), (Start: 114 @62948 has 1 MA's), (162, 63029), (165, 63032), (175, 63056), (198, 63089), (211, 63146), (258, 63308),

Gene: Tangent_36 Start: 32578, Stop: 32105, Start Num: 102
Candidate Starts for Tangent_36:
(39, 32716), (Start: 54 @32662 has 2 MA's), (58, 32653), (Start: 80 @32605 has 4 MA's), (Start: 102 @32578 has 21 MA's), (148, 32479), (177, 32437), (180, 32434), (202, 32398), (218, 32341), (226, 32308), (235, 32260),

Gene: Teaspoon_111 Start: 63442, Stop: 63942, Start Num: 85

Candidate Starts for Teaspoon_111:

(58, 63388), (Start: 85 @63442 has 26 MA's), (Start: 114 @63496 has 1 MA's), (162, 63577), (165, 63580), (175, 63604), (198, 63637), (211, 63694), (258, 63856),

Gene: Thibault_95 Start: 58448, Stop: 58990, Start Num: 89

Candidate Starts for Thibault_95:

(Start: 89 @58448 has 18 MA's), (Start: 101 @58466 has 1 MA's), (161, 58586), (169, 58601), (175, 58619), (199, 58658), (205, 58676), (207, 58682), (225, 58742), (249, 58835), (300, 58976),

Gene: Thibault_132 Start: 76186, Stop: 76788, Start Num: 83

Candidate Starts for Thibault_132:

(Start: 83 @76186 has 14 MA's), (153, 76324), (162, 76336), (181, 76378), (203, 76423), (205, 76429), (214, 76471), (233, 76546), (239, 76576), (309, 76774),

Gene: ThreeRngTarjay_109 Start: 64920, Stop: 65462, Start Num: 89

Candidate Starts for ThreeRngTarjay_109:

(33, 64758), (38, 64782), (Start: 66 @64887 has 1 MA's), (Start: 89 @64920 has 18 MA's), (Start: 101 @64938 has 1 MA's), (124, 64995), (161, 65058), (169, 65073), (175, 65091), (205, 65148), (207, 65154), (225, 65214), (249, 65307),

Gene: ThreeRngTarjay_144 Start: 79812, Stop: 80411, Start Num: 86

Candidate Starts for ThreeRngTarjay_144:

(Start: 86 @79812 has 10 MA's), (135, 79914), (144, 79935), (146, 79938), (181, 80001), (198, 80031), (202, 80040), (209, 80073), (224, 80118), (243, 80205), (267, 80265), (278, 80301), (309, 80397),

Gene: Toni_59 Start: 52612, Stop: 52088, Start Num: 94

Candidate Starts for Toni_59:

(55, 52681), (Start: 80 @52627 has 4 MA's), (Start: 94 @52612 has 6 MA's), (Start: 98 @52603 has 6 MA's), (127, 52537), (150, 52492), (164, 52468), (183, 52432), (188, 52426), (202, 52393), (215, 52339), (219, 52336), (248, 52219), (255, 52198), (282, 52123),

Gene: Towmatter_93 Start: 63151, Stop: 63720, Start Num: 92

Candidate Starts for Towmatter_93:

(19, 62842), (28, 62953), (Start: 92 @63151 has 7 MA's), (148, 63268), (177, 63319), (205, 63373), (217, 63418), (255, 63562), (281, 63628),

Gene: Twinkle_57 Start: 42555, Stop: 43061, Start Num: 87

Candidate Starts for Twinkle_57:

(26, 42330), (29, 42360), (Start: 87 @42555 has 5 MA's), (124, 42630), (131, 42642), (156, 42684), (205, 42771), (218, 42810),

Gene: Twister6_58 Start: 42736, Stop: 43260, Start Num: 63

Candidate Starts for Twister6_58:

(Start: 63 @42736 has 1 MA's), (Start: 100 @42787 has 1 MA's), (109, 42805), (154, 42883), (202, 42964), (204, 42973), (238, 43114),

Gene: UBSmoodge_128 Start: 91385, Stop: 91951, Start Num: 68

Candidate Starts for UBSmoodge_128:

(Start: 68 @91385 has 1 MA's), (126, 91484), (137, 91508), (159, 91541), (172, 91571), (179, 91583), (198, 91616), (205, 91637), (206, 91640), (234, 91754), (236, 91763), (281, 91889),

Gene: UPIE_65 Start: 44559, Stop: 45017, Start Num: 91

Candidate Starts for UPIE_65:

(Start: 91 @44559 has 5 MA's), (124, 44631), (192, 44721), (197, 44733), (205, 44754), (223, 44817), (230, 44844),

Gene: Vivi2_38 Start: 33736, Stop: 33263, Start Num: 102

Candidate Starts for Vivi2_38:

(39, 33874), (Start: 54 @33820 has 2 MA's), (58, 33811), (Start: 80 @33763 has 4 MA's), (Start: 102 @33736 has 21 MA's), (148, 33637), (177, 33595), (180, 33592), (202, 33556), (218, 33499), (226, 33466), (235, 33418),

Gene: Wamburgexpress_65 Start: 44589, Stop: 45047, Start Num: 91

Candidate Starts for Wamburgexpress_65:

(Start: 91 @44589 has 5 MA's), (124, 44661), (192, 44751), (197, 44763), (205, 44784), (223, 44847), (230, 44874),

Gene: Wanda_148 Start: 77329, Stop: 77928, Start Num: 86

Candidate Starts for Wanda_148:

(Start: 86 @77329 has 10 MA's), (135, 77431), (144, 77452), (146, 77455), (181, 77518), (198, 77548), (202, 77557), (209, 77590), (224, 77635), (243, 77722), (267, 77782), (278, 77818), (309, 77914),

Gene: Wiggin_113 Start: 62887, Stop: 63387, Start Num: 85

Candidate Starts for Wiggin_113:

(Start: 85 @62887 has 26 MA's), (Start: 114 @62941 has 1 MA's), (162, 63022), (165, 63025), (175, 63049), (198, 63082), (211, 63139), (258, 63301),

Gene: WilliamBoone_144 Start: 75606, Stop: 76268, Start Num: 43

Candidate Starts for WilliamBoone_144:

(41, 75582), (Start: 43 @75606 has 1 MA's), (130, 75792), (170, 75861), (177, 75876), (202, 75918), (281, 76194), (305, 76260),

Gene: Xandras_110 Start: 62710, Stop: 63210, Start Num: 85

Candidate Starts for Xandras_110:

(58, 62656), (Start: 85 @62710 has 26 MA's), (Start: 114 @62764 has 1 MA's), (162, 62845), (165, 62848), (175, 62872), (198, 62905), (211, 62962), (258, 63124),

Gene: Xavia_53 Start: 39307, Stop: 39837, Start Num: 90

Candidate Starts for Xavia_53:

(Start: 90 @39307 has 4 MA's), (117, 39364), (119, 39373), (152, 39436), (155, 39439), (175, 39475), (177, 39478), (186, 39487), (189, 39490), (205, 39532), (230, 39619), (280, 39781),

Gene: Zelink_108 Start: 64885, Stop: 65409, Start Num: 101

Candidate Starts for Zelink_108:

(33, 64705), (38, 64729), (Start: 66 @64834 has 1 MA's), (Start: 89 @64867 has 18 MA's), (Start: 101 @64885 has 1 MA's), (124, 64942), (161, 65005), (169, 65020), (175, 65038), (205, 65095), (207, 65101), (225, 65161), (249, 65254),

Gene: Zelink_143 Start: 80141, Stop: 80740, Start Num: 86

Candidate Starts for Zelink_143:

(Start: 86 @80141 has 10 MA's), (135, 80243), (144, 80264), (146, 80267), (181, 80330), (198, 80360), (202, 80369), (209, 80402), (224, 80447), (243, 80534), (267, 80594), (278, 80630), (309, 80726),