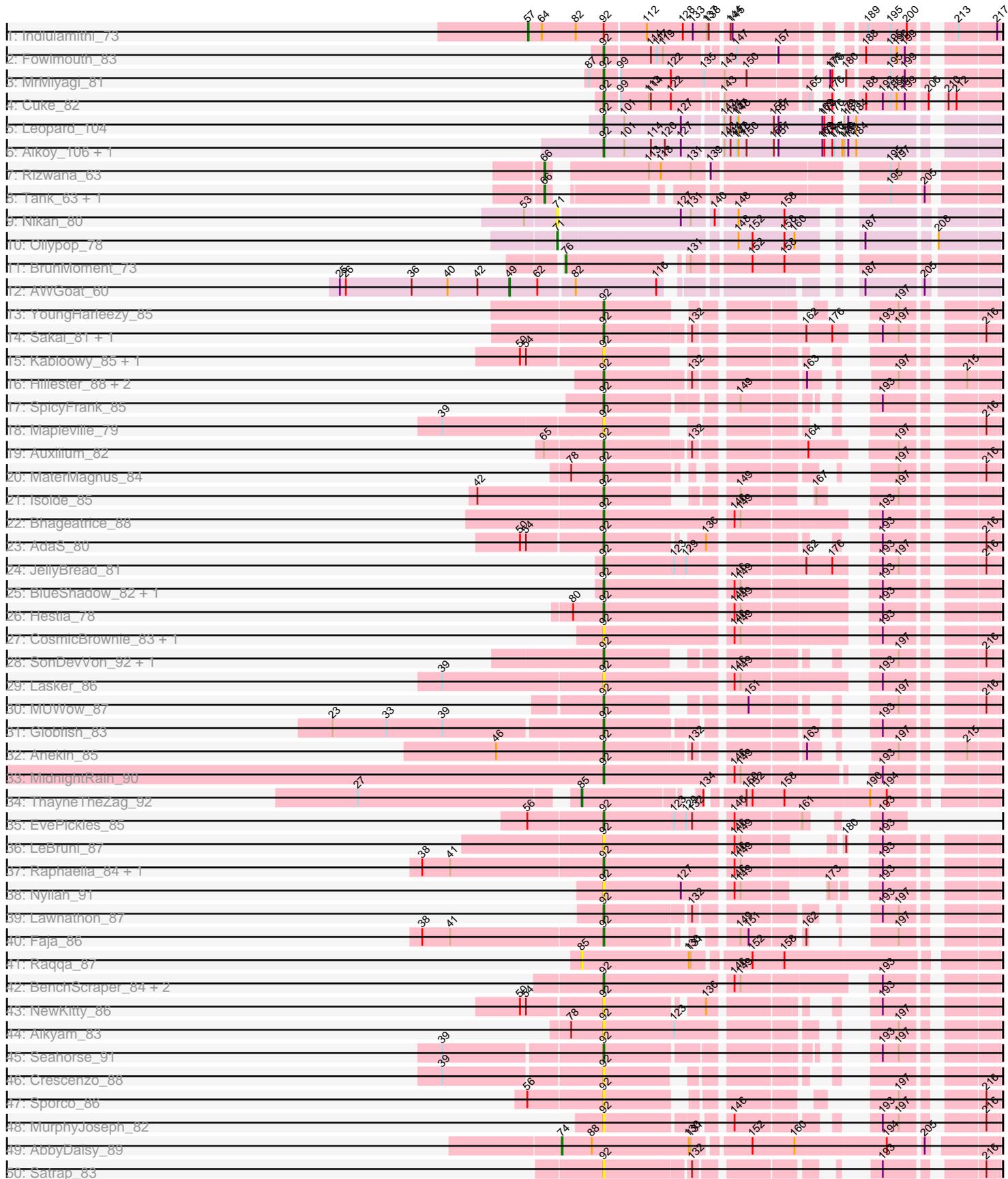
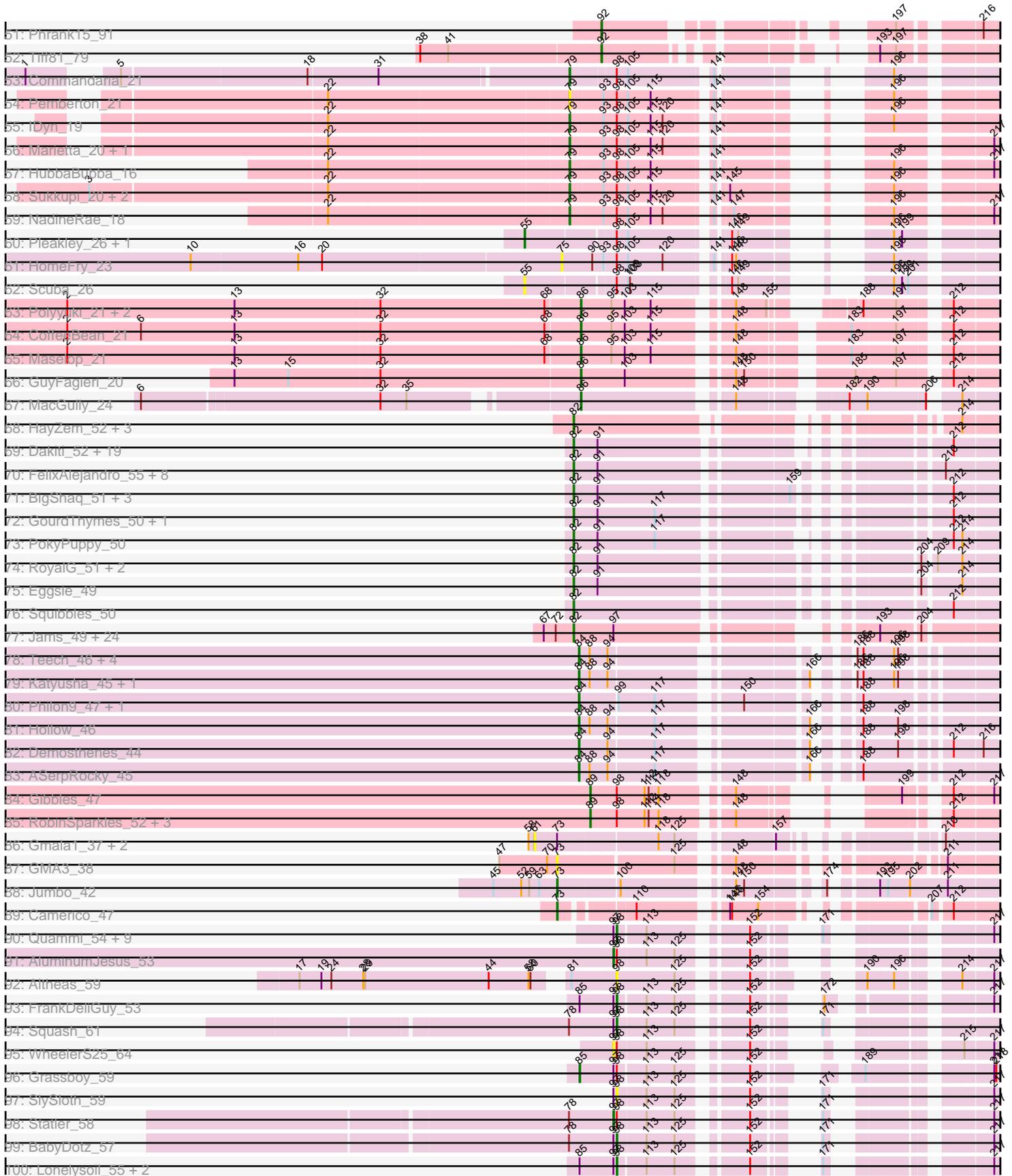


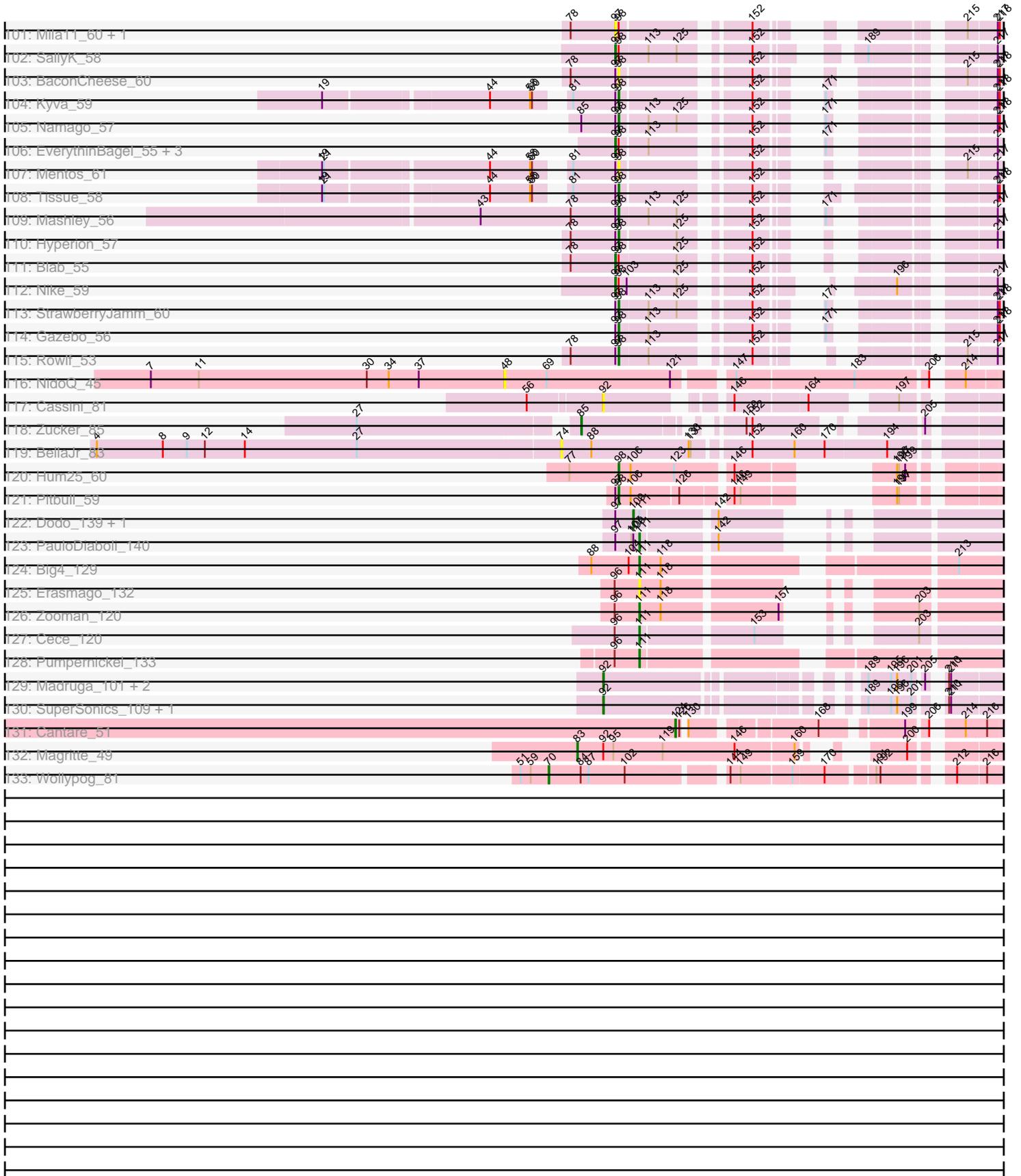
Pham 281962



Pham 281962



Pham 281962



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 281962 Report

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

Pham number 281962 has 241 members, 47 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_73
- Track 2 : Fowlmouth_83
- Track 3 : MrMiyagi_81
- Track 4 : Cuke_82
- Track 5 : Leopard_104
- Track 6 : Aikoy_106, Onyinye_105
- Track 7 : Rizwana_63
- Track 8 : Tank_63, Wilde_65
- Track 9 : Nikan_80
- Track 10 : Ollypop_78
- Track 11 : BruhMoment_73
- Track 12 : AWGoat_60
- Track 13 : YoungHarleezy_85
- Track 14 : Sakai_81, Gorpy_82
- Track 15 : Kabloowy_85, DarwinJr_89
- Track 16 : Hillester_88, RadFad_89, BasketStar_84
- Track 17 : SpicyFrank_85
- Track 18 : Mapleville_79
- Track 19 : Auxilium_82
- Track 20 : MaterMagnus_84
- Track 21 : Isolde_85
- Track 22 : Bhageatrice_88
- Track 23 : AdaS_80
- Track 24 : JellyBread_81
- Track 25 : BlueShadow_82, BillyTP_85
- Track 26 : Hestia_78
- Track 27 : CosmicBrownie_83, GumGum_91
- Track 28 : SonDevVon_92, CookieBear_83
- Track 29 : Lasker_86
- Track 30 : MUWow_87
- Track 31 : Globfish_83
- Track 32 : Anekin_85
- Track 33 : MidnightRain_90
- Track 34 : ThayneTheZag_92
- Track 35 : EvePickles_85
- Track 36 : LeBruni_87
- Track 37 : Raphaella_84, Vopal_85

- Track 38 : Nyilah_91
- Track 39 : Lawnathon_87
- Track 40 : Faja_86
- Track 41 : Raqqa_87
- Track 42 : BenchScraper_84, Windest_88, Richie_87
- Track 43 : NewKitty_86
- Track 44 : Aikyam_83
- Track 45 : Seahorse_91
- Track 46 : Crescenzo_88
- Track 47 : Sporco_86
- Track 48 : MurphyJoseph_82
- Track 49 : AbbyDaisy_89
- Track 50 : Satrap_83
- Track 51 : Phrank15_91
- Track 52 : Tiff81_79
- Track 53 : Commandaria_21
- Track 54 : Pemberton_21
- Track 55 : IDyn_19
- Track 56 : Marietta_20, WhoseManz_20
- Track 57 : HubbaBubba_16
- Track 58 : Sukkupi_20, BiPauneto_21, Yndexa_20
- Track 59 : NadineRae_18
- Track 60 : Pleakley_26, Fury_26
- Track 61 : HomeFry_23
- Track 62 : Scuba_26
- Track 63 : Polyyuki_21, Braxoaddie_21, Apiary_21
- Track 64 : CoffeeBean_21
- Track 65 : Maselop_21
- Track 66 : GuyFagieri_20
- Track 67 : MacGully_24
- Track 68 : HayZem_52, GTE7_41, GMA7_42, Amore2_53
- Track 69 : Dakiti_52, Lizzo_50, CathyBurgh_50, Adgers_52, Chelms_51, RemRem_51, Hotorobo_50, Barbochs_49, Flakey_50, Linetti_52, Breezic_50, BirksAndSocks_55, Gorko_50, Ekhein_51, John316_54, Monty_49, Sam12_50, Kelzog_52, Beaver_54, Exiguo_50
- Track 70 : FelixAlejandro_55, Msay19_55, Butterball_54, CinnamonToast_56, Jellybones_53, Boneham_54, BillyBobJr_56, Poland_55, Sombrero_51
- Track 71 : BigShaq_51, PierreThree_51, BenoitCattle_52, Crete_52
- Track 72 : GourdThymes_50, Worcestershire_51
- Track 73 : PokyPuppy_50
- Track 74 : RoyalG_51, Diabla_54, SteveFrench_50
- Track 75 : Eggsie_49
- Track 76 : Squibbles_50
- Track 77 : Jams_49, Anamika_49, Hail2Pitt_48, Charianelly_49, Harambe_49, Jormungandr_49, Shelley_49, GalacticEye_49, MrWormie_49, Luker_50, Kaseim_49, Newt_50, Damp_49, Sticker17_49, Nimi13_49, Teal_49, Hello_49, Berries_49, Neevie_49, Lahirium_49, Woes_49, Minos_50, Lidong_49, Bianmat_49, Guillaume_49
- Track 78 : Teech_46, Tredge_46, Niagara_45, Kvothe_45, Teatealatte_46
- Track 79 : Katyusha_45, Benczkowski14_45
- Track 80 : Philon9_47, Vitaenoi_47
- Track 81 : Hollow_46
- Track 82 : Demosthenes_44

- Track 83 : ASerpRocky_45
- Track 84 : Gibbles_47
- Track 85 : RobinSparkles_52, Orchid_48, Kampe_49, PatrickStar_49
- Track 86 : Gmala1_37, GordDuk1_37, GordTnk2_37
- Track 87 : GMA3_38
- Track 88 : Jumbo_42
- Track 89 : Camerico_47
- Track 90 : Quammi_54, Wheelie_56, Llemily_56, Sillytadpoles_57, DonaldDuck_56, Viceroy_55, Casend_57, Zhafia_59, Wayne3_58, Teehee_57
- Track 91 : AluminumJesus_53
- Track 92 : Altheas_59
- Track 93 : FrankDeliGuy_53
- Track 94 : Squash_61
- Track 95 : WheelerS25_64
- Track 96 : Grassboy_59
- Track 97 : SlySloth_59
- Track 98 : Statler_58
- Track 99 : BabyDotz_57
- Track 100 : Lonelysoil_55, Zagie_57, Judebell_58
- Track 101 : Mila11_60, MorillMayhem_58
- Track 102 : SallyK_58
- Track 103 : BaconCheese_60
- Track 104 : Kyva_59
- Track 105 : Namago_57
- Track 106 : EverythinBagel_55, Jehoshaphat_58, Rudy_54, Phabia_56
- Track 107 : Mentos_61
- Track 108 : Tissue_58
- Track 109 : Mashley_56
- Track 110 : Hyperion_57
- Track 111 : Blab_55
- Track 112 : Nike_59
- Track 113 : StrawberryJamm_60
- Track 114 : Gazebo_56
- Track 115 : Rowlf_53
- Track 116 : NidoQ_45
- Track 117 : Cassini_81
- Track 118 : Zucker_85
- Track 119 : BellaJr_83
- Track 120 : Hum25_60
- Track 121 : Pitbull_59
- Track 122 : Dodo_139, A3Wally_136
- Track 123 : PauloDiaboli_140
- Track 124 : Big4_129
- Track 125 : Erasmago_132
- Track 126 : Zooman_120
- Track 127 : Cece_120
- Track 128 : Pumpnickel_133
- Track 129 : Madrugua_101, Patience_103, Demikore_104
- Track 130 : SuperSonics_109, Labelle_102
- Track 131 : Cantare_51
- Track 132 : Magritte_49
- Track 133 : Wollypog_81

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

The start number called the most often in the published annotations is 82, it was called in 63 of the 194 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adgers_52, Amore2_53, Anamika_49, Barbochs_49, Beaver_54, BenoitCattle_52, Berries_49, Bianmat_49, BigShaq_51, BillyBobJr_56, BirksAndSocks_55, Boneham_54, Breezic_50, Butterball_54, CathyBurgh_50, Charianelly_49, Chelms_51, CinnamonToast_56, Crete_52, Dakiti_52, Damp_49, Diabla_54, Eggsie_49, Ekhein_51, Exiguo_50, FelixAlejandro_55, Flakey_50, GMA7_42, GTE7_41, GalacticEye_49, Gorko_50, GourdThymes_50, Guillaume_49, Hail2Pitt_48, Harambe_49, HayZem_52, Hello_49, Hotorobo_50, Jams_49, Jellybones_53, John316_54, Jormungandr_49, Kaseim_49, Kelzog_52, Lahirium_49, Lidong_49, Linetti_52, Lizzo_50, Luker_50, Minos_50, Monty_49, MrWormie_49, Msay19_55, Neoevie_49, Newt_50, Nimi13_49, PierreThree_51, PokyPuppy_50, Poland_55, RemRem_51, RoyalG_51, Sam12_50, Shelley_49, Sombrero_51, Squibbles_50, SteveFrench_50, Sticker17_49, Teal_49, Woes_49, Worcestershire_51,

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

- AWGoat_60, Indlulamithi_73,

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

- A3Wally_136, ASerpRocky_45, AbbyDaisy_89, AdaS_80, Aikoy_106, Aikyam_83, Altheas_59, AluminumJesus_53, Anekin_85, Apiary_21, Auxilium_82, BabyDotz_57, BaconCheese_60, BasketStar_84, BellaJr_83, BenchScraper_84, Benczkowski14_45, Bhageatrice_88, BiPauneto_21, Big4_129, BillyTP_85, Blab_55, BlueShadow_82, Braxoaddie_21, BruhMoment_73, Camerico_47, Cantare_51, Casend_57, Cassini_81, Cece_120, CoffeeBean_21, Commandaria_21, CookieBear_83, CosmicBrownie_83, Crescenzo_88, Cuke_82, DarwinJr_89, Demikore_104, Demosthenes_44, Dodo_139, DonaldDuck_56, Erasmago_132, EvePickles_85, EverythinBagel_55, Faja_86, Fowlmouth_83, FrankDeliGuy_53, Fury_26, GMA3_38, Gazebo_56, Gibbles_47, Globfish_83, Gmala1_37, GordDuk1_37, GordTnk2_37, Gorpy_82, Grassboy_59, GumGum_91, GuyFagieri_20, Hestia_78, Hillester_88, Hollow_46, HomeFry_23, HubbaBubba_16, Hum25_60, Hyperion_57, IDyn_19, Isolde_85, Jehoshaphat_58, JellyBread_81, Judebell_58, Jumbo_42, Kabloowy_85, Kampe_49, Katyusha_45, Kvothe_45, Kyva_59, Labelle_102, Lasker_86, Lawnathon_87, LeBruni_87, Leopard_104, Llemily_56, Lonelysoil_55, MUWow_87, MacGully_24, Madrugua_101, Magritte_49, Mapleville_79, Marietta_20, Maselop_21, Mashley_56, MaterMagnus_84, Mentos_61, MidnightRain_90, Mila11_60, MorillMayhem_58, MrMiyagi_81, MurphyJoseph_82, NadineRae_18, Namago_57, NewKitty_86, Niagara_45, NidoQ_45, Nikan_80, Nike_59, Nyilah_91, Ollypop_78, Onyinye_105, Orchid_48, Patience_103, PatrickStar_49, PauloDiaboli_140, Pemberton_21, Phabia_56, Philon9_47, Phrank15_91, Pitbull_59, Pleakley_26, Polyuyuki_21, Pumpernickel_133, Quammi_54, RadFad_89, Raphaella_84, Raqqa_87, Richie_87, Rizwana_63, RobinSparkles_52, Rowlf_53, Rudy_54, Sakai_81, SallyK_58, Satrap_83, Scuba_26, Seahorse_91, Sillytadpoles_57, SlySloth_59, SonDevVon_92, SpicyFrank_85, Sporco_86, Squash_61, Statler_58, StrawberryJamm_60, Sukkupi_20, SuperSonics_109,

Tank_63, Teatealatte_46, Teech_46, Teehee_57, ThayneTheZag_92, Tiff81_79, Tissue_58, Tredge_46, Viceroy_55, Vitaenoi_47, Vopal_85, Wayne3_58, WheelerS25_64, Wheelie_56, WhoseManz_20, Wilde_65, Windest_88, Wollypog_81, Yndexa_20, YoungHarleezy_85, Zagie_57, Zhafia_59, Zooman_120, Zucker_85,

Summary by start number:

Start 48:

- Found in 1 of 241 (0.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NidoQ_45 (FA),

Start 49:

- Found in 1 of 241 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_60 (AP4),

Start 55:

- Found in 3 of 241 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury_26 (CR5), Pleakley_26 (CR5), Scuba_26 (CR5),

Start 57:

- Found in 1 of 241 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi_73 (AC),

Start 61:

- Found in 3 of 241 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gmala1_37 (DF1), GordDuk1_37 (DF1), GordTnk2_37 (DF1),

Start 66:

- Found in 3 of 241 (1.2%) of genes in pham
- Manual Annotations of this start: 3 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rizwana_63 (AP1), Tank_63 (AP1), Wilde_65 (AP1),

Start 70:

- Found in 2 of 241 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Wollypog_81 (singleton),

Start 71:

- Found in 2 of 241 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nikan_80 (AP2), Ollypop_78 (AP2),

Start 73:

- Found in 6 of 241 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 194
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Camerico_47 (DF4), GMA3_38 (DF2), Jumbo_42 (DF3),

Start 74:

- Found in 2 of 241 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_89 (AY), BellaJr_83 (FN),

Start 75:

- Found in 1 of 241 (0.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HomeFry_23 (CR5),

Start 76:

- Found in 1 of 241 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BruhMoment_73 (AP3),

Start 79:

- Found in 10 of 241 (4.1%) of genes in pham
- Manual Annotations of this start: 9 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto_21 (CR4), Commandaria_21 (CR2), HubbaBubba_16 (CR4), IDyn_19 (CR4), Marietta_20 (CR4), NadineRae_18 (CR4), Pemberton_21 (CR4), Sukkupi_20 (CR4), WhoseManz_20 (CR4), Yndexa_20 (CR4),

Start 82:

- Found in 72 of 241 (29.9%) of genes in pham
- Manual Annotations of this start: 63 of 194
- Called 97.2% of time when present
- Phage (with cluster) where this start called: Adgers_52 (CS2), Amore2_53 (CS1), Anamika_49 (CS3), Barbochs_49 (CS2), Beaver_54 (CS2), BenoitCattle_52 (CS2), Berries_49 (CS3), Bianmat_49 (CS3), BigShaq_51 (CS2), BillyBobJr_56 (CS2), BirksAndSocks_55 (CS2), Boneham_54 (CS2), Breezic_50 (CS2), Butterball_54 (CS2), CathyBurgh_50 (CS2), Charianelly_49 (CS3), Chelms_51 (CS2), CinnamonToast_56 (CS2), Crete_52 (CS2), Dakiti_52 (CS2), Damp_49 (CS3), Diabla_54 (CS2), Eggsie_49 (CS2), Ekhein_51 (CS2), Exiguo_50 (CS2), FelixAlejandro_55 (CS2), Flakey_50 (CS2), GMA7_42 (CS1), GTE7_41 (CS1), GalacticEye_49 (CS3), Gorko_50 (CS2), GourdThymes_50 (CS2), Guillaume_49 (CS3), Hail2Pitt_48 (CS3), Harambe_49 (CS3), HayZem_52 (CS1), Hello_49 (CS3),

Hotorobo_50 (CS2), Jams_49 (CS3), Jellybones_53 (CS2), John316_54 (CS2), Jormungandr_49 (CS3), Kaseim_49 (CS3), Kelzog_52 (CS2), Lahirium_49 (CS3), Lidong_49 (CS3), Linetti_52 (CS2), Lizzo_50 (CS2), Luker_50 (CS3), Minos_50 (CS3), Monty_49 (CS2), MrWormie_49 (CS3), Msay19_55 (CS2), Neoevie_49 (CS3), Newt_50 (CS3), Nimi13_49 (CS3), PierreThree_51 (CS2), PokyPuppy_50 (CS2), Poland_55 (CS2), RemRem_51 (CS2), RoyalG_51 (CS2), Sam12_50 (CS2), Shelley_49 (CS3), Sombrero_51 (CS2), Squibbles_50 (CS2), SteveFrench_50 (CS2), Sticker17_49 (CS3), Teal_49 (CS3), Woes_49 (CS3), Worcestershire_51 (CS2),

Start 83:

- Found in 1 of 241 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Magritte_49 (singleton),

Start 84:

- Found in 13 of 241 (5.4%) of genes in pham
- Manual Annotations of this start: 12 of 194
- Called 92.3% of time when present
- Phage (with cluster) where this start called: ASerpRocky_45 (CS4), Benczkowski14_45 (CS4), Demosthenes_44 (CS4), Hollow_46 (CS4), Katyusha_45 (CS4), Kvothe_45 (CS4), Niagara_45 (CS4), Philon9_47 (CS4), Teatealatte_46 (CS4), Teech_46 (CS4), Tredge_46 (CS4), Vitaenoi_47 (CS4),

Start 85:

- Found in 9 of 241 (3.7%) of genes in pham
- Manual Annotations of this start: 3 of 194
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Grassboy_59 (EG), Raqqa_87 (AY), ThayneTheZag_92 (AY), Zucker_85 (FN),

Start 86:

- Found in 7 of 241 (2.9%) of genes in pham
- Manual Annotations of this start: 7 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary_21 (CR6), Braxoaddie_21 (CR6), CoffeeBean_21 (CR6), GuyFagieri_20 (CR6), MacGully_24 (CR7), Maselop_21 (CR6), Polyuyuki_21 (CR6),

Start 89:

- Found in 5 of 241 (2.1%) of genes in pham
- Manual Annotations of this start: 5 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gibbles_47 (CX), Kampe_49 (CX), Orchid_48 (CX), PatrickStar_49 (CX), RobinSparkles_52 (CX),

Start 92:

- Found in 61 of 241 (25.3%) of genes in pham
- Manual Annotations of this start: 39 of 194
- Called 96.7% of time when present
- Phage (with cluster) where this start called: AdaS_80 (AY), Aikoy_106 (AE), Aikyam_83 (AY), Anekin_85 (AY), Auxilium_82 (AY), BasketStar_84 (AY), BenchScraper_84 (AY), Bhageatrice_88 (AY), BillyTP_85 (AY), BlueShadow_82

(AY), Cassini_81 (FN), CookieBear_83 (AY), CosmicBrownie_83 (AY), Crescenzo_88 (AY), Cuke_82 (AC), DarwinJr_89 (AY), Demikore_104 (U), EvePickles_85 (AY), Faja_86 (AY), Fowlmouth_83 (AC), Globfish_83 (AY), Gorpy_82 (AY), GumGum_91 (AY), Hestia_78 (AY), Hillester_88 (AY), Isolde_85 (AY), JellyBread_81 (AY), Kabloowy_85 (AY), Labelle_102 (U), Lasker_86 (AY), Lawnathon_87 (AY), LeBruni_87 (AY), Leopard_104 (AE), MUWow_87 (AY), Madruga_101 (U), Mapleville_79 (AY), MaterMagnus_84 (AY), MidnightRain_90 (AY), MrMiyagi_81 (AC), MurphyJoseph_82 (AY), NewKitty_86 (AY), Nyilah_91 (AY), Onyinye_105 (AE), Patience_103 (U), Phrank15_91 (AY), RadFad_89 (AY), Raphaella_84 (AY), Richie_87 (AY), Sakai_81 (AY), Satrap_83 (AY), Seahorse_91 (AY), SonDevVon_92 (AY), SpicyFrank_85 (AY), Sporco_86 (AY), SuperSonics_109 (U), Tiff81_79 (AY), Vopal_85 (AY), Windest_88 (AY), YoungHarleezy_85 (AY),

Start 97:

- Found in 69 of 241 (28.6%) of genes in pham
- Manual Annotations of this start: 9 of 194
- Called 17.4% of time when present
- Phage (with cluster) where this start called: AluminumJesus_53 (EG), Blab_55 (EG), EverythinBagel_55 (EG), Jehoshaphat_58 (EG), Mila11_60 (EG), MorillMayhem_58 (EG), Nike_59 (EG), Phabia_56 (EG), Rudy_54 (EG), SallyK_58 (EG), Statler_58 (EG), WheelerS25_64 (EG),

Start 98:

- Found in 62 of 241 (25.7%) of genes in pham
- Manual Annotations of this start: 26 of 194
- Called 48.4% of time when present
- Phage (with cluster) where this start called: Altheas_59 (EG), BabyDotz_57 (EG), BaconCheese_60 (EG), Casend_57 (EG), DonaldDuck_56 (EG), FrankDeliGuy_53 (EG), Gazebo_56 (EG), Hum25_60 (FQ), Hyperion_57 (EG), Judebell_58 (EG), Kyva_59 (EG), Llemily_56 (EG), Lonelysoil_55 (EG), Mashley_56 (EG), Mentos_61 (EG), Namago_57 (EG), Pitbull_59 (FQ), Quammi_54 (EG), Rowlf_53 (EG), Sillytadpoles_57 (EG), SlySloth_59 (EG), Squash_61 (EG), StrawberryJamm_60 (EG), Teehee_57 (EG), Tissue_58 (EG), Viceroy_55 (EG), Wayne3_58 (EG), Wheelie_56 (EG), Zagie_57 (EG), Zhafia_59 (EG),

Start 109:

- Found in 3 of 241 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 66.7% of time when present
- Phage (with cluster) where this start called: A3Wally_136 (GD1), Dodo_139 (GD1),

Start 111:

- Found in 8 of 241 (3.3%) of genes in pham
- Manual Annotations of this start: 5 of 194
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Big4_129 (GD2), Cece_120 (GD3), Erasmago_132 (GD2), PauloDiaboli_140 (GD1), Pumpnickel_133 (GD4), Zooman_120 (GD2),

Start 124:

- Found in 1 of 241 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Cantare_51 (singleton),

Summary by clusters:

There are 31 clusters represented in this pham: FQ, GD2, GD3, GD4, GD1, AP2, AP3, AP1, singleton, AP4, FA, FN, DF4, DF1, DF3, DF2, CS4, CS1, CS3, CS2, AC, AE, EG, CX, U, AY, CR2, CR6, CR7, CR4, CR5,

Info for manual annotations of cluster AC:

- Start number 57 was manually annotated 1 time for cluster AC.
- Start number 92 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:

- Start number 92 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AP1:

- Start number 66 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 71 was manually annotated 1 time for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 76 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 49 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:

- Start number 74 was manually annotated 1 time for cluster AY.
- Start number 85 was manually annotated 1 time for cluster AY.
- Start number 92 was manually annotated 30 times for cluster AY.

Info for manual annotations of cluster CR2:

- Start number 79 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR4:

- Start number 79 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 55 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 86 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 86 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CS1:

- Start number 82 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 82 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 82 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 84 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 89 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 73 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 73 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster EG:

- Start number 85 was manually annotated 1 time for cluster EG.
- Start number 97 was manually annotated 9 times for cluster EG.
- Start number 98 was manually annotated 24 times for cluster EG.

Info for manual annotations of cluster FN:

- Start number 85 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster FQ:

- Start number 98 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster GD1:

- Start number 109 was manually annotated 1 time for cluster GD1.
- Start number 111 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 111 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 111 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 111 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster U:

- Start number 92 was manually annotated 3 times for cluster U.

Gene Information:

Gene: A3Wally_136 Start: 86849, Stop: 87247, Start Num: 109

Candidate Starts for A3Wally_136:

(Start: 97 @86822 has 9 MA's), (Start: 109 @86849 has 1 MA's), (Start: 111 @86858 has 5 MA's), (142, 86957),

Gene: ASerpRocky_45 Start: 46949, Stop: 46455, Start Num: 84
Candidate Starts for ASerpRocky_45:
(Start: 84 @46949 has 12 MA's), (88, 46934), (94, 46907), (117, 46841), (166, 46658), (188, 46619),

Gene: AWGoat_60 Start: 44171, Stop: 43587, Start Num: 49
Candidate Starts for AWGoat_60:
(25, 44426), (26, 44417), (36, 44318), (40, 44264), (42, 44219), (Start: 49 @44171 has 1 MA's), (62, 44129), (Start: 82 @44078 has 63 MA's), (116, 43961), (187, 43760), (205, 43682),

Gene: AbbyDaisy_89 Start: 50820, Stop: 51422, Start Num: 74
Candidate Starts for AbbyDaisy_89:
(Start: 74 @50820 has 1 MA's), (88, 50865), (130, 51009), (131, 51012), (152, 51087), (160, 51150), (194, 51285), (205, 51333),

Gene: AdaS_80 Start: 44928, Stop: 45341, Start Num: 92
Candidate Starts for AdaS_80:
(50, 44811), (54, 44820), (Start: 92 @44928 has 39 MA's), (136, 45054), (193, 45204), (216, 45321),

Gene: Adgers_52 Start: 46769, Stop: 46248, Start Num: 82
Candidate Starts for Adgers_52:
(Start: 82 @46769 has 63 MA's), (91, 46733), (212, 46307),

Gene: Aikoy_106 Start: 67335, Stop: 67865, Start Num: 92
Candidate Starts for Aikoy_106:
(Start: 92 @67335 has 39 MA's), (101, 67362), (114, 67401), (120, 67422), (127, 67443), (143, 67494), (144, 67503), (147, 67512), (148, 67515), (150, 67527), (156, 67566), (157, 67569), (169, 67635), (170, 67638), (176, 67650), (177, 67653), (178, 67665), (179, 67668), (181, 67674), (184, 67686),

Gene: Aikyam_83 Start: 45953, Stop: 46399, Start Num: 92
Candidate Starts for Aikyam_83:
(78, 45908), (Start: 92 @45953 has 39 MA's), (123, 46055), (197, 46286),

Gene: Altheas_59 Start: 43024, Stop: 42620, Start Num: 98
Candidate Starts for Altheas_59:
(17, 43459), (19, 43426), (24, 43411), (28, 43366), (29, 43363), (44, 43180), (58, 43120), (60, 43117), (81, 43087), (Start: 98 @43024 has 26 MA's), (125, 42937), (152, 42856), (190, 42775), (196, 42739), (214, 42670), (217, 42628),

Gene: AluminumJesus_53 Start: 41962, Stop: 41567, Start Num: 97
Candidate Starts for AluminumJesus_53:
(Start: 97 @41962 has 9 MA's), (Start: 98 @41959 has 26 MA's), (113, 41917), (125, 41875), (152, 41794),

Gene: Amore2_53 Start: 47169, Stop: 46684, Start Num: 82
Candidate Starts for Amore2_53:
(Start: 82 @47169 has 63 MA's), (214, 46731),

Gene: Anamika_49 Start: 47821, Stop: 47318, Start Num: 82
Candidate Starts for Anamika_49:
(67, 47866), (72, 47848), (Start: 82 @47821 has 63 MA's), (Start: 97 @47761 has 9 MA's), (193, 47470), (204, 47416),

Gene: Anekin_85 Start: 48188, Stop: 48622, Start Num: 92
Candidate Starts for Anekin_85:
(46, 48032), (Start: 92 @48188 has 39 MA's), (132, 48305), (163, 48443), (197, 48509), (215, 48578),

Gene: Apiary_21 Start: 10881, Stop: 11363, Start Num: 86
Candidate Starts for Apiary_21:
(2, 10119), (13, 10371), (32, 10587), (68, 10830), (Start: 86 @10881 has 7 MA's), (95, 10926), (103, 10944), (115, 10980), (148, 11076), (155, 11121), (188, 11196), (197, 11241), (212, 11301),

Gene: Auxilium_82 Start: 45357, Stop: 45833, Start Num: 92
Candidate Starts for Auxilium_82:
(65, 45273), (Start: 92 @45357 has 39 MA's), (132, 45474), (164, 45618), (197, 45720),

Gene: BabyDotz_57 Start: 43429, Stop: 43037, Start Num: 98
Candidate Starts for BabyDotz_57:
(78, 43498), (Start: 97 @43432 has 9 MA's), (Start: 98 @43429 has 26 MA's), (113, 43387), (125, 43345), (152, 43264), (171, 43219), (217, 43045),

Gene: BaconCheese_60 Start: 43894, Stop: 43499, Start Num: 98
Candidate Starts for BaconCheese_60:
(78, 43963), (Start: 97 @43897 has 9 MA's), (Start: 98 @43894 has 26 MA's), (152, 43732), (215, 43546), (217, 43507), (218, 43504),

Gene: Barbochs_49 Start: 46513, Stop: 45992, Start Num: 82
Candidate Starts for Barbochs_49:
(Start: 82 @46513 has 63 MA's), (91, 46477), (212, 46051),

Gene: BasketStar_84 Start: 47969, Stop: 48403, Start Num: 92
Candidate Starts for BasketStar_84:
(Start: 92 @47969 has 39 MA's), (132, 48086), (163, 48224), (197, 48290), (215, 48359),

Gene: Beaver_54 Start: 48283, Stop: 47762, Start Num: 82
Candidate Starts for Beaver_54:
(Start: 82 @48283 has 63 MA's), (91, 48247), (212, 47821),

Gene: BellaJr_83 Start: 47858, Stop: 48460, Start Num: 74
Candidate Starts for BellaJr_83:
(4, 47168), (8, 47267), (9, 47303), (12, 47330), (14, 47390), (27, 47558), (Start: 74 @47858 has 1 MA's), (88, 47903), (130, 48047), (131, 48050), (152, 48125), (160, 48188), (170, 48233), (194, 48323),

Gene: BenchScraper_84 Start: 46314, Stop: 46808, Start Num: 92
Candidate Starts for BenchScraper_84:
(Start: 92 @46314 has 39 MA's), (146, 46491), (149, 46500), (193, 46671),

Gene: Benczkowski14_45 Start: 47238, Stop: 46744, Start Num: 84
Candidate Starts for Benczkowski14_45:
(Start: 84 @47238 has 12 MA's), (88, 47223), (94, 47196), (166, 46947), (186, 46917), (188, 46908), (196, 46866), (198, 46860),

Gene: BenoitCattle_52 Start: 47030, Stop: 46509, Start Num: 82
Candidate Starts for BenoitCattle_52:
(Start: 82 @47030 has 63 MA's), (91, 46994), (159, 46736), (212, 46568),

Gene: Berries_49 Start: 47793, Stop: 47290, Start Num: 82

Candidate Starts for Berries_49:

(67, 47838), (72, 47820), (Start: 82 @47793 has 63 MA's), (Start: 97 @47733 has 9 MA's), (193, 47442), (204, 47388),

Gene: Bhageatrice_88 Start: 50590, Stop: 51084, Start Num: 92

Candidate Starts for Bhageatrice_88:

(Start: 92 @50590 has 39 MA's), (146, 50767), (149, 50776), (193, 50947),

Gene: BiPauneto_21 Start: 8586, Stop: 9044, Start Num: 79

Candidate Starts for BiPauneto_21:

(3, 7887), (22, 8232), (Start: 79 @8586 has 9 MA's), (93, 8634), (Start: 98 @8652 has 26 MA's), (105, 8667), (115, 8700), (141, 8775), (145, 8787), (196, 8916),

Gene: Bianmat_49 Start: 47833, Stop: 47330, Start Num: 82

Candidate Starts for Bianmat_49:

(67, 47878), (72, 47860), (Start: 82 @47833 has 63 MA's), (Start: 97 @47773 has 9 MA's), (193, 47482), (204, 47428),

Gene: Big4_129 Start: 85559, Stop: 86026, Start Num: 111

Candidate Starts for Big4_129:

(88, 85493), (104, 85544), (Start: 111 @85559 has 5 MA's), (118, 85589), (213, 85961),

Gene: BigShaq_51 Start: 47035, Stop: 46514, Start Num: 82

Candidate Starts for BigShaq_51:

(Start: 82 @47035 has 63 MA's), (91, 46999), (159, 46741), (212, 46573),

Gene: BillyBobJr_56 Start: 48593, Stop: 48072, Start Num: 82

Candidate Starts for BillyBobJr_56:

(Start: 82 @48593 has 63 MA's), (91, 48557), (210, 48143),

Gene: BillyTP_85 Start: 48420, Stop: 48914, Start Num: 92

Candidate Starts for BillyTP_85:

(Start: 92 @48420 has 39 MA's), (146, 48597), (149, 48606), (193, 48777),

Gene: BirksAndSocks_55 Start: 48633, Stop: 48112, Start Num: 82

Candidate Starts for BirksAndSocks_55:

(Start: 82 @48633 has 63 MA's), (91, 48597), (212, 48171),

Gene: Blab_55 Start: 42584, Stop: 42189, Start Num: 97

Candidate Starts for Blab_55:

(78, 42650), (Start: 97 @42584 has 9 MA's), (Start: 98 @42581 has 26 MA's), (125, 42497), (152, 42416),

Gene: BlueShadow_82 Start: 47675, Stop: 48169, Start Num: 92

Candidate Starts for BlueShadow_82:

(Start: 92 @47675 has 39 MA's), (146, 47852), (149, 47861), (193, 48032),

Gene: Boneham_54 Start: 48534, Stop: 48013, Start Num: 82

Candidate Starts for Boneham_54:

(Start: 82 @48534 has 63 MA's), (91, 48498), (210, 48084),

Gene: Braxoaddie_21 Start: 10869, Stop: 11351, Start Num: 86
Candidate Starts for Braxoaddie_21:
(2, 10107), (13, 10359), (32, 10575), (68, 10818), (Start: 86 @10869 has 7 MA's), (95, 10914), (103, 10932), (115, 10968), (148, 11064), (155, 11109), (188, 11184), (197, 11229), (212, 11289),

Gene: Breezic_50 Start: 46526, Stop: 46005, Start Num: 82
Candidate Starts for Breezic_50:
(Start: 82 @46526 has 63 MA's), (91, 46490), (212, 46064),

Gene: BruhMoment_73 Start: 49223, Stop: 48708, Start Num: 76
Candidate Starts for BruhMoment_73:
(Start: 76 @49223 has 1 MA's), (131, 49073), (152, 48998), (158, 48950),

Gene: Butterball_54 Start: 48539, Stop: 48018, Start Num: 82
Candidate Starts for Butterball_54:
(Start: 82 @48539 has 63 MA's), (91, 48503), (210, 48089),

Gene: Camerico_47 Start: 46654, Stop: 46154, Start Num: 73
Candidate Starts for Camerico_47:
(Start: 73 @46654 has 2 MA's), (110, 46561), (145, 46453), (146, 46450), (154, 46411), (207, 46240), (212, 46216),

Gene: Cantare_51 Start: 46110, Stop: 46487, Start Num: 124
Candidate Starts for Cantare_51:
(Start: 124 @46110 has 1 MA's), (126, 46116), (130, 46119), (168, 46278), (199, 46380), (206, 46407), (214, 46437), (216, 46467),

Gene: Casend_57 Start: 42837, Stop: 42448, Start Num: 98
Candidate Starts for Casend_57:
(Start: 97 @42840 has 9 MA's), (Start: 98 @42837 has 26 MA's), (113, 42798), (152, 42675), (171, 42630), (217, 42456),

Gene: Cassini_81 Start: 46935, Stop: 47390, Start Num: 92
Candidate Starts for Cassini_81:
(56, 46830), (Start: 92 @46935 has 39 MA's), (146, 47073), (164, 47175), (197, 47277),

Gene: CathyBurgh_50 Start: 47103, Stop: 46582, Start Num: 82
Candidate Starts for CathyBurgh_50:
(Start: 82 @47103 has 63 MA's), (91, 47067), (212, 46641),

Gene: Cece_120 Start: 88234, Stop: 88626, Start Num: 111
Candidate Starts for Cece_120:
(96, 88198), (Start: 111 @88234 has 5 MA's), (153, 88387), (203, 88513),

Gene: Charianelly_49 Start: 47543, Stop: 47040, Start Num: 82
Candidate Starts for Charianelly_49:
(67, 47588), (72, 47570), (Start: 82 @47543 has 63 MA's), (Start: 97 @47483 has 9 MA's), (193, 47192), (204, 47138),

Gene: Chelms_51 Start: 47023, Stop: 46514, Start Num: 82
Candidate Starts for Chelms_51:
(Start: 82 @47023 has 63 MA's), (91, 46987), (212, 46573),

Gene: CinnamonToast_56 Start: 48593, Stop: 48072, Start Num: 82
Candidate Starts for CinnamonToast_56:
(Start: 82 @48593 has 63 MA's), (91, 48557), (210, 48143),

Gene: CoffeeBean_21 Start: 10806, Stop: 11321, Start Num: 86
Candidate Starts for CoffeeBean_21:
(2, 10044), (6, 10155), (13, 10296), (32, 10512), (68, 10755), (Start: 86 @10806 has 7 MA's), (95, 10851), (103, 10869), (115, 10905), (148, 11001), (183, 11136), (197, 11199), (212, 11259),

Gene: Commandaria_21 Start: 9793, Stop: 10248, Start Num: 79
Candidate Starts for Commandaria_21:
(1, 9061), (5, 9148), (18, 9418), (31, 9520), (Start: 79 @9793 has 9 MA's), (Start: 98 @9856 has 26 MA's), (105, 9871), (141, 9979), (196, 10120),

Gene: CookieBear_83 Start: 46991, Stop: 47392, Start Num: 92
Candidate Starts for CookieBear_83:
(Start: 92 @46991 has 39 MA's), (197, 47279), (216, 47372),

Gene: CosmicBrownie_83 Start: 46516, Stop: 47010, Start Num: 92
Candidate Starts for CosmicBrownie_83:
(Start: 92 @46516 has 39 MA's), (146, 46693), (149, 46702), (193, 46873),

Gene: Crescenzo_88 Start: 49356, Stop: 49757, Start Num: 92
Candidate Starts for Crescenzo_88:
(39, 49128), (Start: 92 @49356 has 39 MA's),

Gene: Crete_52 Start: 47301, Stop: 46780, Start Num: 82
Candidate Starts for Crete_52:
(Start: 82 @47301 has 63 MA's), (91, 47265), (159, 47007), (212, 46839),

Gene: Cuke_82 Start: 48535, Stop: 49002, Start Num: 92
Candidate Starts for Cuke_82:
(Start: 92 @48535 has 39 MA's), (99, 48553), (113, 48595), (114, 48598), (122, 48628), (143, 48685), (165, 48799), (176, 48817), (188, 48841), (193, 48862), (195, 48874), (196, 48883), (199, 48895), (206, 48922), (210, 48928), (212, 48940),

Gene: Dakiti_52 Start: 47891, Stop: 47382, Start Num: 82
Candidate Starts for Dakiti_52:
(Start: 82 @47891 has 63 MA's), (91, 47855), (212, 47441),

Gene: Damp_49 Start: 46707, Stop: 46204, Start Num: 82
Candidate Starts for Damp_49:
(67, 46752), (72, 46734), (Start: 82 @46707 has 63 MA's), (Start: 97 @46647 has 9 MA's), (193, 46356), (204, 46302),

Gene: DarwinJr_89 Start: 49470, Stop: 49871, Start Num: 92
Candidate Starts for DarwinJr_89:
(50, 49353), (54, 49362), (Start: 92 @49470 has 39 MA's),

Gene: Demikore_104 Start: 64612, Stop: 65076, Start Num: 92
Candidate Starts for Demikore_104:
(Start: 92 @64612 has 39 MA's), (189, 64918), (195, 64948), (196, 64957), (201, 64978), (205, 64990), (210, 65002), (211, 65005),

Gene: Demosthenes_44 Start: 46925, Stop: 46431, Start Num: 84
Candidate Starts for Demosthenes_44:
(Start: 84 @46925 has 12 MA's), (94, 46883), (117, 46817), (166, 46634), (188, 46595), (198, 46547),
(212, 46490), (216, 46451),

Gene: Diabla_54 Start: 48464, Stop: 47943, Start Num: 82
Candidate Starts for Diabla_54:
(Start: 82 @48464 has 63 MA's), (91, 48428), (204, 48041), (209, 48026), (214, 47990),

Gene: Dodo_139 Start: 87192, Stop: 87590, Start Num: 109
Candidate Starts for Dodo_139:
(Start: 97 @87165 has 9 MA's), (Start: 109 @87192 has 1 MA's), (Start: 111 @87201 has 5 MA's),
(142, 87300),

Gene: DonaldDuck_56 Start: 42186, Stop: 41797, Start Num: 98
Candidate Starts for DonaldDuck_56:
(Start: 97 @42189 has 9 MA's), (Start: 98 @42186 has 26 MA's), (113, 42147), (152, 42024), (171,
41979), (217, 41805),

Gene: Eggsie_49 Start: 46426, Stop: 45905, Start Num: 82
Candidate Starts for Eggsie_49:
(Start: 82 @46426 has 63 MA's), (91, 46390), (204, 46003), (214, 45952),

Gene: Ekhein_51 Start: 46231, Stop: 45710, Start Num: 82
Candidate Starts for Ekhein_51:
(Start: 82 @46231 has 63 MA's), (91, 46195), (212, 45769),

Gene: Erasmago_132 Start: 83948, Stop: 84340, Start Num: 111
Candidate Starts for Erasmago_132:
(96, 83912), (Start: 111 @83948 has 5 MA's), (118, 83978),

Gene: EvePickles_85 Start: 48837, Stop: 49178, Start Num: 92
Candidate Starts for EvePickles_85:
(56, 48729), (Start: 92 @48837 has 39 MA's), (123, 48939), (129, 48957), (132, 48966), (146, 49014),
(161, 49107), (193, 49143),

Gene: EverythinBagel_55 Start: 42550, Stop: 42158, Start Num: 97
Candidate Starts for EverythinBagel_55:
(Start: 97 @42550 has 9 MA's), (Start: 98 @42547 has 26 MA's), (113, 42508), (152, 42385), (171,
42340), (217, 42166),

Gene: Exiguo_50 Start: 46243, Stop: 45722, Start Num: 82
Candidate Starts for Exiguo_50:
(Start: 82 @46243 has 63 MA's), (91, 46207), (212, 45781),

Gene: Faja_86 Start: 48359, Stop: 48745, Start Num: 92
Candidate Starts for Faja_86:
(38, 48092), (41, 48134), (Start: 92 @48359 has 39 MA's), (149, 48506), (151, 48518), (162, 48587),
(197, 48632),

Gene: FelixAlejandro_55 Start: 48737, Stop: 48216, Start Num: 82
Candidate Starts for FelixAlejandro_55:

(Start: 82 @48737 has 63 MA's), (91, 48701), (210, 48287),

Gene: Flakey_50 Start: 47107, Stop: 46586, Start Num: 82

Candidate Starts for Flakey_50:

(Start: 82 @47107 has 63 MA's), (91, 47071), (212, 46645),

Gene: Fowlmouth_83 Start: 51110, Stop: 51577, Start Num: 92

Candidate Starts for Fowlmouth_83:

(Start: 92 @51110 has 39 MA's), (114, 51173), (117, 51182), (119, 51191), (147, 51278), (157, 51335), (188, 51416), (195, 51449), (196, 51458), (199, 51470),

Gene: FrankDeliGuy_53 Start: 42165, Stop: 41773, Start Num: 98

Candidate Starts for FrankDeliGuy_53:

(Start: 85 @42216 has 3 MA's), (Start: 97 @42168 has 9 MA's), (Start: 98 @42165 has 26 MA's), (113, 42126), (125, 42084), (152, 42003), (172, 41958), (217, 41781),

Gene: Fury_26 Start: 10463, Stop: 10972, Start Num: 55

Candidate Starts for Fury_26:

(Start: 55 @10463 has 2 MA's), (Start: 98 @10580 has 26 MA's), (105, 10595), (146, 10718), (149, 10727), (196, 10844), (199, 10856),

Gene: GMA3_38 Start: 40837, Stop: 40325, Start Num: 73

Candidate Starts for GMA3_38:

(47, 40918), (Start: 70 @40849 has 1 MA's), (Start: 73 @40837 has 2 MA's), (125, 40669), (148, 40609), (211, 40390),

Gene: GMA7_42 Start: 41383, Stop: 40898, Start Num: 82

Candidate Starts for GMA7_42:

(Start: 82 @41383 has 63 MA's), (214, 40945),

Gene: GTE7_41 Start: 41414, Stop: 40929, Start Num: 82

Candidate Starts for GTE7_41:

(Start: 82 @41414 has 63 MA's), (214, 40976),

Gene: GalacticEye_49 Start: 47504, Stop: 47001, Start Num: 82

Candidate Starts for GalacticEye_49:

(67, 47549), (72, 47531), (Start: 82 @47504 has 63 MA's), (Start: 97 @47444 has 9 MA's), (193, 47153), (204, 47099),

Gene: Gazebo_56 Start: 42670, Stop: 42278, Start Num: 98

Candidate Starts for Gazebo_56:

(Start: 97 @42673 has 9 MA's), (Start: 98 @42670 has 26 MA's), (113, 42628), (152, 42505), (171, 42460), (217, 42286), (218, 42283),

Gene: Gibbles_47 Start: 45170, Stop: 44748, Start Num: 89

Candidate Starts for Gibbles_47:

(Start: 89 @45170 has 5 MA's), (Start: 98 @45134 has 26 MA's), (112, 45095), (114, 45089), (118, 45074), (148, 44984), (199, 44855), (212, 44810), (217, 44756),

Gene: Globfish_83 Start: 46114, Stop: 46545, Start Num: 92

Candidate Starts for Globfish_83:

(23, 45718), (33, 45799), (39, 45883), (Start: 92 @46114 has 39 MA's), (193, 46408),

Gene: Gmala1_37 Start: 39458, Stop: 38919, Start Num: 61
Candidate Starts for Gmala1_37:
(58, 39467), (61, 39458), (Start: 73 @39425 has 2 MA's), (118, 39281), (125, 39257), (157, 39143),
(210, 38987),

Gene: GordDuk1_37 Start: 39399, Stop: 38860, Start Num: 61
Candidate Starts for GordDuk1_37:
(58, 39408), (61, 39399), (Start: 73 @39366 has 2 MA's), (118, 39222), (125, 39198), (157, 39084),
(210, 38928),

Gene: GordTnk2_37 Start: 39365, Stop: 38826, Start Num: 61
Candidate Starts for GordTnk2_37:
(58, 39374), (61, 39365), (Start: 73 @39332 has 2 MA's), (118, 39188), (125, 39164), (157, 39050),
(210, 38894),

Gene: Gorko_50 Start: 46235, Stop: 45714, Start Num: 82
Candidate Starts for Gorko_50:
(Start: 82 @46235 has 63 MA's), (91, 46199), (212, 45773),

Gene: Gorpy_82 Start: 48333, Stop: 48809, Start Num: 92
Candidate Starts for Gorpy_82:
(Start: 92 @48333 has 39 MA's), (132, 48450), (162, 48591), (176, 48630), (193, 48672), (197, 48696),
(216, 48789),

Gene: GourdThymes_50 Start: 47109, Stop: 46588, Start Num: 82
Candidate Starts for GourdThymes_50:
(Start: 82 @47109 has 63 MA's), (91, 47073), (117, 46989), (212, 46647),

Gene: Grassboy_59 Start: 43110, Stop: 42643, Start Num: 85
Candidate Starts for Grassboy_59:
(Start: 85 @43110 has 3 MA's), (Start: 97 @43062 has 9 MA's), (Start: 98 @43059 has 26 MA's), (113,
43020), (125, 42978), (152, 42897), (189, 42801), (217, 42651), (218, 42648),

Gene: Guillaume_49 Start: 47554, Stop: 47051, Start Num: 82
Candidate Starts for Guillaume_49:
(67, 47599), (72, 47581), (Start: 82 @47554 has 63 MA's), (Start: 97 @47494 has 9 MA's), (193,
47203), (204, 47149),

Gene: GumGum_91 Start: 48480, Stop: 48974, Start Num: 92
Candidate Starts for GumGum_91:
(Start: 92 @48480 has 39 MA's), (146, 48657), (149, 48666), (193, 48837),

Gene: GuyFagieri_20 Start: 10423, Stop: 10938, Start Num: 86
Candidate Starts for GuyFagieri_20:
(13, 9913), (15, 9994), (32, 10129), (Start: 86 @10423 has 7 MA's), (103, 10486), (148, 10618), (150,
10630), (185, 10759), (197, 10816), (212, 10876),

Gene: Hail2Pitt_48 Start: 48030, Stop: 47527, Start Num: 82
Candidate Starts for Hail2Pitt_48:
(67, 48075), (72, 48057), (Start: 82 @48030 has 63 MA's), (Start: 97 @47970 has 9 MA's), (193,
47679), (204, 47625),

Gene: Harambe_49 Start: 47821, Stop: 47318, Start Num: 82

Candidate Starts for Harambe_49:

(67, 47866), (72, 47848), (Start: 82 @47821 has 63 MA's), (Start: 97 @47761 has 9 MA's), (193, 47470), (204, 47416),

Gene: HayZem_52 Start: 47166, Stop: 46681, Start Num: 82

Candidate Starts for HayZem_52:

(Start: 82 @47166 has 63 MA's), (214, 46728),

Gene: Hello_49 Start: 47783, Stop: 47280, Start Num: 82

Candidate Starts for Hello_49:

(67, 47828), (72, 47810), (Start: 82 @47783 has 63 MA's), (Start: 97 @47723 has 9 MA's), (193, 47432), (204, 47378),

Gene: Hestia_78 Start: 45289, Stop: 45783, Start Num: 92

Candidate Starts for Hestia_78:

(80, 45244), (Start: 92 @45289 has 39 MA's), (146, 45466), (149, 45475), (193, 45646),

Gene: Hillester_88 Start: 48096, Stop: 48530, Start Num: 92

Candidate Starts for Hillester_88:

(Start: 92 @48096 has 39 MA's), (132, 48213), (163, 48351), (197, 48417), (215, 48486),

Gene: Hollow_46 Start: 47574, Stop: 47080, Start Num: 84

Candidate Starts for Hollow_46:

(Start: 84 @47574 has 12 MA's), (88, 47559), (94, 47532), (117, 47466), (166, 47283), (188, 47244), (198, 47196),

Gene: HomeFry_23 Start: 9368, Stop: 9835, Start Num: 75

Candidate Starts for HomeFry_23:

(10, 8822), (16, 8981), (20, 9017), (75, 9368), (90, 9413), (93, 9428), (Start: 98 @9443 has 26 MA's), (105, 9458), (120, 9509), (141, 9566), (146, 9581), (148, 9587), (196, 9707),

Gene: Hotorobo_50 Start: 47114, Stop: 46593, Start Num: 82

Candidate Starts for Hotorobo_50:

(Start: 82 @47114 has 63 MA's), (91, 47078), (212, 46652),

Gene: HubbaBubba_16 Start: 7112, Stop: 7570, Start Num: 79

Candidate Starts for HubbaBubba_16:

(22, 6758), (Start: 79 @7112 has 9 MA's), (93, 7160), (Start: 98 @7178 has 26 MA's), (105, 7193), (115, 7226), (141, 7301), (196, 7442), (217, 7562),

Gene: Hum25_60 Start: 34774, Stop: 35166, Start Num: 98

Candidate Starts for Hum25_60:

(77, 34702), (Start: 98 @34774 has 26 MA's), (106, 34792), (123, 34855), (146, 34930), (196, 35050), (197, 35053), (199, 35062),

Gene: Hyperion_57 Start: 42845, Stop: 42456, Start Num: 98

Candidate Starts for Hyperion_57:

(78, 42914), (Start: 97 @42848 has 9 MA's), (Start: 98 @42845 has 26 MA's), (125, 42764), (152, 42683), (217, 42464),

Gene: IDyn_19 Start: 8503, Stop: 8961, Start Num: 79

Candidate Starts for IDyn_19:

(22, 8149), (Start: 79 @8503 has 9 MA's), (93, 8551), (Start: 98 @8569 has 26 MA's), (105, 8584), (115, 8617), (120, 8635), (141, 8692), (196, 8833),

Gene: Indlulamithi_73 Start: 51686, Stop: 52294, Start Num: 57

Candidate Starts for Indlulamithi_73:

(Start: 57 @51686 has 1 MA's), (64, 51707), (Start: 82 @51758 has 63 MA's), (Start: 92 @51800 has 39 MA's), (112, 51857), (128, 51911), (133, 51926), (137, 51947), (138, 51950), (144, 51974), (145, 51977), (189, 52136), (195, 52166), (200, 52190), (213, 52235), (217, 52286),

Gene: Isolde_85 Start: 48621, Stop: 49019, Start Num: 92

Candidate Starts for Isolde_85:

(42, 48438), (Start: 92 @48621 has 39 MA's), (149, 48768), (167, 48849), (197, 48906),

Gene: Jams_49 Start: 46993, Stop: 46490, Start Num: 82

Candidate Starts for Jams_49:

(67, 47038), (72, 47020), (Start: 82 @46993 has 63 MA's), (Start: 97 @46933 has 9 MA's), (193, 46642), (204, 46588),

Gene: Jehoshaphat_58 Start: 43108, Stop: 42716, Start Num: 97

Candidate Starts for Jehoshaphat_58:

(Start: 97 @43108 has 9 MA's), (Start: 98 @43105 has 26 MA's), (113, 43066), (152, 42943), (171, 42898), (217, 42724),

Gene: JellyBread_81 Start: 47381, Stop: 47875, Start Num: 92

Candidate Starts for JellyBread_81:

(Start: 92 @47381 has 39 MA's), (123, 47483), (129, 47501), (162, 47657), (176, 47696), (193, 47738), (197, 47762), (216, 47855),

Gene: Jellybones_53 Start: 48215, Stop: 47694, Start Num: 82

Candidate Starts for Jellybones_53:

(Start: 82 @48215 has 63 MA's), (91, 48179), (210, 47765),

Gene: John316_54 Start: 48272, Stop: 47751, Start Num: 82

Candidate Starts for John316_54:

(Start: 82 @48272 has 63 MA's), (91, 48236), (212, 47810),

Gene: Jormungandr_49 Start: 47536, Stop: 47033, Start Num: 82

Candidate Starts for Jormungandr_49:

(67, 47581), (72, 47563), (Start: 82 @47536 has 63 MA's), (Start: 97 @47476 has 9 MA's), (193, 47185), (204, 47131),

Gene: Judebell_58 Start: 42554, Stop: 42165, Start Num: 98

Candidate Starts for Judebell_58:

(Start: 85 @42605 has 3 MA's), (Start: 97 @42557 has 9 MA's), (Start: 98 @42554 has 26 MA's), (113, 42515), (125, 42473), (152, 42392), (171, 42347), (217, 42173),

Gene: Jumbo_42 Start: 45467, Stop: 44925, Start Num: 73

Candidate Starts for Jumbo_42:

(45, 45563), (52, 45521), (59, 45509), (63, 45494), (Start: 73 @45467 has 2 MA's), (100, 45380), (148, 45239), (150, 45227), (174, 45140), (193, 45095), (195, 45083), (202, 45050), (211, 44993),

Gene: Kabloowy_85 Start: 48367, Stop: 48768, Start Num: 92

Candidate Starts for Kabloowy_85:

(50, 48250), (54, 48259), (Start: 92 @48367 has 39 MA's),

Gene: Kampe_49 Start: 45153, Stop: 44731, Start Num: 89

Candidate Starts for Kampe_49:

(Start: 89 @45153 has 5 MA's), (Start: 98 @45117 has 26 MA's), (112, 45078), (114, 45072), (118, 45057), (148, 44967), (212, 44793),

Gene: Kaseim_49 Start: 46978, Stop: 46475, Start Num: 82

Candidate Starts for Kaseim_49:

(67, 47023), (72, 47005), (Start: 82 @46978 has 63 MA's), (Start: 97 @46918 has 9 MA's), (193, 46627), (204, 46573),

Gene: Katyusha_45 Start: 47238, Stop: 46744, Start Num: 84

Candidate Starts for Katyusha_45:

(Start: 84 @47238 has 12 MA's), (88, 47223), (94, 47196), (166, 46947), (186, 46917), (188, 46908), (196, 46866), (198, 46860),

Gene: Kelzog_52 Start: 47121, Stop: 46600, Start Num: 82

Candidate Starts for Kelzog_52:

(Start: 82 @47121 has 63 MA's), (91, 47085), (212, 46659),

Gene: Kvothe_45 Start: 47137, Stop: 46643, Start Num: 84

Candidate Starts for Kvothe_45:

(Start: 84 @47137 has 12 MA's), (88, 47122), (94, 47095), (186, 46816), (188, 46807), (196, 46765), (198, 46759),

Gene: Kyva_59 Start: 43089, Stop: 42700, Start Num: 98

Candidate Starts for Kyva_59:

(19, 43476), (44, 43245), (58, 43185), (60, 43182), (81, 43152), (Start: 97 @43092 has 9 MA's), (Start: 98 @43089 has 26 MA's), (152, 42927), (171, 42882), (217, 42708), (218, 42705),

Gene: Labelle_102 Start: 64800, Stop: 65264, Start Num: 92

Candidate Starts for Labelle_102:

(Start: 92 @64800 has 39 MA's), (189, 65106), (195, 65136), (196, 65145), (201, 65166), (210, 65190), (211, 65193),

Gene: Lahirium_49 Start: 48058, Stop: 47555, Start Num: 82

Candidate Starts for Lahirium_49:

(67, 48103), (72, 48085), (Start: 82 @48058 has 63 MA's), (Start: 97 @47998 has 9 MA's), (193, 47707), (204, 47653),

Gene: Lasker_86 Start: 48414, Stop: 48908, Start Num: 92

Candidate Starts for Lasker_86:

(39, 48180), (Start: 92 @48414 has 39 MA's), (146, 48591), (149, 48600), (193, 48771),

Gene: Lawnathon_87 Start: 47552, Stop: 47980, Start Num: 92

Candidate Starts for Lawnathon_87:

(Start: 92 @47552 has 39 MA's), (132, 47669), (193, 47843), (197, 47867),

Gene: LeBruni_87 Start: 47711, Stop: 48136, Start Num: 92

Candidate Starts for LeBruni_87:

(Start: 92 @47711 has 39 MA's), (146, 47888), (149, 47897), (180, 47978), (193, 47999),

Gene: Leopard_104 Start: 67266, Stop: 67778, Start Num: 92

Candidate Starts for Leopard_104:

(Start: 92 @67266 has 39 MA's), (101, 67293), (127, 67374), (143, 67425), (144, 67434), (147, 67443), (148, 67446), (156, 67497), (157, 67500), (169, 67566), (170, 67569), (176, 67581), (179, 67584), (181, 67590), (184, 67599),

Gene: Lidong_49 Start: 47793, Stop: 47290, Start Num: 82

Candidate Starts for Lidong_49:

(67, 47838), (72, 47820), (Start: 82 @47793 has 63 MA's), (Start: 97 @47733 has 9 MA's), (193, 47442), (204, 47388),

Gene: Linetti_52 Start: 48032, Stop: 47523, Start Num: 82

Candidate Starts for Linetti_52:

(Start: 82 @48032 has 63 MA's), (91, 47996), (212, 47582),

Gene: Lizzo_50 Start: 47103, Stop: 46582, Start Num: 82

Candidate Starts for Lizzo_50:

(Start: 82 @47103 has 63 MA's), (91, 47067), (212, 46641),

Gene: Llemily_56 Start: 41881, Stop: 41492, Start Num: 98

Candidate Starts for Llemily_56:

(Start: 97 @41884 has 9 MA's), (Start: 98 @41881 has 26 MA's), (113, 41842), (152, 41719), (171, 41674), (217, 41500),

Gene: Lonelysoil_55 Start: 42037, Stop: 41648, Start Num: 98

Candidate Starts for Lonelysoil_55:

(Start: 85 @42088 has 3 MA's), (Start: 97 @42040 has 9 MA's), (Start: 98 @42037 has 26 MA's), (113, 41998), (125, 41956), (152, 41875), (171, 41830), (217, 41656),

Gene: Luker_50 Start: 48011, Stop: 47508, Start Num: 82

Candidate Starts for Luker_50:

(67, 48056), (72, 48038), (Start: 82 @48011 has 63 MA's), (Start: 97 @47951 has 9 MA's), (193, 47660), (204, 47606),

Gene: MUWow_87 Start: 49154, Stop: 49555, Start Num: 92

Candidate Starts for MUWow_87:

(Start: 92 @49154 has 39 MA's), (151, 49316), (197, 49442), (216, 49535),

Gene: MacGully_24 Start: 10356, Stop: 10865, Start Num: 86

Candidate Starts for MacGully_24:

(6, 9750), (32, 10098), (35, 10137), (Start: 86 @10356 has 7 MA's), (148, 10551), (182, 10677), (190, 10704), (206, 10785), (214, 10815),

Gene: Madruga_101 Start: 64424, Stop: 64888, Start Num: 92

Candidate Starts for Madruga_101:

(Start: 92 @64424 has 39 MA's), (189, 64730), (195, 64760), (196, 64769), (201, 64790), (205, 64802), (210, 64814), (211, 64817),

Gene: Magritte_49 Start: 48175, Stop: 48675, Start Num: 83

Candidate Starts for Magritte_49:

(Start: 83 @48175 has 1 MA's), (Start: 92 @48214 has 39 MA's), (95, 48229), (119, 48301), (146, 48409), (160, 48493), (200, 48571),

Gene: Mapleville_79 Start: 46363, Stop: 46764, Start Num: 92

Candidate Starts for Mapleville_79:

(39, 46129), (Start: 92 @46363 has 39 MA's), (216, 46744),

Gene: Marietta_20 Start: 8429, Stop: 8887, Start Num: 79

Candidate Starts for Marietta_20:

(22, 8075), (Start: 79 @8429 has 9 MA's), (93, 8477), (Start: 98 @8495 has 26 MA's), (105, 8510), (115, 8543), (120, 8561), (141, 8618), (217, 8879),

Gene: Maselop_21 Start: 10882, Stop: 11397, Start Num: 86

Candidate Starts for Maselop_21:

(2, 10120), (13, 10372), (32, 10588), (68, 10831), (Start: 86 @10882 has 7 MA's), (95, 10927), (103, 10945), (115, 10981), (148, 11077), (183, 11212), (197, 11275), (212, 11335),

Gene: Mashley_56 Start: 42624, Stop: 42232, Start Num: 98

Candidate Starts for Mashley_56:

(43, 42828), (78, 42693), (Start: 97 @42627 has 9 MA's), (Start: 98 @42624 has 26 MA's), (113, 42582), (125, 42540), (152, 42459), (171, 42414), (217, 42240),

Gene: MaterMagnus_84 Start: 48125, Stop: 48532, Start Num: 92

Candidate Starts for MaterMagnus_84:

(78, 48080), (Start: 92 @48125 has 39 MA's), (197, 48419), (216, 48512),

Gene: Mentos_61 Start: 43855, Stop: 43466, Start Num: 98

Candidate Starts for Mentos_61:

(19, 44245), (21, 44242), (44, 44011), (58, 43951), (60, 43948), (81, 43918), (Start: 97 @43858 has 9 MA's), (Start: 98 @43855 has 26 MA's), (152, 43693), (215, 43513), (217, 43474),

Gene: MidnightRain_90 Start: 48881, Stop: 49366, Start Num: 92

Candidate Starts for MidnightRain_90:

(Start: 92 @48881 has 39 MA's), (146, 49058), (149, 49067), (193, 49229),

Gene: Mila11_60 Start: 44086, Stop: 43688, Start Num: 97

Candidate Starts for Mila11_60:

(78, 44152), (Start: 97 @44086 has 9 MA's), (Start: 98 @44083 has 26 MA's), (152, 43921), (215, 43735), (217, 43696), (218, 43693),

Gene: Minos_50 Start: 47535, Stop: 47032, Start Num: 82

Candidate Starts for Minos_50:

(67, 47580), (72, 47562), (Start: 82 @47535 has 63 MA's), (Start: 97 @47475 has 9 MA's), (193, 47184), (204, 47130),

Gene: Monty_49 Start: 46253, Stop: 45732, Start Num: 82

Candidate Starts for Monty_49:

(Start: 82 @46253 has 63 MA's), (91, 46217), (212, 45791),

Gene: MorillMayhem_58 Start: 42963, Stop: 42565, Start Num: 97

Candidate Starts for MorillMayhem_58:

(78, 43029), (Start: 97 @42963 has 9 MA's), (Start: 98 @42960 has 26 MA's), (152, 42798), (215, 42612), (217, 42573), (218, 42570),

Gene: MrMiyagi_81 Start: 51354, Stop: 51842, Start Num: 92

Candidate Starts for MrMiyagi_81:

(87, 51333), (Start: 92 @51354 has 39 MA's), (99, 51372), (122, 51447), (135, 51495), (143, 51525), (150, 51558), (175, 51654), (176, 51657), (180, 51660), (195, 51714), (199, 51735),

Gene: MrWormie_49 Start: 46696, Stop: 46193, Start Num: 82

Candidate Starts for MrWormie_49:

(67, 46741), (72, 46723), (Start: 82 @46696 has 63 MA's), (Start: 97 @46636 has 9 MA's), (193, 46345), (204, 46291),

Gene: Msay19_55 Start: 48726, Stop: 48205, Start Num: 82

Candidate Starts for Msay19_55:

(Start: 82 @48726 has 63 MA's), (91, 48690), (210, 48276),

Gene: MurphyJoseph_82 Start: 46404, Stop: 46835, Start Num: 92

Candidate Starts for MurphyJoseph_82:

(Start: 92 @46404 has 39 MA's), (146, 46560), (193, 46698), (197, 46722), (216, 46815),

Gene: NadineRae_18 Start: 7679, Stop: 8137, Start Num: 79

Candidate Starts for NadineRae_18:

(22, 7325), (Start: 79 @7679 has 9 MA's), (93, 7727), (Start: 98 @7745 has 26 MA's), (105, 7760), (115, 7793), (120, 7811), (141, 7868), (147, 7886), (196, 8009), (217, 8129),

Gene: Namago_57 Start: 42027, Stop: 41638, Start Num: 98

Candidate Starts for Namago_57:

(Start: 85 @42078 has 3 MA's), (Start: 97 @42030 has 9 MA's), (Start: 98 @42027 has 26 MA's), (113, 41988), (125, 41946), (152, 41865), (171, 41820), (217, 41646), (218, 41643),

Gene: Neoevie_49 Start: 47797, Stop: 47294, Start Num: 82

Candidate Starts for Neoevie_49:

(67, 47842), (72, 47824), (Start: 82 @47797 has 63 MA's), (Start: 97 @47737 has 9 MA's), (193, 47446), (204, 47392),

Gene: NewKitty_86 Start: 48783, Stop: 49196, Start Num: 92

Candidate Starts for NewKitty_86:

(50, 48666), (54, 48675), (Start: 92 @48783 has 39 MA's), (136, 48909), (193, 49059),

Gene: Newt_50 Start: 48025, Stop: 47522, Start Num: 82

Candidate Starts for Newt_50:

(67, 48070), (72, 48052), (Start: 82 @48025 has 63 MA's), (Start: 97 @47965 has 9 MA's), (193, 47674), (204, 47620),

Gene: Niagara_45 Start: 47216, Stop: 46722, Start Num: 84

Candidate Starts for Niagara_45:

(Start: 84 @47216 has 12 MA's), (88, 47201), (94, 47174), (186, 46895), (188, 46886), (196, 46844), (198, 46838),

Gene: NidoQ_45 Start: 31597, Stop: 32259, Start Num: 48

Candidate Starts for NidoQ_45:

(7, 31066), (11, 31138), (30, 31390), (34, 31423), (37, 31468), (48, 31597), (69, 31660), (121, 31843), (147, 31912), (183, 32080), (206, 32182), (214, 32212),

Gene: Nikan_80 Start: 49613, Stop: 49059, Start Num: 71

Candidate Starts for Nikan_80:

(53, 49658), (Start: 71 @49613 has 1 MA's), (127, 49439), (131, 49424), (140, 49397), (148, 49370), (158, 49301),

Gene: Nike_59 Start: 43351, Stop: 42950, Start Num: 97

Candidate Starts for Nike_59:

(Start: 97 @43351 has 9 MA's), (Start: 98 @43348 has 26 MA's), (103, 43336), (125, 43264), (152, 43183), (196, 43069), (217, 42958),

Gene: Nimi13_49 Start: 47544, Stop: 47041, Start Num: 82

Candidate Starts for Nimi13_49:

(67, 47589), (72, 47571), (Start: 82 @47544 has 63 MA's), (Start: 97 @47484 has 9 MA's), (193, 47193), (204, 47139),

Gene: Nyilah_91 Start: 47700, Stop: 48131, Start Num: 92

Candidate Starts for Nyilah_91:

(Start: 92 @47700 has 39 MA's), (127, 47811), (146, 47877), (149, 47886), (173, 47955), (193, 47994),

Gene: Ollypop_78 Start: 50399, Stop: 49848, Start Num: 71

Candidate Starts for Ollypop_78:

(Start: 71 @50399 has 1 MA's), (148, 50156), (152, 50135), (158, 50087), (160, 50072), (187, 50021), (208, 49934),

Gene: Onyinye_105 Start: 67128, Stop: 67658, Start Num: 92

Candidate Starts for Onyinye_105:

(Start: 92 @67128 has 39 MA's), (101, 67155), (114, 67194), (120, 67215), (127, 67236), (143, 67287), (144, 67296), (147, 67305), (148, 67308), (150, 67320), (156, 67359), (157, 67362), (169, 67428), (170, 67431), (176, 67443), (177, 67446), (178, 67458), (179, 67461), (181, 67467), (184, 67479),

Gene: Orchid_48 Start: 45154, Stop: 44732, Start Num: 89

Candidate Starts for Orchid_48:

(Start: 89 @45154 has 5 MA's), (Start: 98 @45118 has 26 MA's), (112, 45079), (114, 45073), (118, 45058), (148, 44968), (212, 44794),

Gene: Patience_103 Start: 65328, Stop: 65792, Start Num: 92

Candidate Starts for Patience_103:

(Start: 92 @65328 has 39 MA's), (189, 65634), (195, 65664), (196, 65673), (201, 65694), (205, 65706), (210, 65718), (211, 65721),

Gene: PatrickStar_49 Start: 45153, Stop: 44731, Start Num: 89

Candidate Starts for PatrickStar_49:

(Start: 89 @45153 has 5 MA's), (Start: 98 @45117 has 26 MA's), (112, 45078), (114, 45072), (118, 45057), (148, 44967), (212, 44793),

Gene: PauloDiaboli_140 Start: 86201, Stop: 86590, Start Num: 111

Candidate Starts for PauloDiaboli_140:

(Start: 97 @86165 has 9 MA's), (107, 86189), (Start: 109 @86192 has 1 MA's), (Start: 111 @86201 has 5 MA's), (142, 86300),

Gene: Pemberton_21 Start: 8397, Stop: 8855, Start Num: 79

Candidate Starts for Pemberton_21:

(22, 8043), (Start: 79 @8397 has 9 MA's), (93, 8445), (Start: 98 @8463 has 26 MA's), (105, 8478), (115, 8511), (141, 8586), (196, 8727),

Gene: Phabia_56 Start: 42299, Stop: 41907, Start Num: 97
Candidate Starts for Phabia_56:
(Start: 97 @42299 has 9 MA's), (Start: 98 @42296 has 26 MA's), (113, 42257), (152, 42134), (171, 42089), (217, 41915),

Gene: Philon9_47 Start: 48247, Stop: 47753, Start Num: 84
Candidate Starts for Philon9_47:
(Start: 84 @48247 has 12 MA's), (99, 48193), (117, 48139), (150, 48037), (188, 47917),

Gene: Phrank15_91 Start: 48788, Stop: 49189, Start Num: 92
Candidate Starts for Phrank15_91:
(Start: 92 @48788 has 39 MA's), (197, 49076), (216, 49169),

Gene: PierreThree_51 Start: 47781, Stop: 47260, Start Num: 82
Candidate Starts for PierreThree_51:
(Start: 82 @47781 has 63 MA's), (91, 47745), (159, 47487), (212, 47319),

Gene: Pitbull_59 Start: 33633, Stop: 34013, Start Num: 98
Candidate Starts for Pitbull_59:
(Start: 97 @33630 has 9 MA's), (Start: 98 @33633 has 26 MA's), (106, 33651), (126, 33717), (146, 33777), (149, 33786), (196, 33897), (197, 33900),

Gene: Pleakley_26 Start: 10464, Stop: 10973, Start Num: 55
Candidate Starts for Pleakley_26:
(Start: 55 @10464 has 2 MA's), (Start: 98 @10581 has 26 MA's), (105, 10596), (146, 10719), (149, 10728), (196, 10845), (199, 10857),

Gene: PokyPuppy_50 Start: 47715, Stop: 47209, Start Num: 82
Candidate Starts for PokyPuppy_50:
(Start: 82 @47715 has 63 MA's), (91, 47679), (117, 47595), (212, 47268), (214, 47256),

Gene: Poland_55 Start: 48705, Stop: 48184, Start Num: 82
Candidate Starts for Poland_55:
(Start: 82 @48705 has 63 MA's), (91, 48669), (210, 48255),

Gene: Polyzuki_21 Start: 10892, Stop: 11374, Start Num: 86
Candidate Starts for Polyzuki_21:
(2, 10130), (13, 10382), (32, 10598), (68, 10841), (Start: 86 @10892 has 7 MA's), (95, 10937), (103, 10955), (115, 10991), (148, 11087), (155, 11132), (188, 11207), (197, 11252), (212, 11312),

Gene: Pumpernickel_133 Start: 86998, Stop: 87462, Start Num: 111
Candidate Starts for Pumpernickel_133:
(96, 86962), (Start: 111 @86998 has 5 MA's),

Gene: Quammi_54 Start: 41996, Stop: 41607, Start Num: 98
Candidate Starts for Quammi_54:
(Start: 97 @41999 has 9 MA's), (Start: 98 @41996 has 26 MA's), (113, 41957), (152, 41834), (171, 41789), (217, 41615),

Gene: RadFad_89 Start: 48096, Stop: 48530, Start Num: 92
Candidate Starts for RadFad_89:
(Start: 92 @48096 has 39 MA's), (132, 48213), (163, 48351), (197, 48417), (215, 48486),

Gene: Raphaella_84 Start: 46653, Stop: 47147, Start Num: 92
Candidate Starts for Raphaella_84:
(38, 46386), (41, 46428), (Start: 92 @46653 has 39 MA's), (146, 46830), (149, 46839), (193, 47010),

Gene: Raqqa_87 Start: 48508, Stop: 49080, Start Num: 85
Candidate Starts for Raqqa_87:
(Start: 85 @48508 has 3 MA's), (130, 48667), (131, 48670), (152, 48745), (158, 48793),

Gene: RemRem_51 Start: 46243, Stop: 45722, Start Num: 82
Candidate Starts for RemRem_51:
(Start: 82 @46243 has 63 MA's), (91, 46207), (212, 45781),

Gene: Richie_87 Start: 48886, Stop: 49380, Start Num: 92
Candidate Starts for Richie_87:
(Start: 92 @48886 has 39 MA's), (146, 49063), (149, 49072), (193, 49243),

Gene: Rizwana_63 Start: 46128, Stop: 45559, Start Num: 66
Candidate Starts for Rizwana_63:
(Start: 66 @46128 has 3 MA's), (113, 46002), (118, 45984), (131, 45939), (139, 45918), (195, 45690),
(197, 45678),

Gene: RobinSparkles_52 Start: 45706, Stop: 45284, Start Num: 89
Candidate Starts for RobinSparkles_52:
(Start: 89 @45706 has 5 MA's), (Start: 98 @45670 has 26 MA's), (112, 45631), (114, 45625), (118,
45610), (148, 45520), (212, 45346),

Gene: Rowlf_53 Start: 41900, Stop: 41508, Start Num: 98
Candidate Starts for Rowlf_53:
(78, 41969), (Start: 97 @41903 has 9 MA's), (Start: 98 @41900 has 26 MA's), (113, 41858), (152,
41735), (215, 41555), (217, 41516),

Gene: RoyalG_51 Start: 47075, Stop: 46554, Start Num: 82
Candidate Starts for RoyalG_51:
(Start: 82 @47075 has 63 MA's), (91, 47039), (204, 46652), (209, 46637), (214, 46601),

Gene: Rudy_54 Start: 42035, Stop: 41643, Start Num: 97
Candidate Starts for Rudy_54:
(Start: 97 @42035 has 9 MA's), (Start: 98 @42032 has 26 MA's), (113, 41993), (152, 41870), (171,
41825), (217, 41651),

Gene: Sakai_81 Start: 47044, Stop: 47520, Start Num: 92
Candidate Starts for Sakai_81:
(Start: 92 @47044 has 39 MA's), (132, 47161), (162, 47302), (176, 47341), (193, 47383), (197, 47407),
(216, 47500),

Gene: SallyK_58 Start: 43182, Stop: 42760, Start Num: 97
Candidate Starts for SallyK_58:
(Start: 97 @43182 has 9 MA's), (Start: 98 @43179 has 26 MA's), (113, 43137), (125, 43095), (152,
43014), (189, 42918), (217, 42768),

Gene: Sam12_50 Start: 46243, Stop: 45722, Start Num: 82
Candidate Starts for Sam12_50:
(Start: 82 @46243 has 63 MA's), (91, 46207), (212, 45781),

Gene: Satrap_83 Start: 47191, Stop: 47619, Start Num: 92
Candidate Starts for Satrap_83:
(Start: 92 @47191 has 39 MA's), (132, 47308), (193, 47482), (216, 47599),

Gene: Scuba_26 Start: 10550, Stop: 11059, Start Num: 55
Candidate Starts for Scuba_26:
(Start: 55 @10550 has 2 MA's), (Start: 98 @10667 has 26 MA's), (105, 10682), (108, 10685), (146, 10805), (149, 10814), (196, 10931), (199, 10943), (201, 10952),

Gene: Seahorse_91 Start: 52291, Stop: 52725, Start Num: 92
Candidate Starts for Seahorse_91:
(39, 52063), (Start: 92 @52291 has 39 MA's), (193, 52588), (197, 52612),

Gene: Shelley_49 Start: 47020, Stop: 46517, Start Num: 82
Candidate Starts for Shelley_49:
(67, 47065), (72, 47047), (Start: 82 @47020 has 63 MA's), (Start: 97 @46960 has 9 MA's), (193, 46669), (204, 46615),

Gene: Sillytadpoles_57 Start: 41869, Stop: 41480, Start Num: 98
Candidate Starts for Sillytadpoles_57:
(Start: 97 @41872 has 9 MA's), (Start: 98 @41869 has 26 MA's), (113, 41830), (152, 41707), (171, 41662), (217, 41488),

Gene: SlySloth_59 Start: 42544, Stop: 42152, Start Num: 98
Candidate Starts for SlySloth_59:
(Start: 97 @42547 has 9 MA's), (Start: 98 @42544 has 26 MA's), (113, 42502), (125, 42460), (152, 42379), (171, 42334), (217, 42160),

Gene: Sombrero_51 Start: 46616, Stop: 46095, Start Num: 82
Candidate Starts for Sombrero_51:
(Start: 82 @46616 has 63 MA's), (91, 46580), (210, 46166),

Gene: SonDevVon_92 Start: 47989, Stop: 48390, Start Num: 92
Candidate Starts for SonDevVon_92:
(Start: 92 @47989 has 39 MA's), (197, 48277), (216, 48370),

Gene: SpicyFrank_85 Start: 47210, Stop: 47635, Start Num: 92
Candidate Starts for SpicyFrank_85:
(Start: 92 @47210 has 39 MA's), (149, 47375), (193, 47498),

Gene: Sporco_86 Start: 48755, Stop: 49153, Start Num: 92
Candidate Starts for Sporco_86:
(56, 48647), (Start: 92 @48755 has 39 MA's), (197, 49040), (216, 49133),

Gene: Squash_61 Start: 43540, Stop: 43148, Start Num: 98
Candidate Starts for Squash_61:
(78, 43609), (Start: 97 @43543 has 9 MA's), (Start: 98 @43540 has 26 MA's), (113, 43498), (125, 43456), (152, 43375), (171, 43330),

Gene: Squibbles_50 Start: 47106, Stop: 46585, Start Num: 82
Candidate Starts for Squibbles_50:
(Start: 82 @47106 has 63 MA's), (212, 46644),

Gene: Statler_58 Start: 42622, Stop: 42227, Start Num: 97

Candidate Starts for Statler_58:

(78, 42688), (Start: 97 @42622 has 9 MA's), (Start: 98 @42619 has 26 MA's), (113, 42577), (125, 42535), (152, 42454), (171, 42409), (217, 42235),

Gene: SteveFrench_50 Start: 47315, Stop: 46794, Start Num: 82

Candidate Starts for SteveFrench_50:

(Start: 82 @47315 has 63 MA's), (91, 47279), (204, 46892), (209, 46877), (214, 46841),

Gene: Sticker17_49 Start: 47535, Stop: 47032, Start Num: 82

Candidate Starts for Sticker17_49:

(67, 47580), (72, 47562), (Start: 82 @47535 has 63 MA's), (Start: 97 @47475 has 9 MA's), (193, 47184), (204, 47130),

Gene: StrawberryJamm_60 Start: 42333, Stop: 41941, Start Num: 98

Candidate Starts for StrawberryJamm_60:

(Start: 97 @42336 has 9 MA's), (Start: 98 @42333 has 26 MA's), (113, 42291), (125, 42249), (152, 42168), (171, 42123), (217, 41949), (218, 41946),

Gene: Sukkupi_20 Start: 8477, Stop: 8935, Start Num: 79

Candidate Starts for Sukkupi_20:

(3, 7778), (22, 8123), (Start: 79 @8477 has 9 MA's), (93, 8525), (Start: 98 @8543 has 26 MA's), (105, 8558), (115, 8591), (141, 8666), (145, 8678), (196, 8807),

Gene: SuperSonics_109 Start: 64383, Stop: 64847, Start Num: 92

Candidate Starts for SuperSonics_109:

(Start: 92 @64383 has 39 MA's), (189, 64689), (195, 64719), (196, 64728), (201, 64749), (210, 64773), (211, 64776),

Gene: Tank_63 Start: 46124, Stop: 45591, Start Num: 66

Candidate Starts for Tank_63:

(Start: 66 @46124 has 3 MA's), (195, 45722), (205, 45680),

Gene: Teal_49 Start: 48002, Stop: 47499, Start Num: 82

Candidate Starts for Teal_49:

(67, 48047), (72, 48029), (Start: 82 @48002 has 63 MA's), (Start: 97 @47942 has 9 MA's), (193, 47651), (204, 47597),

Gene: Teatealatte_46 Start: 47140, Stop: 46646, Start Num: 84

Candidate Starts for Teatealatte_46:

(Start: 84 @47140 has 12 MA's), (88, 47125), (94, 47098), (186, 46819), (188, 46810), (196, 46768), (198, 46762),

Gene: Teech_46 Start: 46941, Stop: 46447, Start Num: 84

Candidate Starts for Teech_46:

(Start: 84 @46941 has 12 MA's), (88, 46926), (94, 46899), (186, 46620), (188, 46611), (196, 46569), (198, 46563),

Gene: Teehee_57 Start: 43102, Stop: 42713, Start Num: 98

Candidate Starts for Teehee_57:

(Start: 97 @43105 has 9 MA's), (Start: 98 @43102 has 26 MA's), (113, 43063), (152, 42940), (171, 42895), (217, 42721),

Gene: ThayneTheZag_92 Start: 49112, Stop: 49648, Start Num: 85
Candidate Starts for ThayneTheZag_92:
(27, 48812), (Start: 85 @49112 has 3 MA's), (134, 49262), (150, 49307), (152, 49316), (158, 49364),
(190, 49487), (194, 49511),

Gene: Tiff81_79 Start: 45794, Stop: 46192, Start Num: 92
Candidate Starts for Tiff81_79:
(38, 45527), (41, 45569), (Start: 92 @45794 has 39 MA's), (193, 46055), (197, 46079),

Gene: Tissue_58 Start: 42946, Stop: 42539, Start Num: 98
Candidate Starts for Tissue_58:
(19, 43333), (21, 43330), (44, 43102), (58, 43042), (60, 43039), (81, 43009), (Start: 97 @42949 has 9
MA's), (Start: 98 @42946 has 26 MA's), (152, 42784), (217, 42547), (218, 42544),

Gene: Tredge_46 Start: 47140, Stop: 46646, Start Num: 84
Candidate Starts for Tredge_46:
(Start: 84 @47140 has 12 MA's), (88, 47125), (94, 47098), (186, 46819), (188, 46810), (196, 46768),
(198, 46762),

Gene: Viceroy_55 Start: 42002, Stop: 41613, Start Num: 98
Candidate Starts for Viceroy_55:
(Start: 97 @42005 has 9 MA's), (Start: 98 @42002 has 26 MA's), (113, 41963), (152, 41840), (171,
41795), (217, 41621),

Gene: Vitaenoi_47 Start: 48246, Stop: 47752, Start Num: 84
Candidate Starts for Vitaenoi_47:
(Start: 84 @48246 has 12 MA's), (99, 48192), (117, 48138), (150, 48036), (188, 47916),

Gene: Vopal_85 Start: 48719, Stop: 49213, Start Num: 92
Candidate Starts for Vopal_85:
(38, 48452), (41, 48494), (Start: 92 @48719 has 39 MA's), (146, 48896), (149, 48905), (193, 49076),

Gene: Wayne3_58 Start: 42865, Stop: 42476, Start Num: 98
Candidate Starts for Wayne3_58:
(Start: 97 @42868 has 9 MA's), (Start: 98 @42865 has 26 MA's), (113, 42826), (152, 42703), (171,
42658), (217, 42484),

Gene: WheelerS25_64 Start: 44030, Stop: 43635, Start Num: 97
Candidate Starts for WheelerS25_64:
(Start: 97 @44030 has 9 MA's), (Start: 98 @44027 has 26 MA's), (113, 43985), (152, 43862), (215,
43682), (217, 43643),

Gene: Wheelie_56 Start: 42186, Stop: 41797, Start Num: 98
Candidate Starts for Wheelie_56:
(Start: 97 @42189 has 9 MA's), (Start: 98 @42186 has 26 MA's), (113, 42147), (152, 42024), (171,
41979), (217, 41805),

Gene: WhoseManz_20 Start: 8040, Stop: 8498, Start Num: 79
Candidate Starts for WhoseManz_20:
(22, 7686), (Start: 79 @8040 has 9 MA's), (93, 8088), (Start: 98 @8106 has 26 MA's), (105, 8121),
(115, 8154), (120, 8172), (141, 8229), (217, 8490),

Gene: Wilde_65 Start: 46423, Stop: 45890, Start Num: 66
Candidate Starts for Wilde_65:
(Start: 66 @46423 has 3 MA's), (195, 46021), (205, 45979),

Gene: Windest_88 Start: 46371, Stop: 46865, Start Num: 92
Candidate Starts for Windest_88:
(Start: 92 @46371 has 39 MA's), (146, 46548), (149, 46557), (193, 46728),

Gene: Woes_49 Start: 48053, Stop: 47550, Start Num: 82
Candidate Starts for Woes_49:
(67, 48098), (72, 48080), (Start: 82 @48053 has 63 MA's), (Start: 97 @47993 has 9 MA's), (193, 47702), (204, 47648),

Gene: Wollypog_81 Start: 56236, Stop: 56814, Start Num: 70
Candidate Starts for Wollypog_81:
(51, 56194), (59, 56209), (Start: 70 @56236 has 1 MA's), (Start: 84 @56284 has 12 MA's), (87, 56296), (102, 56350), (144, 56476), (149, 56488), (159, 56560), (170, 56605), (191, 56668), (192, 56674), (212, 56752), (216, 56791),

Gene: Worcestershire_51 Start: 46245, Stop: 45724, Start Num: 82
Candidate Starts for Worcestershire_51:
(Start: 82 @46245 has 63 MA's), (91, 46209), (117, 46125), (212, 45783),

Gene: Yndexa_20 Start: 8477, Stop: 8935, Start Num: 79
Candidate Starts for Yndexa_20:
(3, 7778), (22, 8123), (Start: 79 @8477 has 9 MA's), (93, 8525), (Start: 98 @8543 has 26 MA's), (105, 8558), (115, 8591), (141, 8666), (145, 8678), (196, 8807),

Gene: YoungHarleezy_85 Start: 48259, Stop: 48660, Start Num: 92
Candidate Starts for YoungHarleezy_85:
(Start: 92 @48259 has 39 MA's), (197, 48547),

Gene: Zagie_57 Start: 42527, Stop: 42138, Start Num: 98
Candidate Starts for Zagie_57:
(Start: 85 @42578 has 3 MA's), (Start: 97 @42530 has 9 MA's), (Start: 98 @42527 has 26 MA's), (113, 42488), (125, 42446), (152, 42365), (171, 42320), (217, 42146),

Gene: Zhafia_59 Start: 42666, Stop: 42277, Start Num: 98
Candidate Starts for Zhafia_59:
(Start: 97 @42669 has 9 MA's), (Start: 98 @42666 has 26 MA's), (113, 42627), (152, 42504), (171, 42459), (217, 42285),

Gene: Zooman_120 Start: 82979, Stop: 83374, Start Num: 111
Candidate Starts for Zooman_120:
(96, 82943), (Start: 111 @82979 has 5 MA's), (118, 83009), (157, 83171), (203, 83261),

Gene: Zucker_85 Start: 49487, Stop: 49963, Start Num: 85
Candidate Starts for Zucker_85:
(27, 49187), (Start: 85 @49487 has 3 MA's), (150, 49670), (152, 49679), (205, 49874),