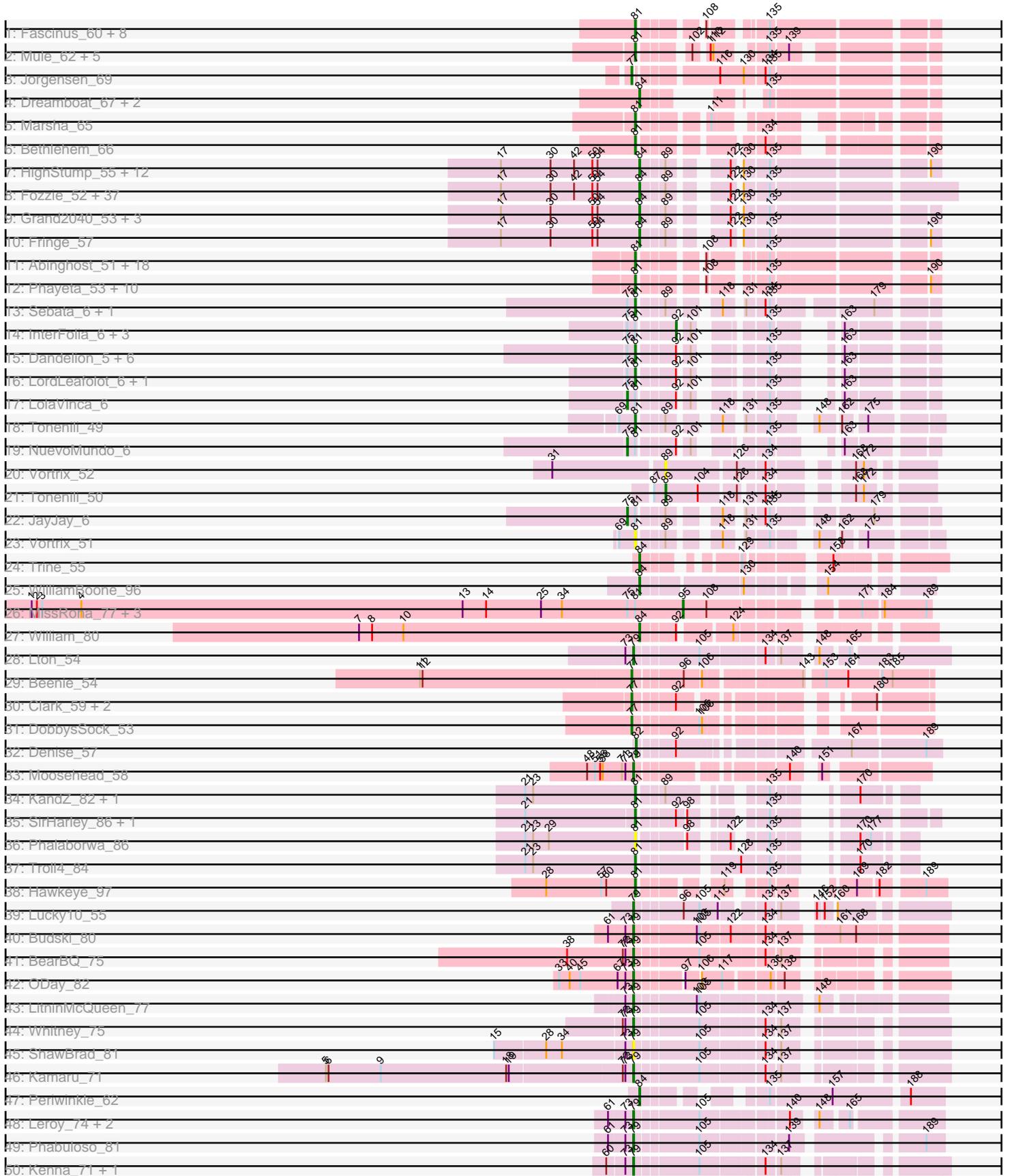
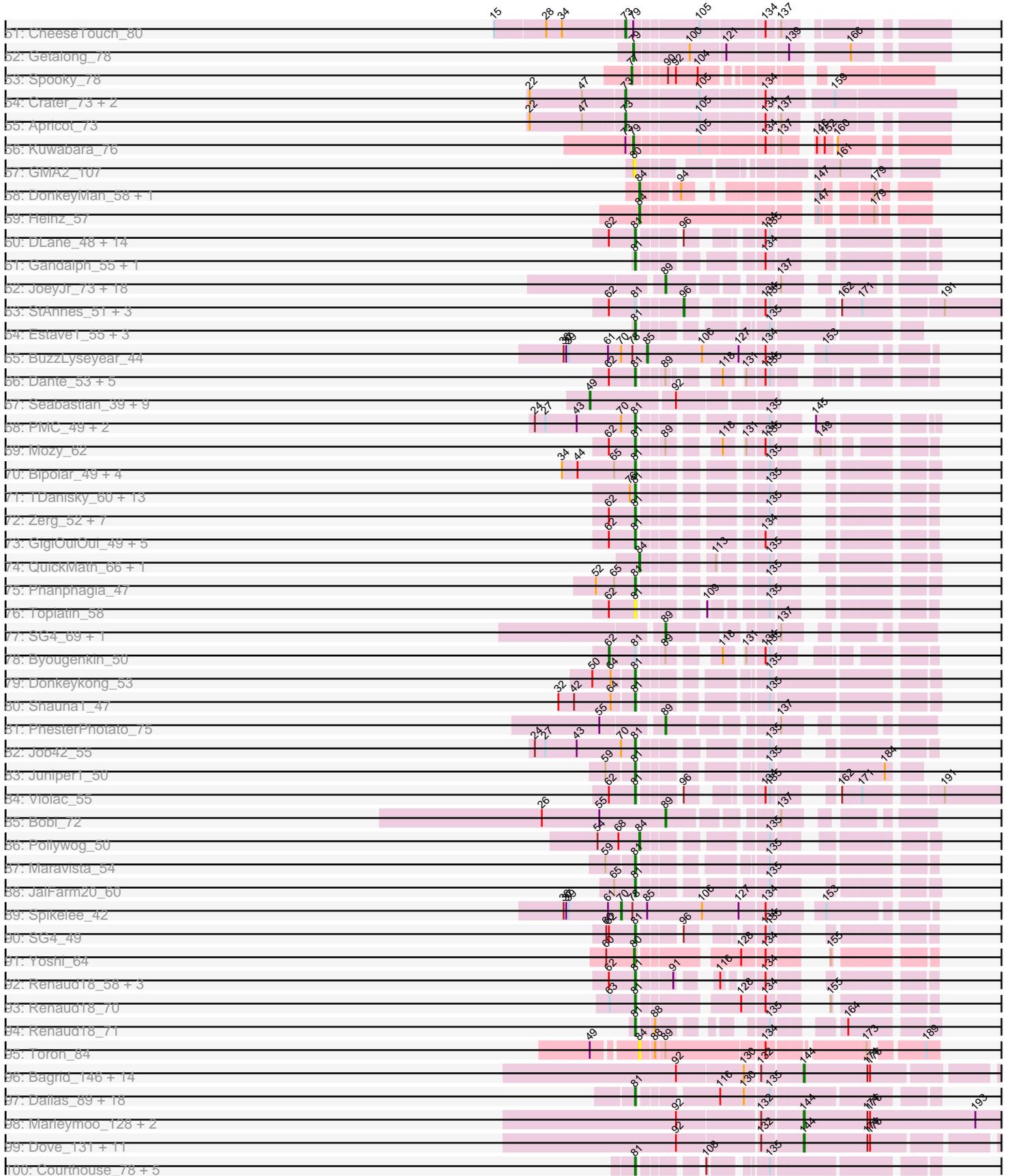


Pham 290723



Pham 290723



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 290723 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290723 has 402 members, 32 are drafts.

Phages represented in each track:

- Track 1 : Fascinus_60, Paraselene_66, Carlyle_66, CactusRose_66, Maroc7_64, Blue_65, Makemake_71, Graduation_70, Bigfoot_58
- Track 2 : Mule_62, Sunshine924_70, Smairt_67, Aeneas_68, PhrostyMug_65, BaconJack_70
- Track 3 : Jorgensen_69
- Track 4 : Dreamboat_67, PherrisBueller_66, Jasper_66
- Track 5 : Marsha_65
- Track 6 : Bethlehem_66
- Track 7 : HighStump_55, HenryJackson_53, Kahve_53, Orwigg_53, Childish_53, Soile_54, Nicole21_54, DaddyDaniels_55, Iridessa_54, Craff_56, Legolas_55, Longacauda_54, Brilliant_55
- Track 8 : Fozzie_52, CamL_53, Mosaic_52, Sophia_52, Serendipity_53, TallGrassMM_53, Surely_53, Chorkpop_53, Squid_53, MrPhizzler_55, Morgushi_53, Solosis_52, Timmi_52, MitKao_53, Maru_53, Rimu_54, Lasso_53, Potter_52, Samaymay_53, QueenBeane_53, Mana_52, Daffy_53, LeeLot_53, Oosterbaan_53, Hertubise_53, Zelda_53, Cannibal_53, Kwadwo_52, Thora_53, Haleema_52, TomBombadil_53, SassyCat97_52, Vortex_53, Puhltonio_53, Xavier_52, Held_53, Cosmolli16_54, Banjo_52
- Track 9 : Grand2040_53, Mesh1_54, Lumine_54, Giraffe_54
- Track 10 : Fringe_57
- Track 11 : Abinghost_51, Neos5_51, SynergyX_51, Baloo_51, GlenHope_52, Audrey_51, Nozo_51, Daisy_51, ChaChing_51, Philly_50, Glubnar_52, Halfpint_50, OrangeOswald_51, Corofin_51, Akoma_51, Kamiyu_51, Phlyer_51, Athena_52, Chandler_51
- Track 12 : Phayeta_53, Chentzyk_52, Kronus_51, Gervas_52, Mortcellus_51, Ben11_51, Casbah_51, Rita1961_52, TinyTerror_52, MmasiCarm_52, Obutu_52
- Track 13 : Sebata_6, LinStu_6
- Track 14 : InterFolia_6, Tainan_6, PharkleMinkus_6, Pupusa_6
- Track 15 : Dandelion_5, DTDevon_6, Pier_6, Specks_6, Nappy_5, Drazdys_6, Tyke_6
- Track 16 : LordLeafolot_6, FrayBell_6
- Track 17 : LolaVinca_6
- Track 18 : Tonenili_49
- Track 19 : NuevoMundo_6
- Track 20 : Vortrix_52
- Track 21 : Tonenili_50
- Track 22 : JayJay_6

- Track 23 : Vortrix_51
- Track 24 : Trine_55
- Track 25 : WilliamBoone_96
- Track 26 : MissRona_77, Blueberry_76, Azula_77, Gambino_79
- Track 27 : William_80
- Track 28 : Lton_54
- Track 29 : Beenie_54
- Track 30 : Clark_59, Invectra_62, Samman98_60
- Track 31 : DobbysSock_53
- Track 32 : Denise_57
- Track 33 : Moosehead_58
- Track 34 : KandZ_82, Helpful_87
- Track 35 : SirHarley_86, Gumball_84
- Track 36 : Phalaborwa_86
- Track 37 : Troll4_84
- Track 38 : Hawkeye_97
- Track 39 : Lucky10_55
- Track 40 : Budski_80
- Track 41 : BearBQ_75
- Track 42 : ODay_82
- Track 43 : LitninMcQueen_77
- Track 44 : Whitney_75
- Track 45 : ShawBrad_81
- Track 46 : Kamaru_71
- Track 47 : Periwinkle_62
- Track 48 : Leroy_74, Holliday_79, OneDirection_52
- Track 49 : Phabuloso_81
- Track 50 : Kenna_71, Lutum_77
- Track 51 : CheeseTouch_80
- Track 52 : Getalong_78
- Track 53 : Spooky_78
- Track 54 : Crater_73, Horus_75, Phistory_72
- Track 55 : Apricot_73
- Track 56 : Kuwabara_76
- Track 57 : GMA2_107
- Track 58 : DonkeyMan_58, Tarzan_58
- Track 59 : Heinz_57
- Track 60 : DLane_48, MinionDave_51, XFactor_50, PhesterPhotato_54, Hamulus_53, Ardmore_44, Moonbeam_48, Batiatus_50, Melissauren88_50, Royals2015_55, Phalconet_51, MilleniumForce_52, CaptainTrips_49, Tweety_52, Madiba_50
- Track 61 : Gandalph_55, Polka14_51
- Track 62 : JoeyJr_73, PHappiness_73, Leperchaun_71, Empress_71, Sassafras_74, Doomphist_76, Poenanya_76, Nimbo_65, Geralt_66, Polka14_77, Deb65_66, RitaG_73, Scottish_71, Daenerys_72, Dorothy_74, KingMidas_72, Inventum_71, RedBird_74, OldBen_70
- Track 63 : StAnnes_51, Medindi_50, Filuzino_50, IMpilo_49
- Track 64 : Estave1_55, Eish_57, DoRead_54, Whatsapiecost_53
- Track 65 : BuzzLyseyear_44
- Track 66 : Dante_53, Inventum_47, Demsculpinboyz_62, DaWorst_54, DaddyRickover_52, Sassafras_50
- Track 67 : Seabastian_39, Ochi17_37, Jinglebell_38, Nichirin_39, OfUltron_39, Yoshi_44, Llama_39, Modragons_38, Oksu_39, AlpineSix_39

- Track 68 : PMC_49, Boomer_57, Rockne_53
- Track 69 : Mozy_62
- Track 70 : Bipolar_49, SuperGrey_52, ShroomBoi_52, KristaRAM_51, Kenuha5_50
- Track 71 : TDanisky_60, Madiba_63, Ogopogo_57, Chuckly_55, Phasih_51, Minerva_89, Clank_57, Optimus_84, BAKA_91, Mova_66, EricMillard_83, Sparkdehlily_60, Aubs_53, MadMen_50
- Track 72 : Zerg_52, Che8_55, Firehouse51_53, ArcusAngelus_56, Mwanjiwa_58, Chevrolet_59, RockyHorror_53, Doug_55
- Track 73 : GigiOuiOui_49, OwlsT2W_53, Doomphist_52, Poenanya_52, Cornucopia_55, DotProduct_48
- Track 74 : QuickMath_66, Kimberlium_67
- Track 75 : Phanphagia_47
- Track 76 : Topiatin_58
- Track 77 : SG4_69, Hegedechwinu_72
- Track 78 : Byougenkin_50
- Track 79 : Donkeykong_53
- Track 80 : Shauna1_47
- Track 81 : PhesterPhotato_75
- Track 82 : Job42_55
- Track 83 : Juniper1_50
- Track 84 : Violac_55
- Track 85 : Bobi_72
- Track 86 : Pollywog_50
- Track 87 : Maravista_54
- Track 88 : JalFarm20_60
- Track 89 : Spikelee_42
- Track 90 : SG4_49
- Track 91 : Yoshi_64
- Track 92 : Renaud18_58, Taj_56, Wee_55, DeadP_58
- Track 93 : Renaud18_70
- Track 94 : Renaud18_71
- Track 95 : Toron_84
- Track 96 : Bagrid_146, ThreeRngTarjay_140, Halley_147, Pound_137, DmpstrDiver_146, Ejimix_138, Phoebus_145, Optimus_136, BAKA_145, EricMillard_137, Hughesyang_144, Constella_139, Duke13_141, Dallas_146, Schatzie_141
- Track 97 : Dallas_89, Hughesyang_90, DmpstrDiver_90, ThreeRngTarjay_87, Kalah2_84, Yeet_83, Zelink_87, Dove_75, Phoebus_92, Schatzie_85, Halley_91, Bombitas_78, Bagrid_89, NihilNomen_91, Beem_90, JuicyJay_87, Odette_88, Constella_75, HokkenD_79
- Track 98 : Marleymoo_128, Bobby_135, Hidrated_131
- Track 99 : Dove_131, NihilNomen_147, HokkenD_138, Yeet_139, Odette_149, Kalah2_136, Redno2_140, JuicyJay_141, Klein_143, Beem_147, KashFlow_144, Bombitas_133
- Track 100 : Courthouse_78, MiaZeal_83, Ariel_82, Lucky2013_80, Porcelain_82, Squint_83
- Track 101 : Minerva_145, Wanda_145
- Track 102 : Wanda_94, Klein_90
- Track 103 : Porcelain_141, MiaZeal_144, Lucky2013_137
- Track 104 : Xiaokay_141
- Track 105 : Zelink_140
- Track 106 : Thibault_128
- Track 107 : Rando14_64

- Track 108 : VanLee_73
- Track 109 : VanLee_59
- Track 110 : Colossa_75
- Track 111 : Colossa_74
- Track 112 : Douge_118
- Track 113 : Smooch_99
- Track 114 : Etoile_52, Langerak_53, Chubbello_52, Fishburne_52, FirstPlacePfu_54, Bartholomew_52, Venti_53, Kari_52
- Track 115 : Polkaroo_55
- Track 116 : BigNuz_57
- Track 117 : Nazo_58
- Track 118 : Phayonce_59
- Track 119 : Purky_63
- Track 120 : Purky_64
- Track 121 : Lilbit_7, VasuNzinga_8, Pringar_6, Beelzebub_8, FeliMaine_7, Clarkson_7
- Track 122 : RedRaider77_9
- Track 123 : Stellammi_140
- Track 124 : Gaia_57
- Track 125 : Gaia_56
- Track 126 : Gudmit_51
- Track 127 : GMA1_52
- Track 128 : GAL1_58

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

The start number called the most often in the published annotations is 81, it was called in 173 of the 370 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_51, Aeneas_68, Akoma_51, ArcusAngelus_56, Ardmore_44, Ariel_82, Athena_52, Aubs_53, Audrey_51, BAKA_91, BaconJack_70, Bagrid_89, Baloo_51, Batiatus_50, Beelzebub_8, Beem_90, Ben11_51, Bethlehem_66, Bigfoot_58, Bipolar_49, Blue_65, Bombitas_78, Boomer_57, CactusRose_66, CaptainTrips_49, Carlyle_66, Casbah_51, ChaChing_51, Chandler_51, Che8_55, Chentzyk_52, Chevrolet_59, Chuckly_55, Clank_57, Clarkson_7, Constella_75, Cornucopia_55, Corofin_51, Courthouse_78, DLane_48, DTDevon_6, DaWorst_54, DaddyRickover_52, Daisy_51, Dallas_89, Dandelion_5, Dante_53, DeadP_58, Demsculpinboyz_62, DmpstrDiver_90, DoRead_54, Donkeykong_53, Doomphist_52, DotProduct_48, Doug_55, Dove_75, Drazdys_6, Eish_57, EricMillard_83, Estave1_55, Fascinus_60, FeliMaine_7, Firehouse51_53, FrayBell_6, Gandalph_55, Gervas_52, GigiOuiOui_49, GlenHope_52, Glubnar_52, Graduation_70, Gumball_84, Halfpint_50, Halley_91, Hamulus_53, Hawkeye_97, Helpful_87, HokkenD_79, Hughesyang_90, Inventum_47, JalFarm20_60, Job42_55, JuicyJay_87, Juniper1_50, Kalah2_84, Kamiyu_51, KandZ_82, Kenuha5_50, Klein_90, KristaRAM_51, Kronus_51, Lilbit_7, LinStu_6, LordLeafolot_6, Lucky2013_80, MadMen_50, Madiba_50, Madiba_63, Makemake_71, Maravista_54, Maroc7_64, Marsha_65, Melissauren88_50, MiaZeal_83, MilleniumForce_52, Minerva_89, MinionDave_51, MmasiCarm_52, Moonbeam_48, Mortcellus_51, Mova_66, Mozy_62, Mule_62, Mwanjiwa_58, Nappy_5, Neos5_51, NihilNomen_91, Nozo_51, Obutu_52,

Odette_88, Ogopogo_57, Optimus_84, OrangeOswald_51, OwlsT2W_53, PMC_49, Paraselene_66, Phalaborwa_86, Phalconet_51, Phanphagia_47, Phasih_51, Phayeta_53, PhesterPotato_54, Philly_50, Phlyer_51, Phoebus_92, PhrostyMug_65, Pier_6, Poenanya_52, Polka14_51, Porcelain_82, Pringar_6, RedRaider77_9, Renaud18_58, Renaud18_70, Renaud18_71, Rita1961_52, Rockne_53, RockyHorror_53, Royals2015_55, SG4_49, Sassafras_50, Schatzie_85, Sebata_6, Shauna1_47, ShroomBoi_52, SirHarley_86, Smairt_67, Smooch_99, Sparkdehlily_60, Specks_6, Squint_83, Stellammi_140, Sunshine924_70, SuperGrey_52, SynergyX_51, TDanisky_60, Taj_56, ThreeRngTarjay_87, TinyTerror_52, Tonenili_49, Topiatin_58, Troll4_84, Tweety_52, Tyke_6, VasuNzinga_8, Violac_55, Vortrix_51, Wanda_94, Wee_55, Whatsapiecost_53, XFactor_50, Yeet_83, Zelink_87, Zerg_52,

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

- Azula_77, Blueberry_76, Byougenkin_50, Filuzino_50, Gambino_79, IMpilo_49, InterFolia_6, JayJay_6, LolaVinca_6, Medindi_50, MissRona_77, NuevoMundo_6, PharkleMinkus_6, Pupusa_6, StAnnes_51, Tainan_6,

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

- AlpineSix_39, Apricot_73, BAKA_145, Bagrid_146, Banjo_52, Bartholomew_52, BearBQ_75, Beem_147, Beenie_54, BigNuz_57, Bobby_135, Bobi_72, Bombitas_133, Brilliant_55, Budski_80, BuzzLyseyear_44, CamL_53, Cannibal_53, CheeseTouch_80, Childish_53, Chorkpop_53, Chubbello_52, Clark_59, Colossa_74, Colossa_75, Constella_139, Cosmolli16_54, Craff_56, Crater_73, DaddyDaniels_55, Daenerys_72, Daffy_53, Dallas_146, Deb65_66, Denise_57, DmpstrDiver_146, DobbysSock_53, DonkeyMan_58, Doomphist_76, Dorothy_74, Douge_118, Dove_131, Dreamboat_67, Duke13_141, Ejimix_138, Empress_71, EricMillard_137, Etoile_52, FirstPlacePfu_54, Fishburne_52, Fozzie_52, Fringe_57, GAL1_58, GMA1_52, GMA2_107, Gaia_56, Gaia_57, Geralt_66, Getalong_78, Giraffe_54, Grand2040_53, Gudmit_51, Haleema_52, Halley_147, Hegedechwinu_72, Heinz_57, Held_53, HenryJackson_53, Hertubise_53, Hidrated_131, HighStump_55, HokkenD_138, Holliday_79, Horus_75, Hughesyang_144, Invectra_62, Inventum_71, Iridessa_54, Jasper_66, Jinglebell_38, JoeyJr_73, Jorgensen_69, JuicyJay_141, Kahve_53, Kalah2_136, Kamaru_71, Kari_52, KashFlow_144, Kenna_71, Kimberlium_67, KingMidas_72, Klein_143, Kuwabara_76, Kwadwo_52, Langerak_53, Lasso_53, LeeLot_53, Legolas_55, Leperchaun_71, Leroy_74, LitninMcQueen_77, Llama_39, Longacauda_54, Lton_54, Lucky10_55, Lucky2013_137, Lumine_54, Lutum_77, Mana_52, Marleymoo_128, Maru_53, Mesh1_54, MiaZeal_144, Minerva_145, MitKao_53, Modragons_38, Moosehead_58, Morgushi_53, Mosaic_52, MrPhizzler_55, Nazo_58, Nichirin_39, Nicole21_54, NihilNomen_147, Nimbo_65, ODay_82, Ochi17_37, Odette_149, OfUltron_39, Oksu_39, OldBen_70, OneDirection_52, Oosterbaan_53, Optimus_136, Orwigg_53, PHappiness_73, Periwinkle_62, Phabuloso_81, Phayonce_59, PherrisBueller_66, PhesterPotato_75, Phistory_72, Phoebus_145, Poenanya_76, Polka14_77, Polkaroo_55, Pollywog_50, Porcelain_141, Potter_52, Pound_137, Puhltonio_53, Purky_63, Purky_64, QueenBeane_53, QuickMath_66, Rando14_64, RedBird_74, Redno2_140, Rimu_54, RitaG_73, SG4_69, Samaymay_53, Samman98_60, Sassafras_74, SassyCat97_52, Schatzie_141, Scottish_71, Seabastian_39, Serendipity_53, ShawBrad_81, Soile_54, Solosis_52, Sophia_52, Spikelee_42, Spooky_78, Squid_53, Surely_53, TallGrassMM_53, Tarzan_58, Thibault_128, Thora_53, ThreeRngTarjay_140, Timmi_52, TomBombadil_53, Tonenili_50, Toron_84, Trine_55, VanLee_59, VanLee_73, Venti_53, Vortex_53, Vortrix_52, Wanda_145, Whitney_75, WilliamBoone_96, William_80, Xavier_52, Xiaokay_141, Yeet_139, Yoshi_44,

Yoshi_64, Zelda_53, Zelink_140,

Summary by start number:

Start 49:

- Found in 11 of 402 (2.7%) of genes in pham
- Manual Annotations of this start: 8 of 370
- Called 90.9% of time when present
- Phage (with cluster) where this start called: AlpineSix_39 (F1), Jinglebell_38 (F1), Llama_39 (F1), Modragons_38 (F1), Nichirin_39 (F1), Ochi17_37 (F1), OfUltron_39 (F1), Oksu_39 (F1), Sebastian_39 (F1), Yoshi_44 (F2),

Start 62:

- Found in 48 of 402 (11.9%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 2.1% of time when present
- Phage (with cluster) where this start called: Byougenkin_50 (F1),

Start 70:

- Found in 7 of 402 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Spikelee_42 (F1),

Start 73:

- Found in 21 of 402 (5.2%) of genes in pham
- Manual Annotations of this start: 5 of 370
- Called 23.8% of time when present
- Phage (with cluster) where this start called: Apricot_73 (DN3), CheeseTouch_80 (DN1), Crater_73 (DN3), Horus_75 (DN1), Phistory_72 (DN1),

Start 75:

- Found in 22 of 402 (5.5%) of genes in pham
- Manual Annotations of this start: 3 of 370
- Called 13.6% of time when present
- Phage (with cluster) where this start called: JayJay_6 (C1), LolaVinca_6 (C1), NuevoMundo_6 (C1),

Start 77:

- Found in 10 of 402 (2.5%) of genes in pham
- Manual Annotations of this start: 9 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beenie_54 (CZ4), Clark_59 (CZ4), DobbysSock_53 (CZ4), GAL1_58 (singleton), Gudmit_51 (singleton), Invectra_62 (CZ4), Jorgensen_69 (A1), Samman98_60 (CZ4), Spooky_78 (DN2), VanLee_59 (KA),

Start 79:

- Found in 19 of 402 (4.7%) of genes in pham
- Manual Annotations of this start: 17 of 370
- Called 94.7% of time when present
- Phage (with cluster) where this start called: BearBQ_75 (DN), Budski_80 (DN), Getalong_78 (DN1), Holliday_79 (DN1), Kamaru_71 (DN1), Kenna_71 (DN1),

Kuwabara_76 (DN4), Leroy_74 (DN1), LitninMcQueen_77 (DN1), Lton_54 (CZ), Lucky10_55 (DH), Lutum_77 (DN1), Moosehead_58 (CZ6), ODay_82 (DN), OneDirection_52 (CZ6), Phabuloso_81 (DN1), ShawBrad_81 (DN1), Whitney_75 (DN1),

Start 80:

- Found in 3 of 402 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA1_52 (singleton), GMA2_107 (DS), Yoshi_64 (F2),

Start 81:

- Found in 199 of 402 (49.5%) of genes in pham
- Manual Annotations of this start: 173 of 370
- Called 92.0% of time when present
- Phage (with cluster) where this start called: Abinghost_51 (B3), Aeneas_68 (A1), Akoma_51 (B3), ArcusAngelus_56 (F1), Ardmore_44 (F1), Ariel_82 (J), Athena_52 (B3), Aubs_53 (F1), Audrey_51 (B3), BAKA_91 (J), BaconJack_70 (A1), Bagrid_89 (J), Baloo_51 (B3), Batiatus_50 (F1), Beelzebub_8 (S), Beem_90 (J), Ben11_51 (B3), Bethlehem_66 (A1), Bigfoot_58 (A1), Bipolar_49 (F1), Blue_65 (A1), Bombitas_78 (J), Boomer_57 (F1), CactusRose_66 (A1), CaptainTrips_49 (F1), Carlyle_66 (A1), Casbah_51 (B3), ChaChing_51 (B3), Chandler_51 (B3), Che8_55 (F1), Chentzyk_52 (B3), Chevrolet_59 (F1), Chuckly_55 (F1), Clank_57 (F), Clarkson_7 (S), Constella_75 (J), Cornucopia_55 (F1), Corofin_51 (B3), Courthouse_78 (J), DLane_48 (F1), DTDevon_6 (C1), DaWorst_54 (F1), DaddyRickover_52 (F1), Daisy_51 (B3), Dallas_89 (J), Dandelion_5 (C1), Dante_53 (F1), DeadP_58 (F1), Demsculpinboyz_62 (F2), DmpstrDiver_90 (J), DoRead_54 (F1), Donkeykong_53 (F1), Doomphist_52 (F1), DotProduct_48 (F1), Doug_55 (F1), Dove_75 (J), Drazdys_6 (C1), Eish_57 (F1), EricMillard_83 (J), Estave1_55 (F1), Fascinus_60 (A1), FeliMaine_7 (S), Firehouse51_53 (F1), FrayBell_6 (C1), Gandolph_55 (F1), Gervas_52 (B3), GigiOuiOui_49 (F1), GlenHope_52 (B3), Glubnar_52 (B3), Graduation_70 (A1), Gumball_84 (D1), Halfpint_50 (B3), Halley_91 (J), Hamulus_53 (F1), Hawkeye_97 (D2), Helpful_87 (D1), HokkenD_79 (J), Hughesyang_90 (J), Inventum_47 (F1), JalFarm20_60 (F1), Job42_55 (F1), JuicyJay_87 (J), Juniper1_50 (F1), Kalah2_84 (J), Kamiyu_51 (B3), KandZ_82 (D1), Kenuha5_50 (F1), Klein_90 (J), KristaRAM_51 (F1), Kronus_51 (B3), Lilbit_7 (S), LinStu_6 (C1), LordLeafolot_6 (C1), Lucky2013_80 (J), MadMen_50 (F1), Madiba_50 (F1), Madiba_63 (F1), Makemake_71 (A1), Maravista_54 (F1), Maroc7_64 (A1), Marsha_65 (A1), Melissauren88_50 (F1), MiaZeal_83 (J), MilleniumForce_52 (F1), Minerva_89 (J), MinionDave_51 (F1), MmasiCarm_52 (B3), Moonbeam_48 (F1), Mortcellus_51 (B3), Mova_66 (F1), Mozy_62 (F1), Mule_62 (A1), Mwanjiwa_58 (F1), Nappy_5 (C1), Neos5_51 (B3), NihilNomen_91 (J), Nozo_51 (B3), Obutu_52 (B3), Odette_88 (J), Ogopogo_57 (F1), Optimus_84 (J), OrangeOswald_51 (B3), OwlsT2W_53 (F1), PMC_49 (F1), Paraselene_66 (A1), Phalaborwa_86 (D1), Phalconet_51 (F1), Phanphagia_47 (F1), Phasih_51 (F1), Phayeta_53 (B3), PhesterPotato_54 (F1), Philly_50 (B3), Phlyer_51 (B3), Phoebus_92 (J), PhrostyMug_65 (A1), Pier_6 (C1), Poenanya_52 (F1), Polka14_51 (F1), Porcelain_82 (J), Pringar_6 (S), RedRaider77_9 (S), Renaud18_58 (F4), Renaud18_70 (F4), Renaud18_71 (F4), Rita1961_52 (B3), Rockne_53 (F1), RockyHorror_53 (F1), Royals2015_55 (F1), SG4_49 (F1), Sassafra_50 (F1), Schatzie_85 (J), Sebata_6 (C1), Shauna1_47 (F1), ShroomBoi_52 (F1), SirHarley_86 (D1), Smairt_67 (A1), Smooch_99 (O), Sparkdehlily_60 (F1), Specks_6 (C1), Squint_83 (J), Stellammi_140 (UNK),

Sunshine924_70 (A1), SuperGrey_52 (F1), SynergyX_51 (B3), TDanisky_60 (F1), Taj_56 (F1), ThreeRngTarjay_87 (J), TinyTerror_52 (B3), Tonenili_49 (C1), Topiatin_58 (F1), Troll4_84 (D1), Tweety_52 (F1), Tyke_6 (C1), VasuNzinga_8 (S), Violac_55 (F1), Vortrix_51 (C1), Wanda_94 (J), Wee_55 (F1), Whatsapiecost_53 (F1), XFactor_50 (F1), Yeet_83 (J), Zelink_87 (J), Zerg_52 (F1),

Start 82:

- Found in 1 of 402 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Denise_57 (CZ5),

Start 83:

- Found in 1 of 402 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rando14_64 (K5),

Start 84:

- Found in 74 of 402 (18.4%) of genes in pham
- Manual Annotations of this start: 72 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banjo_52 (B1), Brilliant_55 (B1), CamL_53 (B1), Cannibal_53 (B1), Childish_53 (B1), Chorkpop_53 (B1), Colossa_75 (KA), Cosmolli16_54 (B1), Craff_56 (B1), DaddyDaniels_55 (B1), Daffy_53 (B1), DonkeyMan_58 (DY), Dreamboat_67 (A1), Fozzie_52 (B1), Fringe_57 (B1), Giraffe_54 (B1), Grand2040_53 (B1), Haleema_52 (B1), Heinz_57 (DY), Held_53 (B1), HenryJackson_53 (B1), Hertubise_53 (B1), HighStump_55 (B1), Iridessa_54 (B1), Jasper_66 (A1), Kahve_53 (B1), Kimberlium_67 (F1), Kwadwo_52 (B1), Lasso_53 (B1), LeeLot_53 (B1), Legolas_55 (B1), Longacauda_54 (B1), Lumine_54 (B1), Mana_52 (B1), Maru_53 (B1), Mesh1_54 (B1), MitKao_53 (B1), Morgushi_53 (B1), Mosaic_52 (B1), MrPhizzler_55 (B1), Nicole21_54 (B1), Oosterbaan_53 (B1), Orwigg_53 (B1), Periwinkle_62 (DN1), PherrisBueller_66 (A1), Pollywog_50 (F1), Potter_52 (B1), Puhltonio_53 (B1), Purky_63 (P6), Purky_64 (P6), QueenBeane_53 (B1), QuickMath_66 (F1), Rimu_54 (B1), Samaymay_53 (B1), SassyCat97_52 (B1), Serendipity_53 (B1), Soile_54 (B1), Solosis_52 (B1), Sophia_52 (B1), Squid_53 (B1), Surely_53 (B1), TallGrassMM_53 (B1), Tarzan_58 (DY), Thora_53 (B1), Timmi_52 (B1), TomBombadil_53 (B1), Toron_84 (F6), Trine_55 (CD), VanLee_73 (KA), Vortex_53 (B1), WilliamBoone_96 (CQ1), William_80 (CV), Xavier_52 (B1), Zelda_53 (B1),

Start 85:

- Found in 2 of 402 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BuzzLyseyear_44 (F1),

Start 86:

- Found in 1 of 402 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_56 (X),

Start 89:

- Found in 110 of 402 (27.4%) of genes in pham
- Manual Annotations of this start: 35 of 370
- Called 34.5% of time when present
- Phage (with cluster) where this start called: Bartholomew_52 (P1), BigNuz_57 (P4), Bobi_72 (F1), Chubbello_52 (P1), Daenerys_72 (F1), Deb65_66 (F1), Doomphist_76 (F1), Dorothy_74 (F1), Douge_118 (L4), Empress_71 (F1), Etoile_52 (P1), FirstPlacePfu_54 (P1), Fishburne_52 (P1), Gaia_57 (X), Geralt_66 (F1), Hegedechwinu_72 (F1), Inventum_71 (F1), JoeyJr_73 (F1), Kari_52 (P1), KingMidas_72 (F1), Langerak_53 (P1), Leperchaun_71 (F1), Nazo_58 (P4), Nimbo_65 (F1), OldBen_70 (F1), PHappiness_73 (F1), PhesterPhotato_75 (F1), Poenanya_76 (F1), Polka14_77 (F1), Polkaroo_55 (P1), RedBird_74 (F1), RitaG_73 (F1), SG4_69 (F1), Sassafras_74 (F1), Scottish_71 (F1), Tonenili_50 (C1), Venti_53 (P1), Vortex_52 (C1),

Start 92:

- Found in 72 of 402 (17.9%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 5.6% of time when present
- Phage (with cluster) where this start called: InterFolia_6 (C1), PharkleMinkus_6 (C1), Pupusa_6 (C1), Tainan_6 (C1),

Start 93:

- Found in 3 of 402 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 370
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Phayonce_59 (P5),

Start 95:

- Found in 4 of 402 (1.0%) of genes in pham
- Manual Annotations of this start: 4 of 370
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azula_77 (CV), Blueberry_76 (CV), Gambino_79 (CV), MissRona_77 (CV),

Start 96:

- Found in 23 of 402 (5.7%) of genes in pham
- Manual Annotations of this start: 2 of 370
- Called 17.4% of time when present
- Phage (with cluster) where this start called: Filuzino_50 (F1), IMpilo_49 (F1), Medindi_50 (F1), StAnnes_51 (F1),

Start 100:

- Found in 2 of 402 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Colossa_74 (KA),

Start 144:

- Found in 38 of 402 (9.5%) of genes in pham
- Manual Annotations of this start: 33 of 370
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BAKA_145 (J), Bagrid_146 (J), Beem_147 (J), Bobby_135 (J), Bombitas_133 (J), Constella_139 (J), Dallas_146 (J), DmpstrDiver_146 (J), Dove_131 (J), Duke13_141 (J), Ejimix_138 (J), EricMillard_137 (J), Halley_147 (J), Hidrated_131 (J), HokkenD_138 (J), Hughesyang_144 (J), JuicyJay_141 (J), Kalah2_136 (J), KashFlow_144 (J), Klein_143 (J), Lucky2013_137 (J), Marleymoo_128 (J), MiaZeal_144 (J), Minerva_145 (J), NihilNomen_147 (J), Odette_149 (J), Optimus_136 (J), Phoebus_145 (J), Porcelain_141 (J), Pound_137 (J), Redno2_140 (J), Schatzie_141 (J), Thibault_128 (J), ThreeRngTarjay_140 (J), Wanda_145 (J), Xiaokay_141 (J), Yeet_139 (J), Zelink_140 (J),

Summary by clusters:

There are 39 clusters represented in this pham: DN, singleton, CQ1, DH, CZ6, CZ4, CZ5, K5, DY, DS, F, A1, DN4, DN1, DN3, DN2, C1, P1, P6, P4, P5, J, KA, O, CD, CZ, S, X, UNK, CV, F1, F2, F4, F6, L4, B1, B3, D2, D1,

Info for manual annotations of cluster A1:

- Start number 77 was manually annotated 1 time for cluster A1.
- Start number 81 was manually annotated 17 times for cluster A1.
- Start number 84 was manually annotated 3 times for cluster A1.

Info for manual annotations of cluster B1:

- Start number 84 was manually annotated 56 times for cluster B1.

Info for manual annotations of cluster B3:

- Start number 81 was manually annotated 30 times for cluster B3.

Info for manual annotations of cluster C1:

- Start number 75 was manually annotated 3 times for cluster C1.
- Start number 81 was manually annotated 12 times for cluster C1.
- Start number 89 was manually annotated 1 time for cluster C1.
- Start number 92 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster CD:

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

Info for manual annotations of cluster CQ1:

- Start number 84 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CV:

- Start number 84 was manually annotated 1 time for cluster CV.
- Start number 95 was manually annotated 4 times for cluster CV.

Info for manual annotations of cluster CZ:

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

Info for manual annotations of cluster CZ4:

- Start number 77 was manually annotated 5 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 82 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 79 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster D1:

- Start number 81 was manually annotated 5 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 81 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DH:

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

Info for manual annotations of cluster DN:

- Start number 79 was manually annotated 3 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 73 was manually annotated 3 times for cluster DN1.
- Start number 79 was manually annotated 9 times for cluster DN1.
- Start number 84 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 77 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 73 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 79 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DY:

- Start number 84 was manually annotated 3 times for cluster DY.

Info for manual annotations of cluster F1:

- Start number 49 was manually annotated 7 times for cluster F1.
- Start number 62 was manually annotated 1 time for cluster F1.
- Start number 70 was manually annotated 1 time for cluster F1.
- Start number 81 was manually annotated 67 times for cluster F1.
- Start number 84 was manually annotated 3 times for cluster F1.
- Start number 85 was manually annotated 1 time for cluster F1.
- Start number 89 was manually annotated 23 times for cluster F1.
- Start number 96 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 49 was manually annotated 1 time for cluster F2.
- Start number 80 was manually annotated 1 time for cluster F2.
- Start number 81 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 81 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster J:

- Start number 81 was manually annotated 29 times for cluster J.
- Start number 144 was manually annotated 33 times for cluster J.

Info for manual annotations of cluster K5:

- Start number 83 was manually annotated 1 time for cluster K5.

Info for manual annotations of cluster KA:

- Start number 77 was manually annotated 1 time for cluster KA.
- Start number 84 was manually annotated 1 time for cluster KA.

Info for manual annotations of cluster L4:

- Start number 89 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster O:

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

Info for manual annotations of cluster P1:

- Start number 89 was manually annotated 7 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 89 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 93 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 84 was manually annotated 2 times for cluster P6.

Info for manual annotations of cluster S:

- Start number 81 was manually annotated 7 times for cluster S.

Info for manual annotations of cluster X:

- Start number 86 was manually annotated 1 time for cluster X.
- Start number 89 was manually annotated 1 time for cluster X.

Gene Information:

Gene: Abinghost_51 Start: 45404, Stop: 45135, Start Num: 81

Candidate Starts for Abinghost_51:

(Start: 81 @45404 has 173 MA's), (108, 45350), (135, 45302),

Gene: Aeneas_68 Start: 44278, Stop: 44033, Start Num: 81

Candidate Starts for Aeneas_68:

(Start: 81 @44278 has 173 MA's), (102, 44236), (110, 44224), (112, 44221), (135, 44182), (139, 44164),

Gene: Akoma_51 Start: 45415, Stop: 45146, Start Num: 81

Candidate Starts for Akoma_51:

(Start: 81 @45415 has 173 MA's), (108, 45361), (135, 45313),

Gene: AlpineSix_39 Start: 31200, Stop: 31009, Start Num: 49
Candidate Starts for AlpineSix_39:
(Start: 49 @31200 has 8 MA's), (Start: 92 @31110 has 1 MA's),

Gene: Apricot_73 Start: 42951, Stop: 43250, Start Num: 73
Candidate Starts for Apricot_73:
(22, 42846), (47, 42906), (Start: 73 @42951 has 5 MA's), (105, 43029), (134, 43095), (137, 43107),

Gene: ArcusAngelus_56 Start: 38441, Stop: 38683, Start Num: 81
Candidate Starts for ArcusAngelus_56:
(Start: 62 @38411 has 1 MA's), (Start: 81 @38441 has 173 MA's), (135, 38552),

Gene: Ardmore_44 Start: 35217, Stop: 35447, Start Num: 81
Candidate Starts for Ardmore_44:
(Start: 62 @35187 has 1 MA's), (Start: 81 @35217 has 173 MA's), (Start: 96 @35253 has 2 MA's),
(134, 35313), (135, 35316),

Gene: Ariel_82 Start: 49253, Stop: 48984, Start Num: 81
Candidate Starts for Ariel_82:
(Start: 81 @49253 has 173 MA's), (108, 49199), (135, 49151),

Gene: Athena_52 Start: 46162, Stop: 45893, Start Num: 81
Candidate Starts for Athena_52:
(Start: 81 @46162 has 173 MA's), (108, 46108), (135, 46060),

Gene: Aubs_53 Start: 37222, Stop: 37464, Start Num: 81
Candidate Starts for Aubs_53:
(76, 37216), (Start: 81 @37222 has 173 MA's), (135, 37333),

Gene: Audrey_51 Start: 45410, Stop: 45141, Start Num: 81
Candidate Starts for Audrey_51:
(Start: 81 @45410 has 173 MA's), (108, 45356), (135, 45308),

Gene: Azula_77 Start: 48141, Stop: 48380, Start Num: 95
Candidate Starts for Azula_77:
(1, 47394), (2, 47400), (3, 47406), (4, 47451), (13, 47889), (14, 47916), (25, 47979), (34, 48003),
(Start: 75 @48078 has 3 MA's), (Start: 81 @48087 has 173 MA's), (Start: 95 @48141 has 4 MA's),
(108, 48168), (171, 48306), (184, 48327), (189, 48375),

Gene: BAKA_145 Start: 76447, Stop: 76692, Start Num: 144
Candidate Starts for BAKA_145:
(Start: 92 @76312 has 1 MA's), (130, 76387), (132, 76402), (Start: 144 @76447 has 33 MA's), (174,
76519), (176, 76522),

Gene: BAKA_91 Start: 56921, Stop: 57199, Start Num: 81
Candidate Starts for BAKA_91:
(76, 56915), (Start: 81 @56921 has 173 MA's), (135, 57032),

Gene: BaconJack_70 Start: 45368, Stop: 45123, Start Num: 81
Candidate Starts for BaconJack_70:
(Start: 81 @45368 has 173 MA's), (102, 45326), (110, 45314), (112, 45311), (135, 45272), (139,
45254),

Gene: Bagrid_146 Start: 77142, Stop: 77387, Start Num: 144
Candidate Starts for Bagrid_146:
(Start: 92 @77007 has 1 MA's), (130, 77082), (132, 77097), (Start: 144 @77142 has 33 MA's), (174, 77214), (176, 77217),

Gene: Bagrid_89 Start: 55770, Stop: 56066, Start Num: 81
Candidate Starts for Bagrid_89:
(Start: 81 @55770 has 173 MA's), (116, 55848), (130, 55875), (135, 55899),

Gene: Baloo_51 Start: 45413, Stop: 45144, Start Num: 81
Candidate Starts for Baloo_51:
(Start: 81 @45413 has 173 MA's), (108, 45359), (135, 45311),

Gene: Banjo_52 Start: 47062, Stop: 46769, Start Num: 84
Candidate Starts for Banjo_52:
(17, 47221), (30, 47164), (42, 47137), (50, 47116), (54, 47110), (Start: 84 @47062 has 72 MA's),
(Start: 89 @47038 has 35 MA's), (122, 46990), (130, 46984), (135, 46960),

Gene: Bartholomew_52 Start: 36036, Stop: 36263, Start Num: 89
Candidate Starts for Bartholomew_52:
(55, 35973), (Start: 89 @36036 has 35 MA's), (137, 36135),

Gene: Batiatus_50 Start: 37046, Stop: 37276, Start Num: 81
Candidate Starts for Batiatus_50:
(Start: 62 @37016 has 1 MA's), (Start: 81 @37046 has 173 MA's), (Start: 96 @37082 has 2 MA's),
(134, 37142), (135, 37145),

Gene: BearBQ_75 Start: 45677, Stop: 45961, Start Num: 79
Candidate Starts for BearBQ_75:
(38, 45602), (72, 45665), (Start: 73 @45668 has 5 MA's), (Start: 79 @45677 has 17 MA's), (105, 45743), (134, 45809), (137, 45821),

Gene: Beelzebub_8 Start: 2535, Stop: 2807, Start Num: 81
Candidate Starts for Beelzebub_8:
(Start: 81 @2535 has 173 MA's), (116, 2598), (135, 2640),

Gene: Beem_90 Start: 56631, Stop: 56927, Start Num: 81
Candidate Starts for Beem_90:
(Start: 81 @56631 has 173 MA's), (116, 56709), (130, 56736), (135, 56760),

Gene: Beem_147 Start: 78045, Stop: 78290, Start Num: 144
Candidate Starts for Beem_147:
(Start: 92 @77910 has 1 MA's), (132, 78000), (Start: 144 @78045 has 33 MA's), (174, 78117), (176, 78120),

Gene: Beenie_54 Start: 39845, Stop: 40141, Start Num: 77
Candidate Starts for Beenie_54:
(11, 39605), (12, 39608), (Start: 77 @39845 has 9 MA's), (Start: 96 @39893 has 2 MA's), (106, 39911),
(143, 40007), (153, 40025), (164, 40049), (183, 40085), (185, 40097),

Gene: Ben11_51 Start: 45695, Stop: 45426, Start Num: 81
Candidate Starts for Ben11_51:
(Start: 81 @45695 has 173 MA's), (108, 45641), (135, 45593), (190, 45437),

Gene: Bethlehem_66 Start: 44024, Stop: 43779, Start Num: 81
Candidate Starts for Bethlehem_66:
(Start: 81 @44024 has 173 MA's), (134, 43916),

Gene: BigNuz_57 Start: 39875, Stop: 40117, Start Num: 89
Candidate Starts for BigNuz_57:
(55, 39812), (Start: 89 @39875 has 35 MA's), (108, 39920), (123, 39941), (133, 39965), (187, 40085),

Gene: Bigfoot_58 Start: 41545, Stop: 41276, Start Num: 81
Candidate Starts for Bigfoot_58:
(Start: 81 @41545 has 173 MA's), (108, 41491), (135, 41443),

Gene: Bipolar_49 Start: 36854, Stop: 37099, Start Num: 81
Candidate Starts for Bipolar_49:
(34, 36770), (44, 36788), (65, 36830), (Start: 81 @36854 has 173 MA's), (135, 36965),

Gene: Blue_65 Start: 43245, Stop: 42976, Start Num: 81
Candidate Starts for Blue_65:
(Start: 81 @43245 has 173 MA's), (108, 43191), (135, 43143),

Gene: Blueberry_76 Start: 48141, Stop: 48380, Start Num: 95
Candidate Starts for Blueberry_76:
(1, 47394), (2, 47400), (3, 47406), (4, 47451), (13, 47889), (14, 47916), (25, 47979), (34, 48003),
(Start: 75 @48078 has 3 MA's), (Start: 81 @48087 has 173 MA's), (Start: 95 @48141 has 4 MA's),
(108, 48168), (171, 48306), (184, 48327), (189, 48375),

Gene: Bobby_135 Start: 77882, Stop: 78160, Start Num: 144
Candidate Starts for Bobby_135:
(Start: 92 @77747 has 1 MA's), (132, 77837), (Start: 144 @77882 has 33 MA's), (174, 77954), (176, 77957), (193, 78077),

Gene: Bobi_72 Start: 44458, Stop: 44685, Start Num: 89
Candidate Starts for Bobi_72:
(26, 44317), (55, 44383), (Start: 89 @44458 has 35 MA's), (137, 44557),

Gene: Bombitas_78 Start: 53794, Stop: 54090, Start Num: 81
Candidate Starts for Bombitas_78:
(Start: 81 @53794 has 173 MA's), (116, 53872), (130, 53899), (135, 53923),

Gene: Bombitas_133 Start: 75456, Stop: 75701, Start Num: 144
Candidate Starts for Bombitas_133:
(Start: 92 @75321 has 1 MA's), (132, 75411), (Start: 144 @75456 has 33 MA's), (174, 75528), (176, 75531),

Gene: Boomer_57 Start: 38978, Stop: 39235, Start Num: 81
Candidate Starts for Boomer_57:
(24, 38864), (27, 38876), (43, 38912), (Start: 70 @38963 has 1 MA's), (Start: 81 @38978 has 173 MA's), (135, 39089), (145, 39119),

Gene: Brilliant_55 Start: 47604, Stop: 47335, Start Num: 84
Candidate Starts for Brilliant_55:

(17, 47763), (30, 47706), (42, 47679), (50, 47658), (54, 47652), (Start: 84 @47604 has 72 MA's), (Start: 89 @47580 has 35 MA's), (122, 47532), (130, 47526), (135, 47502), (190, 47346),

Gene: Budski_80 Start: 45490, Stop: 45795, Start Num: 79

Candidate Starts for Budski_80:

(61, 45463), (Start: 73 @45481 has 5 MA's), (Start: 79 @45490 has 17 MA's), (103, 45553), (105, 45556), (122, 45589), (134, 45622), (161, 45685), (168, 45703),

Gene: BuzzLyseyear_44 Start: 32289, Stop: 32008, Start Num: 85

Candidate Starts for BuzzLyseyear_44:

(36, 32382), (37, 32379), (39, 32376), (61, 32331), (Start: 70 @32316 has 1 MA's), (78, 32304), (Start: 85 @32289 has 1 MA's), (106, 32229), (127, 32187), (134, 32163), (153, 32115),

Gene: Byougenkin_50 Start: 36870, Stop: 37133, Start Num: 62

Candidate Starts for Byougenkin_50:

(Start: 62 @36870 has 1 MA's), (Start: 81 @36900 has 173 MA's), (Start: 89 @36924 has 35 MA's), (118, 36966), (131, 36981), (134, 36999), (135, 37002),

Gene: CactusRose_66 Start: 42565, Stop: 42296, Start Num: 81

Candidate Starts for CactusRose_66:

(Start: 81 @42565 has 173 MA's), (108, 42511), (135, 42463),

Gene: CamL_53 Start: 47369, Stop: 47076, Start Num: 84

Candidate Starts for CamL_53:

(17, 47528), (30, 47471), (42, 47444), (50, 47423), (54, 47417), (Start: 84 @47369 has 72 MA's), (Start: 89 @47345 has 35 MA's), (122, 47297), (130, 47291), (135, 47267),

Gene: Cannibal_53 Start: 47352, Stop: 47059, Start Num: 84

Candidate Starts for Cannibal_53:

(17, 47511), (30, 47454), (42, 47427), (50, 47406), (54, 47400), (Start: 84 @47352 has 72 MA's), (Start: 89 @47328 has 35 MA's), (122, 47280), (130, 47274), (135, 47250),

Gene: CaptainTrips_49 Start: 36066, Stop: 36296, Start Num: 81

Candidate Starts for CaptainTrips_49:

(Start: 62 @36036 has 1 MA's), (Start: 81 @36066 has 173 MA's), (Start: 96 @36102 has 2 MA's), (134, 36162), (135, 36165),

Gene: Carlyle_66 Start: 41351, Stop: 41082, Start Num: 81

Candidate Starts for Carlyle_66:

(Start: 81 @41351 has 173 MA's), (108, 41297), (135, 41249),

Gene: Casbah_51 Start: 45725, Stop: 45456, Start Num: 81

Candidate Starts for Casbah_51:

(Start: 81 @45725 has 173 MA's), (108, 45671), (135, 45623), (190, 45467),

Gene: ChaChing_51 Start: 45427, Stop: 45158, Start Num: 81

Candidate Starts for ChaChing_51:

(Start: 81 @45427 has 173 MA's), (108, 45373), (135, 45325),

Gene: Chandler_51 Start: 46194, Stop: 45925, Start Num: 81

Candidate Starts for Chandler_51:

(Start: 81 @46194 has 173 MA's), (108, 46140), (135, 46092),

Gene: Che8_55 Start: 38308, Stop: 38550, Start Num: 81
Candidate Starts for Che8_55:
(Start: 62 @38278 has 1 MA's), (Start: 81 @38308 has 173 MA's), (135, 38419),

Gene: CheeseTouch_80 Start: 40886, Stop: 41182, Start Num: 73
Candidate Starts for CheeseTouch_80:
(15, 40742), (28, 40799), (34, 40817), (Start: 73 @40886 has 5 MA's), (Start: 79 @40895 has 17 MA's),
(105, 40961), (134, 41027), (137, 41039),

Gene: Chentzyk_52 Start: 46237, Stop: 45968, Start Num: 81
Candidate Starts for Chentzyk_52:
(Start: 81 @46237 has 173 MA's), (108, 46183), (135, 46135), (190, 45979),

Gene: Chevrolet_59 Start: 38442, Stop: 38684, Start Num: 81
Candidate Starts for Chevrolet_59:
(Start: 62 @38412 has 1 MA's), (Start: 81 @38442 has 173 MA's), (135, 38553),

Gene: Childish_53 Start: 47631, Stop: 47362, Start Num: 84
Candidate Starts for Childish_53:
(17, 47790), (30, 47733), (42, 47706), (50, 47685), (54, 47679), (Start: 84 @47631 has 72 MA's),
(Start: 89 @47607 has 35 MA's), (122, 47559), (130, 47553), (135, 47529), (190, 47373),

Gene: Chorkpop_53 Start: 47108, Stop: 46815, Start Num: 84
Candidate Starts for Chorkpop_53:
(17, 47267), (30, 47210), (42, 47183), (50, 47162), (54, 47156), (Start: 84 @47108 has 72 MA's),
(Start: 89 @47084 has 35 MA's), (122, 47036), (130, 47030), (135, 47006),

Gene: Chubbello_52 Start: 36032, Stop: 36259, Start Num: 89
Candidate Starts for Chubbello_52:
(55, 35969), (Start: 89 @36032 has 35 MA's), (137, 36131),

Gene: Chuckly_55 Start: 37799, Stop: 38041, Start Num: 81
Candidate Starts for Chuckly_55:
(76, 37793), (Start: 81 @37799 has 173 MA's), (135, 37910),

Gene: Clank_57 Start: 38129, Stop: 38371, Start Num: 81
Candidate Starts for Clank_57:
(76, 38123), (Start: 81 @38129 has 173 MA's), (135, 38240),

Gene: Clark_59 Start: 39693, Stop: 39938, Start Num: 77
Candidate Starts for Clark_59:
(Start: 77 @39693 has 9 MA's), (Start: 92 @39732 has 1 MA's), (180, 39882),

Gene: Clarkson_7 Start: 2311, Stop: 2583, Start Num: 81
Candidate Starts for Clarkson_7:
(Start: 81 @2311 has 173 MA's), (116, 2374), (135, 2416),

Gene: Colossa_75 Start: 44073, Stop: 44345, Start Num: 84
Candidate Starts for Colossa_75:
(Start: 84 @44073 has 72 MA's), (130, 44178), (142, 44232),

Gene: Colossa_74 Start: 43841, Stop: 44080, Start Num: 100
Candidate Starts for Colossa_74:

(100, 43841), (156, 43973),

Gene: Constella_139 Start: 76698, Stop: 76943, Start Num: 144

Candidate Starts for Constella_139:

(Start: 92 @76563 has 1 MA's), (130, 76638), (132, 76653), (Start: 144 @76698 has 33 MA's), (174, 76770), (176, 76773),

Gene: Constella_75 Start: 50768, Stop: 51064, Start Num: 81

Candidate Starts for Constella_75:

(Start: 81 @50768 has 173 MA's), (116, 50846), (130, 50873), (135, 50897),

Gene: Cornucopia_55 Start: 38144, Stop: 38386, Start Num: 81

Candidate Starts for Cornucopia_55:

(Start: 62 @38114 has 1 MA's), (Start: 81 @38144 has 173 MA's), (134, 38252),

Gene: Corofin_51 Start: 45437, Stop: 45168, Start Num: 81

Candidate Starts for Corofin_51:

(Start: 81 @45437 has 173 MA's), (108, 45383), (135, 45335),

Gene: Cosmolli16_54 Start: 47811, Stop: 47542, Start Num: 84

Candidate Starts for Cosmolli16_54:

(17, 47970), (30, 47913), (42, 47886), (50, 47865), (54, 47859), (Start: 84 @47811 has 72 MA's), (Start: 89 @47787 has 35 MA's), (122, 47739), (130, 47733), (135, 47709),

Gene: Courthouse_78 Start: 48853, Stop: 48584, Start Num: 81

Candidate Starts for Courthouse_78:

(Start: 81 @48853 has 173 MA's), (108, 48799), (135, 48751),

Gene: Craff_56 Start: 48056, Stop: 47787, Start Num: 84

Candidate Starts for Craff_56:

(17, 48215), (30, 48158), (42, 48131), (50, 48110), (54, 48104), (Start: 84 @48056 has 72 MA's), (Start: 89 @48032 has 35 MA's), (122, 47984), (130, 47978), (135, 47954), (190, 47798),

Gene: Crater_73 Start: 43346, Stop: 43687, Start Num: 73

Candidate Starts for Crater_73:

(22, 43241), (47, 43301), (Start: 73 @43346 has 5 MA's), (105, 43424), (134, 43490), (159, 43553),

Gene: DLane_48 Start: 36148, Stop: 36381, Start Num: 81

Candidate Starts for DLane_48:

(Start: 62 @36118 has 1 MA's), (Start: 81 @36148 has 173 MA's), (Start: 96 @36184 has 2 MA's), (134, 36244), (135, 36247),

Gene: DTDevon_6 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for DTDevon_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: DaWorst_54 Start: 38043, Stop: 38276, Start Num: 81

Candidate Starts for DaWorst_54:

(Start: 62 @38013 has 1 MA's), (Start: 81 @38043 has 173 MA's), (Start: 89 @38067 has 35 MA's), (118, 38109), (131, 38124), (134, 38142), (135, 38145),

Gene: DaddyDaniels_55 Start: 47588, Stop: 47319, Start Num: 84

Candidate Starts for DaddyDaniels_55:

(17, 47747), (30, 47690), (42, 47663), (50, 47642), (54, 47636), (Start: 84 @47588 has 72 MA's),
(Start: 89 @47564 has 35 MA's), (122, 47516), (130, 47510), (135, 47486), (190, 47330),

Gene: DaddyRickover_52 Start: 37670, Stop: 37903, Start Num: 81

Candidate Starts for DaddyRickover_52:

(Start: 62 @37640 has 1 MA's), (Start: 81 @37670 has 173 MA's), (Start: 89 @37694 has 35 MA's),
(118, 37736), (131, 37751), (134, 37769), (135, 37772),

Gene: Daenerys_72 Start: 47067, Stop: 47294, Start Num: 89

Candidate Starts for Daenerys_72:

(Start: 89 @47067 has 35 MA's), (137, 47166),

Gene: Daffy_53 Start: 47094, Stop: 46801, Start Num: 84

Candidate Starts for Daffy_53:

(17, 47253), (30, 47196), (42, 47169), (50, 47148), (54, 47142), (Start: 84 @47094 has 72 MA's),
(Start: 89 @47070 has 35 MA's), (122, 47022), (130, 47016), (135, 46992),

Gene: Daisy_51 Start: 45439, Stop: 45170, Start Num: 81

Candidate Starts for Daisy_51:

(Start: 81 @45439 has 173 MA's), (108, 45385), (135, 45337),

Gene: Dallas_89 Start: 55552, Stop: 55848, Start Num: 81

Candidate Starts for Dallas_89:

(Start: 81 @55552 has 173 MA's), (116, 55630), (130, 55657), (135, 55681),

Gene: Dallas_146 Start: 77512, Stop: 77757, Start Num: 144

Candidate Starts for Dallas_146:

(Start: 92 @77377 has 1 MA's), (130, 77452), (132, 77467), (Start: 144 @77512 has 33 MA's), (174,
77584), (176, 77587),

Gene: Dandelion_5 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for Dandelion_5:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101,
1933), (135, 1987), (163, 2026),

Gene: Dante_53 Start: 37036, Stop: 37266, Start Num: 81

Candidate Starts for Dante_53:

(Start: 62 @37006 has 1 MA's), (Start: 81 @37036 has 173 MA's), (Start: 89 @37060 has 35 MA's),
(118, 37099), (131, 37114), (134, 37132), (135, 37135),

Gene: DeadP_58 Start: 38932, Stop: 39159, Start Num: 81

Candidate Starts for DeadP_58:

(Start: 62 @38902 has 1 MA's), (Start: 81 @38932 has 173 MA's), (91, 38965), (116, 38989), (134,
39022),

Gene: Deb65_66 Start: 44788, Stop: 45015, Start Num: 89

Candidate Starts for Deb65_66:

(Start: 89 @44788 has 35 MA's), (137, 44887),

Gene: Demsculpinboyz_62 Start: 36874, Stop: 37140, Start Num: 81

Candidate Starts for Demsculpinboyz_62:

(Start: 62 @36844 has 1 MA's), (Start: 81 @36874 has 173 MA's), (Start: 89 @36898 has 35 MA's), (118, 36940), (131, 36955), (134, 36973), (135, 36976),

Gene: Denise_57 Start: 36623, Stop: 36913, Start Num: 82

Candidate Starts for Denise_57:

(Start: 82 @36623 has 1 MA's), (Start: 92 @36659 has 1 MA's), (167, 36815), (189, 36896),

Gene: DmpstrDiver_90 Start: 55966, Stop: 56262, Start Num: 81

Candidate Starts for DmpstrDiver_90:

(Start: 81 @55966 has 173 MA's), (116, 56044), (130, 56071), (135, 56095),

Gene: DmpstrDiver_146 Start: 77431, Stop: 77676, Start Num: 144

Candidate Starts for DmpstrDiver_146:

(Start: 92 @77296 has 1 MA's), (130, 77371), (132, 77386), (Start: 144 @77431 has 33 MA's), (174, 77503), (176, 77506),

Gene: DoRead_54 Start: 36172, Stop: 36447, Start Num: 81

Candidate Starts for DoRead_54:

(Start: 81 @36172 has 173 MA's), (135, 36283),

Gene: DobbysSock_53 Start: 39107, Stop: 39373, Start Num: 77

Candidate Starts for DobbysSock_53:

(Start: 77 @39107 has 9 MA's), (105, 39173), (106, 39176),

Gene: DonkeyMan_58 Start: 38401, Stop: 38625, Start Num: 84

Candidate Starts for DonkeyMan_58:

(Start: 84 @38401 has 72 MA's), (94, 38437), (147, 38530), (179, 38578),

Gene: Donkeykong_53 Start: 39067, Stop: 39345, Start Num: 81

Candidate Starts for Donkeykong_53:

(50, 39022), (64, 39043), (Start: 81 @39067 has 173 MA's), (135, 39178),

Gene: Doomphist_76 Start: 46880, Stop: 47107, Start Num: 89

Candidate Starts for Doomphist_76:

(Start: 89 @46880 has 35 MA's), (137, 46979),

Gene: Doomphist_52 Start: 38179, Stop: 38421, Start Num: 81

Candidate Starts for Doomphist_52:

(Start: 62 @38149 has 1 MA's), (Start: 81 @38179 has 173 MA's), (134, 38287),

Gene: Dorothy_74 Start: 45505, Stop: 45732, Start Num: 89

Candidate Starts for Dorothy_74:

(Start: 89 @45505 has 35 MA's), (137, 45604),

Gene: DotProduct_48 Start: 36209, Stop: 36451, Start Num: 81

Candidate Starts for DotProduct_48:

(Start: 62 @36179 has 1 MA's), (Start: 81 @36209 has 173 MA's), (134, 36317),

Gene: Doug_55 Start: 38300, Stop: 38542, Start Num: 81

Candidate Starts for Doug_55:

(Start: 62 @38270 has 1 MA's), (Start: 81 @38300 has 173 MA's), (135, 38411),

Gene: Douge_118 Start: 64670, Stop: 64912, Start Num: 89

Candidate Starts for Douge_118:

(Start: 89 @64670 has 35 MA's), (Start: 93 @64682 has 1 MA's), (141, 64778), (187, 64865), (189, 64886),

Gene: Dove_131 Start: 73030, Stop: 73275, Start Num: 144

Candidate Starts for Dove_131:

(Start: 92 @72895 has 1 MA's), (132, 72985), (Start: 144 @73030 has 33 MA's), (174, 73102), (176, 73105),

Gene: Dove_75 Start: 52060, Stop: 52356, Start Num: 81

Candidate Starts for Dove_75:

(Start: 81 @52060 has 173 MA's), (116, 52138), (130, 52165), (135, 52189),

Gene: Drazdys_6 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for Drazdys_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Dreamboat_67 Start: 41780, Stop: 41553, Start Num: 84

Candidate Starts for Dreamboat_67:

(Start: 84 @41780 has 72 MA's), (135, 41720),

Gene: Duke13_141 Start: 74732, Stop: 74977, Start Num: 144

Candidate Starts for Duke13_141:

(Start: 92 @74597 has 1 MA's), (130, 74672), (132, 74687), (Start: 144 @74732 has 33 MA's), (174, 74804), (176, 74807),

Gene: Eish_57 Start: 38353, Stop: 38628, Start Num: 81

Candidate Starts for Eish_57:

(Start: 81 @38353 has 173 MA's), (135, 38464),

Gene: Ejimix_138 Start: 77580, Stop: 77825, Start Num: 144

Candidate Starts for Ejimix_138:

(Start: 92 @77445 has 1 MA's), (130, 77520), (132, 77535), (Start: 144 @77580 has 33 MA's), (174, 77652), (176, 77655),

Gene: Empress_71 Start: 45691, Stop: 45918, Start Num: 89

Candidate Starts for Empress_71:

(Start: 89 @45691 has 35 MA's), (137, 45790),

Gene: EricMillard_137 Start: 76084, Stop: 76329, Start Num: 144

Candidate Starts for EricMillard_137:

(Start: 92 @75949 has 1 MA's), (130, 76024), (132, 76039), (Start: 144 @76084 has 33 MA's), (174, 76156), (176, 76159),

Gene: EricMillard_83 Start: 55716, Stop: 55994, Start Num: 81

Candidate Starts for EricMillard_83:

(76, 55710), (Start: 81 @55716 has 173 MA's), (135, 55827),

Gene: Estave1_55 Start: 37717, Stop: 37980, Start Num: 81

Candidate Starts for Estave1_55:

(Start: 81 @37717 has 173 MA's), (135, 37828),

Gene: Etoile_52 Start: 36036, Stop: 36263, Start Num: 89
Candidate Starts for Etoile_52:
(55, 35973), (Start: 89 @36036 has 35 MA's), (137, 36135),

Gene: Fascinus_60 Start: 42059, Stop: 41790, Start Num: 81
Candidate Starts for Fascinus_60:
(Start: 81 @42059 has 173 MA's), (108, 42005), (135, 41957),

Gene: FeliMaine_7 Start: 2312, Stop: 2584, Start Num: 81
Candidate Starts for FeliMaine_7:
(Start: 81 @2312 has 173 MA's), (116, 2375), (135, 2417),

Gene: Filuzino_50 Start: 36021, Stop: 36323, Start Num: 96
Candidate Starts for Filuzino_50:
(Start: 62 @35955 has 1 MA's), (Start: 81 @35985 has 173 MA's), (Start: 96 @36021 has 2 MA's),
(134, 36081), (135, 36084), (162, 36123), (171, 36144), (191, 36222),

Gene: Firehouse51_53 Start: 39958, Stop: 40203, Start Num: 81
Candidate Starts for Firehouse51_53:
(Start: 62 @39928 has 1 MA's), (Start: 81 @39958 has 173 MA's), (135, 40069),

Gene: FirstPlacePfu_54 Start: 36068, Stop: 36295, Start Num: 89
Candidate Starts for FirstPlacePfu_54:
(55, 36005), (Start: 89 @36068 has 35 MA's), (137, 36167),

Gene: Fishburne_52 Start: 36036, Stop: 36263, Start Num: 89
Candidate Starts for Fishburne_52:
(55, 35973), (Start: 89 @36036 has 35 MA's), (137, 36135),

Gene: Fozzie_52 Start: 47398, Stop: 47105, Start Num: 84
Candidate Starts for Fozzie_52:
(17, 47557), (30, 47500), (42, 47473), (50, 47452), (54, 47446), (Start: 84 @47398 has 72 MA's),
(Start: 89 @47374 has 35 MA's), (122, 47326), (130, 47320), (135, 47296),

Gene: FrayBell_6 Start: 1888, Stop: 2115, Start Num: 81
Candidate Starts for FrayBell_6:
(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101,
1933), (135, 1987), (163, 2026),

Gene: Fringe_57 Start: 48533, Stop: 48264, Start Num: 84
Candidate Starts for Fringe_57:
(17, 48692), (30, 48635), (50, 48587), (54, 48581), (Start: 84 @48533 has 72 MA's), (Start: 89 @48509
has 35 MA's), (122, 48461), (130, 48455), (135, 48431), (190, 48275),

Gene: GAL1_58 Start: 39448, Stop: 39708, Start Num: 77
Candidate Starts for GAL1_58:
(Start: 77 @39448 has 9 MA's), (142, 39592),

Gene: GMA1_52 Start: 32897, Stop: 33145, Start Num: 80
Candidate Starts for GMA1_52:
(35, 32816), (41, 32828), (53, 32855), (Start: 70 @32882 has 1 MA's), (Start: 80 @32897 has 1 MA's),

Gene: GMA2_107 Start: 94211, Stop: 93939, Start Num: 80

Candidate Starts for GMA2_107:
(Start: 80 @94211 has 1 MA's), (161, 94031),

Gene: Gaia_57 Start: 40635, Stop: 40414, Start Num: 89
Candidate Starts for Gaia_57:
(Start: 89 @40635 has 35 MA's), (Start: 93 @40623 has 1 MA's), (114, 40581), (187, 40443), (189, 40422),

Gene: Gaia_56 Start: 40287, Stop: 40042, Start Num: 86
Candidate Starts for Gaia_56:
(Start: 86 @40287 has 1 MA's), (107, 40230), (161, 40089),

Gene: Gambino_79 Start: 48141, Stop: 48380, Start Num: 95
Candidate Starts for Gambino_79:
(1, 47394), (2, 47400), (3, 47406), (4, 47451), (13, 47889), (14, 47916), (25, 47979), (34, 48003),
(Start: 75 @48078 has 3 MA's), (Start: 81 @48087 has 173 MA's), (Start: 95 @48141 has 4 MA's),
(108, 48168), (171, 48306), (184, 48327), (189, 48375),

Gene: Gandolph_55 Start: 37415, Stop: 37660, Start Num: 81
Candidate Starts for Gandolph_55:
(Start: 81 @37415 has 173 MA's), (134, 37523),

Gene: Geralt_66 Start: 44787, Stop: 45014, Start Num: 89
Candidate Starts for Geralt_66:
(Start: 89 @44787 has 35 MA's), (137, 44886),

Gene: Gervas_52 Start: 45854, Stop: 45585, Start Num: 81
Candidate Starts for Gervas_52:
(Start: 81 @45854 has 173 MA's), (108, 45800), (135, 45752), (190, 45596),

Gene: Getalong_78 Start: 45864, Stop: 46163, Start Num: 79
Candidate Starts for Getalong_78:
(Start: 79 @45864 has 17 MA's), (100, 45918), (121, 45957), (139, 46014), (166, 46071),

Gene: GigiOuiOui_49 Start: 36354, Stop: 36596, Start Num: 81
Candidate Starts for GigiOuiOui_49:
(Start: 62 @36324 has 1 MA's), (Start: 81 @36354 has 173 MA's), (134, 36462),

Gene: Giraffe_54 Start: 47592, Stop: 47323, Start Num: 84
Candidate Starts for Giraffe_54:
(17, 47751), (30, 47694), (50, 47646), (54, 47640), (Start: 84 @47592 has 72 MA's), (Start: 89 @47568 has 35 MA's), (122, 47520), (130, 47514), (135, 47490),

Gene: GlenHope_52 Start: 45405, Stop: 45136, Start Num: 81
Candidate Starts for GlenHope_52:
(Start: 81 @45405 has 173 MA's), (108, 45351), (135, 45303),

Gene: Glubnar_52 Start: 45405, Stop: 45136, Start Num: 81
Candidate Starts for Glubnar_52:
(Start: 81 @45405 has 173 MA's), (108, 45351), (135, 45303),

Gene: Graduation_70 Start: 43891, Stop: 43622, Start Num: 81
Candidate Starts for Graduation_70:

(Start: 81 @43891 has 173 MA's), (108, 43837), (135, 43789),

Gene: Grand2040_53 Start: 47586, Stop: 47317, Start Num: 84

Candidate Starts for Grand2040_53:

(17, 47745), (30, 47688), (50, 47640), (54, 47634), (Start: 84 @47586 has 72 MA's), (Start: 89 @47562 has 35 MA's), (122, 47514), (130, 47508), (135, 47484),

Gene: Gudmit_51 Start: 32451, Stop: 32681, Start Num: 77

Candidate Starts for Gudmit_51:

(Start: 77 @32451 has 9 MA's), (90, 32481), (Start: 92 @32490 has 1 MA's), (115, 32514), (180, 32625),

Gene: Gumball_84 Start: 60133, Stop: 60360, Start Num: 81

Candidate Starts for Gumball_84:

(21, 60010), (Start: 81 @60133 has 173 MA's), (Start: 92 @60169 has 1 MA's), (98, 60178), (135, 60232),

Gene: Haleema_52 Start: 47090, Stop: 46797, Start Num: 84

Candidate Starts for Haleema_52:

(17, 47249), (30, 47192), (42, 47165), (50, 47144), (54, 47138), (Start: 84 @47090 has 72 MA's), (Start: 89 @47066 has 35 MA's), (122, 47018), (130, 47012), (135, 46988),

Gene: Halfpint_50 Start: 45230, Stop: 44961, Start Num: 81

Candidate Starts for Halfpint_50:

(Start: 81 @45230 has 173 MA's), (108, 45176), (135, 45128),

Gene: Halley_147 Start: 77896, Stop: 78141, Start Num: 144

Candidate Starts for Halley_147:

(Start: 92 @77761 has 1 MA's), (130, 77836), (132, 77851), (Start: 144 @77896 has 33 MA's), (174, 77968), (176, 77971),

Gene: Halley_91 Start: 56631, Stop: 56927, Start Num: 81

Candidate Starts for Halley_91:

(Start: 81 @56631 has 173 MA's), (116, 56709), (130, 56736), (135, 56760),

Gene: Hamulus_53 Start: 37796, Stop: 38026, Start Num: 81

Candidate Starts for Hamulus_53:

(Start: 62 @37766 has 1 MA's), (Start: 81 @37796 has 173 MA's), (Start: 96 @37832 has 2 MA's), (134, 37892), (135, 37895),

Gene: Hawkeye_97 Start: 61659, Stop: 61895, Start Num: 81

Candidate Starts for Hawkeye_97:

(28, 61557), (57, 61620), (60, 61626), (Start: 81 @61659 has 173 MA's), (119, 61728), (135, 61758), (169, 61809), (182, 61830), (189, 61872),

Gene: Hegedechwinu_72 Start: 43105, Stop: 43332, Start Num: 89

Candidate Starts for Hegedechwinu_72:

(Start: 89 @43105 has 35 MA's), (137, 43204),

Gene: Heinz_57 Start: 37331, Stop: 37591, Start Num: 84

Candidate Starts for Heinz_57:

(Start: 84 @37331 has 72 MA's), (147, 37496), (179, 37544),

Gene: Held_53 Start: 47095, Stop: 46802, Start Num: 84

Candidate Starts for Held_53:

(17, 47254), (30, 47197), (42, 47170), (50, 47149), (54, 47143), (Start: 84 @47095 has 72 MA's),
(Start: 89 @47071 has 35 MA's), (122, 47023), (130, 47017), (135, 46993),

Gene: Helpful_87 Start: 60143, Stop: 60346, Start Num: 81

Candidate Starts for Helpful_87:

(21, 60017), (23, 60026), (Start: 81 @60143 has 173 MA's), (Start: 89 @60167 has 35 MA's), (135,
60245), (170, 60296),

Gene: HenryJackson_53 Start: 47620, Stop: 47351, Start Num: 84

Candidate Starts for HenryJackson_53:

(17, 47779), (30, 47722), (42, 47695), (50, 47674), (54, 47668), (Start: 84 @47620 has 72 MA's),
(Start: 89 @47596 has 35 MA's), (122, 47548), (130, 47542), (135, 47518), (190, 47362),

Gene: Hertubise_53 Start: 47387, Stop: 47094, Start Num: 84

Candidate Starts for Hertubise_53:

(17, 47546), (30, 47489), (42, 47462), (50, 47441), (54, 47435), (Start: 84 @47387 has 72 MA's),
(Start: 89 @47363 has 35 MA's), (122, 47315), (130, 47309), (135, 47285),

Gene: Hidrated_131 Start: 76215, Stop: 76493, Start Num: 144

Candidate Starts for Hidrated_131:

(Start: 92 @76080 has 1 MA's), (132, 76170), (Start: 144 @76215 has 33 MA's), (174, 76287), (176,
76290), (193, 76410),

Gene: HighStump_55 Start: 48156, Stop: 47887, Start Num: 84

Candidate Starts for HighStump_55:

(17, 48315), (30, 48258), (42, 48231), (50, 48210), (54, 48204), (Start: 84 @48156 has 72 MA's),
(Start: 89 @48132 has 35 MA's), (122, 48084), (130, 48078), (135, 48054), (190, 47898),

Gene: HokkenD_138 Start: 77055, Stop: 77300, Start Num: 144

Candidate Starts for HokkenD_138:

(Start: 92 @76920 has 1 MA's), (132, 77010), (Start: 144 @77055 has 33 MA's), (174, 77127), (176,
77130),

Gene: HokkenD_79 Start: 54900, Stop: 55196, Start Num: 81

Candidate Starts for HokkenD_79:

(Start: 81 @54900 has 173 MA's), (116, 54978), (130, 55005), (135, 55029),

Gene: Holliday_79 Start: 47725, Stop: 48021, Start Num: 79

Candidate Starts for Holliday_79:

(61, 47698), (Start: 73 @47716 has 5 MA's), (Start: 79 @47725 has 17 MA's), (105, 47791), (140,
47878), (148, 47896), (165, 47923),

Gene: Horus_75 Start: 45413, Stop: 45754, Start Num: 73

Candidate Starts for Horus_75:

(22, 45308), (47, 45368), (Start: 73 @45413 has 5 MA's), (105, 45491), (134, 45557), (159, 45620),

Gene: Hughesyang_90 Start: 56589, Stop: 56885, Start Num: 81

Candidate Starts for Hughesyang_90:

(Start: 81 @56589 has 173 MA's), (116, 56667), (130, 56694), (135, 56718),

Gene: Hughesyang_144 Start: 77666, Stop: 77911, Start Num: 144

Candidate Starts for Hughesyang_144:

(Start: 92 @77531 has 1 MA's), (130, 77606), (132, 77621), (Start: 144 @77666 has 33 MA's), (174, 77738), (176, 77741),

Gene: IMPilo_49 Start: 35464, Stop: 35766, Start Num: 96

Candidate Starts for IMPilo_49:

(Start: 62 @35398 has 1 MA's), (Start: 81 @35428 has 173 MA's), (Start: 96 @35464 has 2 MA's), (134, 35524), (135, 35527), (162, 35566), (171, 35587), (191, 35665),

Gene: InterFolia_6 Start: 1924, Stop: 2115, Start Num: 92

Candidate Starts for InterFolia_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Invectra_62 Start: 41266, Stop: 41511, Start Num: 77

Candidate Starts for Invectra_62:

(Start: 77 @41266 has 9 MA's), (Start: 92 @41305 has 1 MA's), (180, 41455),

Gene: Inventum_47 Start: 36162, Stop: 36395, Start Num: 81

Candidate Starts for Inventum_47:

(Start: 62 @36132 has 1 MA's), (Start: 81 @36162 has 173 MA's), (Start: 89 @36186 has 35 MA's), (118, 36228), (131, 36243), (134, 36261), (135, 36264),

Gene: Inventum_71 Start: 45703, Stop: 45930, Start Num: 89

Candidate Starts for Inventum_71:

(Start: 89 @45703 has 35 MA's), (137, 45802),

Gene: Iridessa_54 Start: 47600, Stop: 47331, Start Num: 84

Candidate Starts for Iridessa_54:

(17, 47759), (30, 47702), (42, 47675), (50, 47654), (54, 47648), (Start: 84 @47600 has 72 MA's), (Start: 89 @47576 has 35 MA's), (122, 47528), (130, 47522), (135, 47498), (190, 47342),

Gene: JalFarm20_60 Start: 39595, Stop: 39840, Start Num: 81

Candidate Starts for JalFarm20_60:

(65, 39571), (Start: 81 @39595 has 173 MA's), (135, 39706),

Gene: Jasper_66 Start: 41666, Stop: 41439, Start Num: 84

Candidate Starts for Jasper_66:

(Start: 84 @41666 has 72 MA's), (135, 41606),

Gene: JayJay_6 Start: 1730, Stop: 1996, Start Num: 75

Candidate Starts for JayJay_6:

(Start: 75 @1730 has 3 MA's), (Start: 81 @1739 has 173 MA's), (Start: 89 @1763 has 35 MA's), (118, 1805), (131, 1820), (134, 1838), (135, 1841), (179, 1937),

Gene: Jinglebell_38 Start: 31199, Stop: 31008, Start Num: 49

Candidate Starts for Jinglebell_38:

(Start: 49 @31199 has 8 MA's), (Start: 92 @31109 has 1 MA's),

Gene: Job42_55 Start: 39394, Stop: 39636, Start Num: 81

Candidate Starts for Job42_55:

(24, 39280), (27, 39292), (43, 39328), (Start: 70 @39379 has 1 MA's), (Start: 81 @39394 has 173 MA's), (135, 39505),

Gene: JoeyJr_73 Start: 46692, Stop: 46919, Start Num: 89

Candidate Starts for JoeyJr_73:

(Start: 89 @46692 has 35 MA's), (137, 46791),

Gene: Jorgensen_69 Start: 42799, Stop: 42503, Start Num: 77

Candidate Starts for Jorgensen_69:

(Start: 77 @42799 has 9 MA's), (116, 42721), (130, 42694), (134, 42673), (135, 42670),

Gene: JuicyJay_141 Start: 79181, Stop: 79426, Start Num: 144

Candidate Starts for JuicyJay_141:

(Start: 92 @79046 has 1 MA's), (132, 79136), (Start: 144 @79181 has 33 MA's), (174, 79253), (176, 79256),

Gene: JuicyJay_87 Start: 57765, Stop: 58061, Start Num: 81

Candidate Starts for JuicyJay_87:

(Start: 81 @57765 has 173 MA's), (116, 57843), (130, 57870), (135, 57894),

Gene: Juniper1_50 Start: 36588, Stop: 36851, Start Num: 81

Candidate Starts for Juniper1_50:

(59, 36558), (Start: 81 @36588 has 173 MA's), (135, 36699), (184, 36819),

Gene: Kahve_53 Start: 47617, Stop: 47348, Start Num: 84

Candidate Starts for Kahve_53:

(17, 47776), (30, 47719), (42, 47692), (50, 47671), (54, 47665), (Start: 84 @47617 has 72 MA's), (Start: 89 @47593 has 35 MA's), (122, 47545), (130, 47539), (135, 47515), (190, 47359),

Gene: Kalah2_84 Start: 55924, Stop: 56220, Start Num: 81

Candidate Starts for Kalah2_84:

(Start: 81 @55924 has 173 MA's), (116, 56002), (130, 56029), (135, 56053),

Gene: Kalah2_136 Start: 76787, Stop: 77032, Start Num: 144

Candidate Starts for Kalah2_136:

(Start: 92 @76652 has 1 MA's), (132, 76742), (Start: 144 @76787 has 33 MA's), (174, 76859), (176, 76862),

Gene: Kamaru_71 Start: 43317, Stop: 43604, Start Num: 79

Candidate Starts for Kamaru_71:

(5, 42969), (6, 42972), (9, 43032), (18, 43176), (19, 43179), (72, 43305), (Start: 73 @43308 has 5 MA's), (Start: 79 @43317 has 17 MA's), (105, 43383), (134, 43449), (137, 43461),

Gene: Kamiyu_51 Start: 45383, Stop: 45114, Start Num: 81

Candidate Starts for Kamiyu_51:

(Start: 81 @45383 has 173 MA's), (108, 45329), (135, 45281),

Gene: KandZ_82 Start: 59971, Stop: 60174, Start Num: 81

Candidate Starts for KandZ_82:

(21, 59845), (23, 59854), (Start: 81 @59971 has 173 MA's), (Start: 89 @59995 has 35 MA's), (135, 60073), (170, 60124),

Gene: Kari_52 Start: 36033, Stop: 36260, Start Num: 89

Candidate Starts for Kari_52:

(55, 35970), (Start: 89 @36033 has 35 MA's), (137, 36132),

Gene: KashFlow_144 Start: 76087, Stop: 76332, Start Num: 144
Candidate Starts for KashFlow_144:
(Start: 92 @75952 has 1 MA's), (132, 76042), (Start: 144 @76087 has 33 MA's), (174, 76159), (176, 76162),

Gene: Kenna_71 Start: 43390, Stop: 43677, Start Num: 79
Candidate Starts for Kenna_71:
(60, 43363), (Start: 73 @43381 has 5 MA's), (Start: 79 @43390 has 17 MA's), (105, 43456), (134, 43522), (137, 43534),

Gene: Kenuha5_50 Start: 36123, Stop: 36365, Start Num: 81
Candidate Starts for Kenuha5_50:
(34, 36039), (44, 36057), (65, 36099), (Start: 81 @36123 has 173 MA's), (135, 36234),

Gene: Kimberlium_67 Start: 43095, Stop: 43343, Start Num: 84
Candidate Starts for Kimberlium_67:
(Start: 84 @43095 has 72 MA's), (113, 43158), (135, 43200),

Gene: KingMidas_72 Start: 46106, Stop: 46333, Start Num: 89
Candidate Starts for KingMidas_72:
(Start: 89 @46106 has 35 MA's), (137, 46205),

Gene: Klein_90 Start: 55600, Stop: 55896, Start Num: 81
Candidate Starts for Klein_90:
(76, 55594), (Start: 81 @55600 has 173 MA's), (116, 55678), (130, 55705), (135, 55729),

Gene: Klein_143 Start: 75389, Stop: 75634, Start Num: 144
Candidate Starts for Klein_143:
(Start: 92 @75254 has 1 MA's), (132, 75344), (Start: 144 @75389 has 33 MA's), (174, 75461), (176, 75464),

Gene: KristaRAM_51 Start: 38223, Stop: 38468, Start Num: 81
Candidate Starts for KristaRAM_51:
(34, 38139), (44, 38157), (65, 38199), (Start: 81 @38223 has 173 MA's), (135, 38334),

Gene: Kronus_51 Start: 46457, Stop: 46188, Start Num: 81
Candidate Starts for Kronus_51:
(Start: 81 @46457 has 173 MA's), (108, 46403), (135, 46355), (190, 46199),

Gene: Kuwabara_76 Start: 45678, Stop: 45968, Start Num: 79
Candidate Starts for Kuwabara_76:
(Start: 73 @45669 has 5 MA's), (Start: 79 @45678 has 17 MA's), (105, 45744), (134, 45810), (137, 45822), (146, 45843), (152, 45849), (160, 45858),

Gene: Kwadwo_52 Start: 47069, Stop: 46776, Start Num: 84
Candidate Starts for Kwadwo_52:
(17, 47228), (30, 47171), (42, 47144), (50, 47123), (54, 47117), (Start: 84 @47069 has 72 MA's), (Start: 89 @47045 has 35 MA's), (122, 46997), (130, 46991), (135, 46967),

Gene: Langerak_53 Start: 36052, Stop: 36279, Start Num: 89
Candidate Starts for Langerak_53:
(55, 35989), (Start: 89 @36052 has 35 MA's), (137, 36151),

Gene: Lasso_53 Start: 47344, Stop: 47051, Start Num: 84

Candidate Starts for Lasso_53:

(17, 47503), (30, 47446), (42, 47419), (50, 47398), (54, 47392), (Start: 84 @47344 has 72 MA's), (Start: 89 @47320 has 35 MA's), (122, 47272), (130, 47266), (135, 47242),

Gene: LeeLot_53 Start: 47396, Stop: 47103, Start Num: 84

Candidate Starts for LeeLot_53:

(17, 47555), (30, 47498), (42, 47471), (50, 47450), (54, 47444), (Start: 84 @47396 has 72 MA's), (Start: 89 @47372 has 35 MA's), (122, 47324), (130, 47318), (135, 47294),

Gene: Legolas_55 Start: 48053, Stop: 47784, Start Num: 84

Candidate Starts for Legolas_55:

(17, 48212), (30, 48155), (42, 48128), (50, 48107), (54, 48101), (Start: 84 @48053 has 72 MA's), (Start: 89 @48029 has 35 MA's), (122, 47981), (130, 47975), (135, 47951), (190, 47795),

Gene: Leperchaun_71 Start: 45926, Stop: 46153, Start Num: 89

Candidate Starts for Leperchaun_71:

(Start: 89 @45926 has 35 MA's), (137, 46025),

Gene: Leroy_74 Start: 43665, Stop: 43955, Start Num: 79

Candidate Starts for Leroy_74:

(61, 43638), (Start: 73 @43656 has 5 MA's), (Start: 79 @43665 has 17 MA's), (105, 43731), (140, 43818), (148, 43836), (165, 43863),

Gene: Lilbit_7 Start: 2312, Stop: 2584, Start Num: 81

Candidate Starts for Lilbit_7:

(Start: 81 @2312 has 173 MA's), (116, 2375), (135, 2417),

Gene: LinStu_6 Start: 2738, Stop: 2995, Start Num: 81

Candidate Starts for LinStu_6:

(Start: 75 @2729 has 3 MA's), (Start: 81 @2738 has 173 MA's), (Start: 89 @2762 has 35 MA's), (118, 2804), (131, 2819), (134, 2837), (135, 2840), (179, 2936),

Gene: LitninMcQueen_77 Start: 44377, Stop: 44670, Start Num: 79

Candidate Starts for LitninMcQueen_77:

(Start: 73 @44368 has 5 MA's), (Start: 79 @44377 has 17 MA's), (103, 44440), (105, 44443), (148, 44548),

Gene: Llama_39 Start: 31198, Stop: 31007, Start Num: 49

Candidate Starts for Llama_39:

(Start: 49 @31198 has 8 MA's), (Start: 92 @31108 has 1 MA's),

Gene: LolaVinca_6 Start: 1879, Stop: 2115, Start Num: 75

Candidate Starts for LolaVinca_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Longacauda_54 Start: 48016, Stop: 47747, Start Num: 84

Candidate Starts for Longacauda_54:

(17, 48175), (30, 48118), (42, 48091), (50, 48070), (54, 48064), (Start: 84 @48016 has 72 MA's), (Start: 89 @47992 has 35 MA's), (122, 47944), (130, 47938), (135, 47914), (190, 47758),

Gene: LordLeafolot_6 Start: 1888, Stop: 2115, Start Num: 81
Candidate Starts for LordLeafolot_6:
(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Lton_54 Start: 33162, Stop: 33458, Start Num: 79
Candidate Starts for Lton_54:
(Start: 73 @33153 has 5 MA's), (Start: 79 @33162 has 17 MA's), (105, 33228), (134, 33294), (137, 33306), (148, 33333), (165, 33360),

Gene: Lucky10_55 Start: 35945, Stop: 36226, Start Num: 79
Candidate Starts for Lucky10_55:
(Start: 79 @35945 has 17 MA's), (Start: 96 @35993 has 2 MA's), (105, 36011), (115, 36032), (134, 36068), (137, 36080), (146, 36101), (152, 36107), (160, 36116),

Gene: Lucky2013_137 Start: 73141, Stop: 73386, Start Num: 144
Candidate Starts for Lucky2013_137:
(Start: 92 @73006 has 1 MA's), (130, 73081), (132, 73096), (Start: 144 @73141 has 33 MA's), (174, 73213), (176, 73216), (178, 73219),

Gene: Lucky2013_80 Start: 49269, Stop: 49000, Start Num: 81
Candidate Starts for Lucky2013_80:
(Start: 81 @49269 has 173 MA's), (108, 49215), (135, 49167),

Gene: Lumine_54 Start: 47804, Stop: 47535, Start Num: 84
Candidate Starts for Lumine_54:
(17, 47963), (30, 47906), (50, 47858), (54, 47852), (Start: 84 @47804 has 72 MA's), (Start: 89 @47780 has 35 MA's), (122, 47732), (130, 47726), (135, 47702),

Gene: Lutum_77 Start: 44553, Stop: 44840, Start Num: 79
Candidate Starts for Lutum_77:
(60, 44526), (Start: 73 @44544 has 5 MA's), (Start: 79 @44553 has 17 MA's), (105, 44619), (134, 44685), (137, 44697),

Gene: MadMen_50 Start: 36869, Stop: 37144, Start Num: 81
Candidate Starts for MadMen_50:
(76, 36863), (Start: 81 @36869 has 173 MA's), (135, 36980),

Gene: Madiba_63 Start: 40537, Stop: 40815, Start Num: 81
Candidate Starts for Madiba_63:
(76, 40531), (Start: 81 @40537 has 173 MA's), (135, 40648),

Gene: Madiba_50 Start: 35664, Stop: 35894, Start Num: 81
Candidate Starts for Madiba_50:
(Start: 62 @35634 has 1 MA's), (Start: 81 @35664 has 173 MA's), (Start: 96 @35700 has 2 MA's), (134, 35760), (135, 35763),

Gene: Makemake_71 Start: 44586, Stop: 44317, Start Num: 81
Candidate Starts for Makemake_71:
(Start: 81 @44586 has 173 MA's), (108, 44532), (135, 44484),

Gene: Mana_52 Start: 47084, Stop: 46791, Start Num: 84
Candidate Starts for Mana_52:

(17, 47243), (30, 47186), (42, 47159), (50, 47138), (54, 47132), (Start: 84 @47084 has 72 MA's),
(Start: 89 @47060 has 35 MA's), (122, 47012), (130, 47006), (135, 46982),

Gene: Maravista_54 Start: 38807, Stop: 39082, Start Num: 81
Candidate Starts for Maravista_54:
(59, 38777), (Start: 81 @38807 has 173 MA's), (135, 38918),

Gene: Marleymoo_128 Start: 73628, Stop: 73906, Start Num: 144
Candidate Starts for Marleymoo_128:
(Start: 92 @73493 has 1 MA's), (132, 73583), (Start: 144 @73628 has 33 MA's), (174, 73700), (176,
73703), (193, 73823),

Gene: Maroc7_64 Start: 43049, Stop: 42780, Start Num: 81
Candidate Starts for Maroc7_64:
(Start: 81 @43049 has 173 MA's), (108, 42995), (135, 42947),

Gene: Marsha_65 Start: 43596, Stop: 43360, Start Num: 81
Candidate Starts for Marsha_65:
(Start: 81 @43596 has 173 MA's), (111, 43536),

Gene: Maru_53 Start: 47523, Stop: 47254, Start Num: 84
Candidate Starts for Maru_53:
(17, 47682), (30, 47625), (42, 47598), (50, 47577), (54, 47571), (Start: 84 @47523 has 72 MA's),
(Start: 89 @47499 has 35 MA's), (122, 47451), (130, 47445), (135, 47421),

Gene: Medindi_50 Start: 35302, Stop: 35604, Start Num: 96
Candidate Starts for Medindi_50:
(Start: 62 @35236 has 1 MA's), (Start: 81 @35266 has 173 MA's), (Start: 96 @35302 has 2 MA's),
(134, 35362), (135, 35365), (162, 35404), (171, 35425), (191, 35503),

Gene: Melissauren88_50 Start: 36304, Stop: 36534, Start Num: 81
Candidate Starts for Melissauren88_50:
(Start: 62 @36274 has 1 MA's), (Start: 81 @36304 has 173 MA's), (Start: 96 @36340 has 2 MA's),
(134, 36400), (135, 36403),

Gene: Mesh1_54 Start: 47616, Stop: 47323, Start Num: 84
Candidate Starts for Mesh1_54:
(17, 47775), (30, 47718), (50, 47670), (54, 47664), (Start: 84 @47616 has 72 MA's), (Start: 89 @47592
has 35 MA's), (122, 47544), (130, 47538), (135, 47514),

Gene: MiaZeal_144 Start: 74280, Stop: 74525, Start Num: 144
Candidate Starts for MiaZeal_144:
(Start: 92 @74145 has 1 MA's), (130, 74220), (132, 74235), (Start: 144 @74280 has 33 MA's), (174,
74352), (176, 74355), (178, 74358),

Gene: MiaZeal_83 Start: 49925, Stop: 49656, Start Num: 81
Candidate Starts for MiaZeal_83:
(Start: 81 @49925 has 173 MA's), (108, 49871), (135, 49823),

Gene: MilleniumForce_52 Start: 38325, Stop: 38558, Start Num: 81
Candidate Starts for MilleniumForce_52:
(Start: 62 @38295 has 1 MA's), (Start: 81 @38325 has 173 MA's), (Start: 96 @38361 has 2 MA's),
(134, 38421), (135, 38424),

Gene: Minerva_145 Start: 76838, Stop: 77116, Start Num: 144

Candidate Starts for Minerva_145:

(Start: 92 @76703 has 1 MA's), (132, 76793), (Start: 144 @76838 has 33 MA's), (174, 76910), (176, 76913), (186, 76955), (193, 77033),

Gene: Minerva_89 Start: 56566, Stop: 56844, Start Num: 81

Candidate Starts for Minerva_89:

(76, 56560), (Start: 81 @56566 has 173 MA's), (135, 56677),

Gene: MinionDave_51 Start: 36841, Stop: 37071, Start Num: 81

Candidate Starts for MinionDave_51:

(Start: 62 @36811 has 1 MA's), (Start: 81 @36841 has 173 MA's), (Start: 96 @36877 has 2 MA's), (134, 36937), (135, 36940),

Gene: MissRona_77 Start: 48142, Stop: 48381, Start Num: 95

Candidate Starts for MissRona_77:

(1, 47395), (2, 47401), (3, 47407), (4, 47452), (13, 47890), (14, 47917), (25, 47980), (34, 48004), (Start: 75 @48079 has 3 MA's), (Start: 81 @48088 has 173 MA's), (Start: 95 @48142 has 4 MA's), (108, 48169), (171, 48307), (184, 48328), (189, 48376),

Gene: MitKao_53 Start: 47094, Stop: 46801, Start Num: 84

Candidate Starts for MitKao_53:

(17, 47253), (30, 47196), (42, 47169), (50, 47148), (54, 47142), (Start: 84 @47094 has 72 MA's), (Start: 89 @47070 has 35 MA's), (122, 47022), (130, 47016), (135, 46992),

Gene: MmasiCarm_52 Start: 45904, Stop: 45635, Start Num: 81

Candidate Starts for MmasiCarm_52:

(Start: 81 @45904 has 173 MA's), (108, 45850), (135, 45802), (190, 45646),

Gene: Modragons_38 Start: 31043, Stop: 30852, Start Num: 49

Candidate Starts for Modragons_38:

(Start: 49 @31043 has 8 MA's), (Start: 92 @30953 has 1 MA's),

Gene: Moonbeam_48 Start: 36361, Stop: 36591, Start Num: 81

Candidate Starts for Moonbeam_48:

(Start: 62 @36331 has 1 MA's), (Start: 81 @36361 has 173 MA's), (Start: 96 @36397 has 2 MA's), (134, 36457), (135, 36460),

Gene: Moosehead_58 Start: 34673, Stop: 34924, Start Num: 79

Candidate Starts for Moosehead_58:

(48, 34622), (51, 34631), (56, 34637), (58, 34640), (71, 34661), (Start: 73 @34664 has 5 MA's), (Start: 79 @34673 has 17 MA's), (140, 34805), (151, 34823),

Gene: Morgushi_53 Start: 47083, Stop: 46790, Start Num: 84

Candidate Starts for Morgushi_53:

(17, 47242), (30, 47185), (42, 47158), (50, 47137), (54, 47131), (Start: 84 @47083 has 72 MA's), (Start: 89 @47059 has 35 MA's), (122, 47011), (130, 47005), (135, 46981),

Gene: Mortcellus_51 Start: 46511, Stop: 46242, Start Num: 81

Candidate Starts for Mortcellus_51:

(Start: 81 @46511 has 173 MA's), (108, 46457), (135, 46409), (190, 46253),

Gene: Mosaic_52 Start: 47088, Stop: 46795, Start Num: 84
Candidate Starts for Mosaic_52:
(17, 47247), (30, 47190), (42, 47163), (50, 47142), (54, 47136), (Start: 84 @47088 has 72 MA's),
(Start: 89 @47064 has 35 MA's), (122, 47016), (130, 47010), (135, 46986),

Gene: Mova_66 Start: 41041, Stop: 41319, Start Num: 81
Candidate Starts for Mova_66:
(76, 41035), (Start: 81 @41041 has 173 MA's), (135, 41152),

Gene: Mozy_62 Start: 39946, Stop: 40173, Start Num: 81
Candidate Starts for Mozy_62:
(Start: 62 @39916 has 1 MA's), (Start: 81 @39946 has 173 MA's), (Start: 89 @39970 has 35 MA's),
(118, 40012), (131, 40027), (134, 40045), (135, 40048), (149, 40078),

Gene: MrPhizzler_55 Start: 47550, Stop: 47281, Start Num: 84
Candidate Starts for MrPhizzler_55:
(17, 47709), (30, 47652), (42, 47625), (50, 47604), (54, 47598), (Start: 84 @47550 has 72 MA's),
(Start: 89 @47526 has 35 MA's), (122, 47478), (130, 47472), (135, 47448),

Gene: Mule_62 Start: 41651, Stop: 41406, Start Num: 81
Candidate Starts for Mule_62:
(Start: 81 @41651 has 173 MA's), (102, 41609), (110, 41597), (112, 41594), (135, 41555), (139,
41537),

Gene: Mwanjiwa_58 Start: 37785, Stop: 38027, Start Num: 81
Candidate Starts for Mwanjiwa_58:
(Start: 62 @37755 has 1 MA's), (Start: 81 @37785 has 173 MA's), (135, 37896),

Gene: Nappy_5 Start: 1734, Stop: 1961, Start Num: 81
Candidate Starts for Nappy_5:
(Start: 75 @1725 has 3 MA's), (Start: 81 @1734 has 173 MA's), (Start: 92 @1770 has 1 MA's), (101,
1779), (135, 1833), (163, 1872),

Gene: Nazo_58 Start: 40075, Stop: 40302, Start Num: 89
Candidate Starts for Nazo_58:
(55, 40012), (Start: 89 @40075 has 35 MA's), (137, 40174), (172, 40237),

Gene: Neos5_51 Start: 46209, Stop: 45940, Start Num: 81
Candidate Starts for Neos5_51:
(Start: 81 @46209 has 173 MA's), (108, 46155), (135, 46107),

Gene: Nichirin_39 Start: 31227, Stop: 31036, Start Num: 49
Candidate Starts for Nichirin_39:
(Start: 49 @31227 has 8 MA's), (Start: 92 @31137 has 1 MA's),

Gene: Nicole21_54 Start: 47889, Stop: 47620, Start Num: 84
Candidate Starts for Nicole21_54:
(17, 48048), (30, 47991), (42, 47964), (50, 47943), (54, 47937), (Start: 84 @47889 has 72 MA's),
(Start: 89 @47865 has 35 MA's), (122, 47817), (130, 47811), (135, 47787), (190, 47631),

Gene: NihilNomen_147 Start: 77126, Stop: 77371, Start Num: 144
Candidate Starts for NihilNomen_147:

(Start: 92 @76991 has 1 MA's), (132, 77081), (Start: 144 @77126 has 33 MA's), (174, 77198), (176, 77201),

Gene: NihilNomen_91 Start: 56718, Stop: 57014, Start Num: 81

Candidate Starts for NihilNomen_91:

(Start: 81 @56718 has 173 MA's), (116, 56796), (130, 56823), (135, 56847),

Gene: Nimbo_65 Start: 44790, Stop: 45017, Start Num: 89

Candidate Starts for Nimbo_65:

(Start: 89 @44790 has 35 MA's), (137, 44889),

Gene: Nozo_51 Start: 46173, Stop: 45904, Start Num: 81

Candidate Starts for Nozo_51:

(Start: 81 @46173 has 173 MA's), (108, 46119), (135, 46071),

Gene: NuevoMundo_6 Start: 1876, Stop: 2112, Start Num: 75

Candidate Starts for NuevoMundo_6:

(Start: 75 @1876 has 3 MA's), (Start: 81 @1885 has 173 MA's), (Start: 92 @1921 has 1 MA's), (101, 1930), (135, 1984), (163, 2023),

Gene: ODay_82 Start: 46976, Stop: 47251, Start Num: 79

Candidate Starts for ODay_82:

(33, 46892), (40, 46904), (45, 46916), (67, 46958), (Start: 73 @46967 has 5 MA's), (Start: 79 @46976 has 17 MA's), (97, 47021), (106, 47036), (117, 47057), (136, 47099), (138, 47111),

Gene: Obutu_52 Start: 45859, Stop: 45590, Start Num: 81

Candidate Starts for Obutu_52:

(Start: 81 @45859 has 173 MA's), (108, 45805), (135, 45757), (190, 45601),

Gene: Ochi17_37 Start: 30650, Stop: 30459, Start Num: 49

Candidate Starts for Ochi17_37:

(Start: 49 @30650 has 8 MA's), (Start: 92 @30560 has 1 MA's),

Gene: Odette_149 Start: 79269, Stop: 79514, Start Num: 144

Candidate Starts for Odette_149:

(Start: 92 @79134 has 1 MA's), (132, 79224), (Start: 144 @79269 has 33 MA's), (174, 79341), (176, 79344),

Gene: Odette_88 Start: 55760, Stop: 56056, Start Num: 81

Candidate Starts for Odette_88:

(Start: 81 @55760 has 173 MA's), (116, 55838), (130, 55865), (135, 55889),

Gene: OfUltron_39 Start: 31199, Stop: 31008, Start Num: 49

Candidate Starts for OfUltron_39:

(Start: 49 @31199 has 8 MA's), (Start: 92 @31109 has 1 MA's),

Gene: Ogopogo_57 Start: 37928, Stop: 38170, Start Num: 81

Candidate Starts for Ogopogo_57:

(76, 37922), (Start: 81 @37928 has 173 MA's), (135, 38039),

Gene: Oksu_39 Start: 31043, Stop: 30852, Start Num: 49

Candidate Starts for Oksu_39:

(Start: 49 @31043 has 8 MA's), (Start: 92 @30953 has 1 MA's),

Gene: OldBen_70 Start: 46182, Stop: 46409, Start Num: 89

Candidate Starts for OldBen_70:

(Start: 89 @46182 has 35 MA's), (137, 46281),

Gene: OneDirection_52 Start: 33066, Stop: 33362, Start Num: 79

Candidate Starts for OneDirection_52:

(61, 33039), (Start: 73 @33057 has 5 MA's), (Start: 79 @33066 has 17 MA's), (105, 33132), (140, 33219), (148, 33237), (165, 33264),

Gene: Oosterbaan_53 Start: 47374, Stop: 47081, Start Num: 84

Candidate Starts for Oosterbaan_53:

(17, 47533), (30, 47476), (42, 47449), (50, 47428), (54, 47422), (Start: 84 @47374 has 72 MA's), (Start: 89 @47350 has 35 MA's), (122, 47302), (130, 47296), (135, 47272),

Gene: Optimus_136 Start: 74406, Stop: 74651, Start Num: 144

Candidate Starts for Optimus_136:

(Start: 92 @74271 has 1 MA's), (130, 74346), (132, 74361), (Start: 144 @74406 has 33 MA's), (174, 74478), (176, 74481),

Gene: Optimus_84 Start: 55270, Stop: 55548, Start Num: 81

Candidate Starts for Optimus_84:

(76, 55264), (Start: 81 @55270 has 173 MA's), (135, 55381),

Gene: OrangeOswald_51 Start: 45414, Stop: 45145, Start Num: 81

Candidate Starts for OrangeOswald_51:

(Start: 81 @45414 has 173 MA's), (108, 45360), (135, 45312),

Gene: Orwigg_53 Start: 47574, Stop: 47305, Start Num: 84

Candidate Starts for Orwigg_53:

(17, 47733), (30, 47676), (42, 47649), (50, 47628), (54, 47622), (Start: 84 @47574 has 72 MA's), (Start: 89 @47550 has 35 MA's), (122, 47502), (130, 47496), (135, 47472), (190, 47316),

Gene: OwlsT2W_53 Start: 37646, Stop: 37888, Start Num: 81

Candidate Starts for OwlsT2W_53:

(Start: 62 @37616 has 1 MA's), (Start: 81 @37646 has 173 MA's), (134, 37754),

Gene: PHappiness_73 Start: 47011, Stop: 47238, Start Num: 89

Candidate Starts for PHappiness_73:

(Start: 89 @47011 has 35 MA's), (137, 47110),

Gene: PMC_49 Start: 37214, Stop: 37471, Start Num: 81

Candidate Starts for PMC_49:

(24, 37100), (27, 37112), (43, 37148), (Start: 70 @37199 has 1 MA's), (Start: 81 @37214 has 173 MA's), (135, 37325), (145, 37355),

Gene: Paraselene_66 Start: 43378, Stop: 43109, Start Num: 81

Candidate Starts for Paraselene_66:

(Start: 81 @43378 has 173 MA's), (108, 43324), (135, 43276),

Gene: Periwinkle_62 Start: 38089, Stop: 38367, Start Num: 84

Candidate Starts for Periwinkle_62:

(Start: 84 @38089 has 72 MA's), (135, 38185), (157, 38251), (188, 38329),

Gene: Phabuloso_81 Start: 45523, Stop: 45816, Start Num: 79

Candidate Starts for Phabuloso_81:

(61, 45496), (Start: 73 @45514 has 5 MA's), (Start: 79 @45523 has 17 MA's), (105, 45589), (139, 45676), (189, 45799),

Gene: Phalaborwa_86 Start: 60456, Stop: 60659, Start Num: 81

Candidate Starts for Phalaborwa_86:

(21, 60330), (23, 60339), (29, 60357), (Start: 81 @60456 has 173 MA's), (98, 60501), (122, 60534), (135, 60558), (170, 60609), (177, 60621),

Gene: Phalconet_51 Start: 36608, Stop: 36838, Start Num: 81

Candidate Starts for Phalconet_51:

(Start: 62 @36578 has 1 MA's), (Start: 81 @36608 has 173 MA's), (Start: 96 @36644 has 2 MA's), (134, 36704), (135, 36707),

Gene: Phanphagia_47 Start: 36555, Stop: 36800, Start Num: 81

Candidate Starts for Phanphagia_47:

(52, 36510), (65, 36531), (Start: 81 @36555 has 173 MA's), (135, 36666),

Gene: PharkleMinkus_6 Start: 1924, Stop: 2115, Start Num: 92

Candidate Starts for PharkleMinkus_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Phasih_51 Start: 37693, Stop: 37935, Start Num: 81

Candidate Starts for Phasih_51:

(76, 37687), (Start: 81 @37693 has 173 MA's), (135, 37804),

Gene: Phayeta_53 Start: 45741, Stop: 45472, Start Num: 81

Candidate Starts for Phayeta_53:

(Start: 81 @45741 has 173 MA's), (108, 45687), (135, 45639), (190, 45483),

Gene: Phayonce_59 Start: 40788, Stop: 41024, Start Num: 93

Candidate Starts for Phayonce_59:

(20, 40608), (Start: 93 @40788 has 1 MA's), (134, 40881), (153, 40929), (168, 40959), (187, 40989), (189, 41010),

Gene: PherrisBueller_66 Start: 41317, Stop: 41090, Start Num: 84

Candidate Starts for PherrisBueller_66:

(Start: 84 @41317 has 72 MA's), (135, 41257),

Gene: PhesterPhotato_75 Start: 45749, Stop: 45976, Start Num: 89

Candidate Starts for PhesterPhotato_75:

(55, 45686), (Start: 89 @45749 has 35 MA's), (137, 45848),

Gene: PhesterPhotato_54 Start: 37593, Stop: 37826, Start Num: 81

Candidate Starts for PhesterPhotato_54:

(Start: 62 @37563 has 1 MA's), (Start: 81 @37593 has 173 MA's), (Start: 96 @37629 has 2 MA's), (134, 37689), (135, 37692),

Gene: Philly_50 Start: 45265, Stop: 44996, Start Num: 81

Candidate Starts for Philly_50:

(Start: 81 @45265 has 173 MA's), (108, 45211), (135, 45163),

Gene: Phistory_72 Start: 42511, Stop: 42852, Start Num: 73

Candidate Starts for Phistory_72:

(22, 42406), (47, 42466), (Start: 73 @42511 has 5 MA's), (105, 42589), (134, 42655), (159, 42718),

Gene: Phlyer_51 Start: 46154, Stop: 45885, Start Num: 81

Candidate Starts for Phlyer_51:

(Start: 81 @46154 has 173 MA's), (108, 46100), (135, 46052),

Gene: Phoebus_92 Start: 57900, Stop: 58196, Start Num: 81

Candidate Starts for Phoebus_92:

(Start: 81 @57900 has 173 MA's), (116, 57978), (130, 58005), (135, 58029),

Gene: Phoebus_145 Start: 79020, Stop: 79265, Start Num: 144

Candidate Starts for Phoebus_145:

(Start: 92 @78885 has 1 MA's), (130, 78960), (132, 78975), (Start: 144 @79020 has 33 MA's), (174, 79092), (176, 79095),

Gene: PhrostyMug_65 Start: 43825, Stop: 43580, Start Num: 81

Candidate Starts for PhrostyMug_65:

(Start: 81 @43825 has 173 MA's), (102, 43783), (110, 43771), (112, 43768), (135, 43729), (139, 43711),

Gene: Pier_6 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for Pier_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Poenanya_76 Start: 46880, Stop: 47107, Start Num: 89

Candidate Starts for Poenanya_76:

(Start: 89 @46880 has 35 MA's), (137, 46979),

Gene: Poenanya_52 Start: 38179, Stop: 38421, Start Num: 81

Candidate Starts for Poenanya_52:

(Start: 62 @38149 has 1 MA's), (Start: 81 @38179 has 173 MA's), (134, 38287),

Gene: Polka14_77 Start: 47670, Stop: 47897, Start Num: 89

Candidate Starts for Polka14_77:

(Start: 89 @47670 has 35 MA's), (137, 47769),

Gene: Polka14_51 Start: 36782, Stop: 37027, Start Num: 81

Candidate Starts for Polka14_51:

(Start: 81 @36782 has 173 MA's), (134, 36890),

Gene: Polkaroo_55 Start: 37375, Stop: 37602, Start Num: 89

Candidate Starts for Polkaroo_55:

(55, 37312), (Start: 89 @37375 has 35 MA's), (137, 37474),

Gene: Pollywog_50 Start: 37066, Stop: 37320, Start Num: 84

Candidate Starts for Pollywog_50:

(54, 37018), (68, 37042), (Start: 84 @37066 has 72 MA's), (135, 37177),

Gene: Porcelain_141 Start: 74087, Stop: 74332, Start Num: 144

Candidate Starts for Porcelain_141:

(Start: 92 @73952 has 1 MA's), (130, 74027), (132, 74042), (Start: 144 @74087 has 33 MA's), (174, 74159), (176, 74162), (178, 74165),

Gene: Porcelain_82 Start: 49925, Stop: 49656, Start Num: 81

Candidate Starts for Porcelain_82:

(Start: 81 @49925 has 173 MA's), (108, 49871), (135, 49823),

Gene: Potter_52 Start: 47105, Stop: 46812, Start Num: 84

Candidate Starts for Potter_52:

(17, 47264), (30, 47207), (42, 47180), (50, 47159), (54, 47153), (Start: 84 @47105 has 72 MA's), (Start: 89 @47081 has 35 MA's), (122, 47033), (130, 47027), (135, 47003),

Gene: Pound_137 Start: 76839, Stop: 77084, Start Num: 144

Candidate Starts for Pound_137:

(Start: 92 @76704 has 1 MA's), (130, 76779), (132, 76794), (Start: 144 @76839 has 33 MA's), (174, 76911), (176, 76914),

Gene: Pringar_6 Start: 1866, Stop: 2138, Start Num: 81

Candidate Starts for Pringar_6:

(Start: 81 @1866 has 173 MA's), (116, 1929), (135, 1971),

Gene: Puhltonio_53 Start: 47379, Stop: 47086, Start Num: 84

Candidate Starts for Puhltonio_53:

(17, 47538), (30, 47481), (42, 47454), (50, 47433), (54, 47427), (Start: 84 @47379 has 72 MA's), (Start: 89 @47355 has 35 MA's), (122, 47307), (130, 47301), (135, 47277),

Gene: Pupusa_6 Start: 1924, Stop: 2115, Start Num: 92

Candidate Starts for Pupusa_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Purky_63 Start: 41280, Stop: 41552, Start Num: 84

Candidate Starts for Purky_63:

(Start: 84 @41280 has 72 MA's), (88, 41295), (125, 41364), (134, 41388), (142, 41421), (150, 41439), (187, 41517), (189, 41538),

Gene: Purky_64 Start: 41545, Stop: 41862, Start Num: 84

Candidate Starts for Purky_64:

(16, 41383), (74, 41530), (Start: 84 @41545 has 72 MA's), (134, 41677), (181, 41794), (189, 41848),

Gene: QueenBeane_53 Start: 47369, Stop: 47076, Start Num: 84

Candidate Starts for QueenBeane_53:

(17, 47528), (30, 47471), (42, 47444), (50, 47423), (54, 47417), (Start: 84 @47369 has 72 MA's), (Start: 89 @47345 has 35 MA's), (122, 47297), (130, 47291), (135, 47267),

Gene: QuickMath_66 Start: 43318, Stop: 43566, Start Num: 84

Candidate Starts for QuickMath_66:

(Start: 84 @43318 has 72 MA's), (113, 43381), (135, 43423),

Gene: Rando14_64 Start: 42240, Stop: 42497, Start Num: 83

Candidate Starts for Rando14_64:

(66, 42219), (Start: 83 @42240 has 1 MA's), (107, 42300), (135, 42360), (142, 42390), (168, 42435),

Gene: RedBird_74 Start: 45372, Stop: 45599, Start Num: 89

Candidate Starts for RedBird_74:

(Start: 89 @45372 has 35 MA's), (137, 45471),

Gene: RedRaider77_9 Start: 2886, Stop: 3152, Start Num: 81

Candidate Starts for RedRaider77_9:

(46, 2829), (Start: 81 @2886 has 173 MA's), (99, 2922), (134, 2982), (135, 2985), (190, 3141),

Gene: Redno2_140 Start: 75128, Stop: 75373, Start Num: 144

Candidate Starts for Redno2_140:

(Start: 92 @74993 has 1 MA's), (132, 75083), (Start: 144 @75128 has 33 MA's), (174, 75200), (176, 75203),

Gene: Renaud18_58 Start: 38221, Stop: 38445, Start Num: 81

Candidate Starts for Renaud18_58:

(Start: 62 @38191 has 1 MA's), (Start: 81 @38221 has 173 MA's), (91, 38254), (116, 38278), (134, 38311),

Gene: Renaud18_70 Start: 41973, Stop: 42221, Start Num: 81

Candidate Starts for Renaud18_70:

(63, 41946), (Start: 81 @41973 has 173 MA's), (128, 42069), (134, 42093), (155, 42126),

Gene: Renaud18_71 Start: 42261, Stop: 42503, Start Num: 81

Candidate Starts for Renaud18_71:

(Start: 81 @42261 has 173 MA's), (88, 42276), (135, 42354), (164, 42414),

Gene: Rimu_54 Start: 47570, Stop: 47301, Start Num: 84

Candidate Starts for Rimu_54:

(17, 47729), (30, 47672), (42, 47645), (50, 47624), (54, 47618), (Start: 84 @47570 has 72 MA's), (Start: 89 @47546 has 35 MA's), (122, 47498), (130, 47492), (135, 47468),

Gene: Rita1961_52 Start: 45860, Stop: 45591, Start Num: 81

Candidate Starts for Rita1961_52:

(Start: 81 @45860 has 173 MA's), (108, 45806), (135, 45758), (190, 45602),

Gene: RitaG_73 Start: 46813, Stop: 47040, Start Num: 89

Candidate Starts for RitaG_73:

(Start: 89 @46813 has 35 MA's), (137, 46912),

Gene: Rockne_53 Start: 37214, Stop: 37471, Start Num: 81

Candidate Starts for Rockne_53:

(24, 37100), (27, 37112), (43, 37148), (Start: 70 @37199 has 1 MA's), (Start: 81 @37214 has 173 MA's), (135, 37325), (145, 37355),

Gene: RockyHorror_53 Start: 37057, Stop: 37299, Start Num: 81

Candidate Starts for RockyHorror_53:

(Start: 62 @37027 has 1 MA's), (Start: 81 @37057 has 173 MA's), (135, 37168),

Gene: Royals2015_55 Start: 37315, Stop: 37545, Start Num: 81

Candidate Starts for Royals2015_55:

(Start: 62 @37285 has 1 MA's), (Start: 81 @37315 has 173 MA's), (Start: 96 @37351 has 2 MA's), (134, 37411), (135, 37414),

Gene: SG4_69 Start: 43478, Stop: 43705, Start Num: 89
Candidate Starts for SG4_69:
(Start: 89 @43478 has 35 MA's), (137, 43577),

Gene: SG4_49 Start: 36037, Stop: 36267, Start Num: 81
Candidate Starts for SG4_49:
(60, 36004), (Start: 62 @36007 has 1 MA's), (Start: 81 @36037 has 173 MA's), (Start: 96 @36073 has 2 MA's), (134, 36133), (135, 36136),

Gene: Samaymay_53 Start: 47369, Stop: 47076, Start Num: 84
Candidate Starts for Samaymay_53:
(17, 47528), (30, 47471), (42, 47444), (50, 47423), (54, 47417), (Start: 84 @47369 has 72 MA's), (Start: 89 @47345 has 35 MA's), (122, 47297), (130, 47291), (135, 47267),

Gene: Samman98_60 Start: 39796, Stop: 40041, Start Num: 77
Candidate Starts for Samman98_60:
(Start: 77 @39796 has 9 MA's), (Start: 92 @39835 has 1 MA's), (180, 39985),

Gene: Sassafras_74 Start: 45702, Stop: 45929, Start Num: 89
Candidate Starts for Sassafras_74:
(Start: 89 @45702 has 35 MA's), (137, 45801),

Gene: Sassafras_50 Start: 36161, Stop: 36394, Start Num: 81
Candidate Starts for Sassafras_50:
(Start: 62 @36131 has 1 MA's), (Start: 81 @36161 has 173 MA's), (Start: 89 @36185 has 35 MA's), (118, 36227), (131, 36242), (134, 36260), (135, 36263),

Gene: SassyCat97_52 Start: 47096, Stop: 46803, Start Num: 84
Candidate Starts for SassyCat97_52:
(17, 47255), (30, 47198), (42, 47171), (50, 47150), (54, 47144), (Start: 84 @47096 has 72 MA's), (Start: 89 @47072 has 35 MA's), (122, 47024), (130, 47018), (135, 46994),

Gene: Schatzie_85 Start: 55507, Stop: 55803, Start Num: 81
Candidate Starts for Schatzie_85:
(Start: 81 @55507 has 173 MA's), (116, 55585), (130, 55612), (135, 55636),

Gene: Schatzie_141 Start: 77688, Stop: 77933, Start Num: 144
Candidate Starts for Schatzie_141:
(Start: 92 @77553 has 1 MA's), (130, 77628), (132, 77643), (Start: 144 @77688 has 33 MA's), (174, 77760), (176, 77763),

Gene: Scottish_71 Start: 45361, Stop: 45588, Start Num: 89
Candidate Starts for Scottish_71:
(Start: 89 @45361 has 35 MA's), (137, 45460),

Gene: Seabastian_39 Start: 31199, Stop: 31008, Start Num: 49
Candidate Starts for Seabastian_39:
(Start: 49 @31199 has 8 MA's), (Start: 92 @31109 has 1 MA's),

Gene: Sebata_6 Start: 2738, Stop: 2995, Start Num: 81

Candidate Starts for Sebata_6:

(Start: 75 @2729 has 3 MA's), (Start: 81 @2738 has 173 MA's), (Start: 89 @2762 has 35 MA's), (118, 2804), (131, 2819), (134, 2837), (135, 2840), (179, 2936),

Gene: Serendipity_53 Start: 47393, Stop: 47100, Start Num: 84

Candidate Starts for Serendipity_53:

(17, 47552), (30, 47495), (42, 47468), (50, 47447), (54, 47441), (Start: 84 @47393 has 72 MA's), (Start: 89 @47369 has 35 MA's), (122, 47321), (130, 47315), (135, 47291),

Gene: Shauna1_47 Start: 36503, Stop: 36781, Start Num: 81

Candidate Starts for Shauna1_47:

(32, 36419), (42, 36437), (64, 36479), (Start: 81 @36503 has 173 MA's), (135, 36614),

Gene: ShawBrad_81 Start: 44287, Stop: 44574, Start Num: 79

Candidate Starts for ShawBrad_81:

(15, 44134), (28, 44191), (34, 44209), (Start: 73 @44278 has 5 MA's), (Start: 79 @44287 has 17 MA's), (105, 44353), (134, 44419), (137, 44431),

Gene: ShroomBoi_52 Start: 36993, Stop: 37238, Start Num: 81

Candidate Starts for ShroomBoi_52:

(34, 36909), (44, 36927), (65, 36969), (Start: 81 @36993 has 173 MA's), (135, 37104),

Gene: SirHarley_86 Start: 60117, Stop: 60344, Start Num: 81

Candidate Starts for SirHarley_86:

(21, 59994), (Start: 81 @60117 has 173 MA's), (Start: 92 @60153 has 1 MA's), (98, 60162), (135, 60216),

Gene: Smairt_67 Start: 44819, Stop: 44574, Start Num: 81

Candidate Starts for Smairt_67:

(Start: 81 @44819 has 173 MA's), (102, 44777), (110, 44765), (112, 44762), (135, 44723), (139, 44705),

Gene: Smooch_99 Start: 62468, Stop: 62202, Start Num: 81

Candidate Starts for Smooch_99:

(Start: 81 @62468 has 173 MA's), (99, 62432), (134, 62372), (135, 62369),

Gene: Soile_54 Start: 47617, Stop: 47348, Start Num: 84

Candidate Starts for Soile_54:

(17, 47776), (30, 47719), (42, 47692), (50, 47671), (54, 47665), (Start: 84 @47617 has 72 MA's), (Start: 89 @47593 has 35 MA's), (122, 47545), (130, 47539), (135, 47515), (190, 47359),

Gene: Solosis_52 Start: 47090, Stop: 46797, Start Num: 84

Candidate Starts for Solosis_52:

(17, 47249), (30, 47192), (42, 47165), (50, 47144), (54, 47138), (Start: 84 @47090 has 72 MA's), (Start: 89 @47066 has 35 MA's), (122, 47018), (130, 47012), (135, 46988),

Gene: Sophia_52 Start: 47084, Stop: 46791, Start Num: 84

Candidate Starts for Sophia_52:

(17, 47243), (30, 47186), (42, 47159), (50, 47138), (54, 47132), (Start: 84 @47084 has 72 MA's), (Start: 89 @47060 has 35 MA's), (122, 47012), (130, 47006), (135, 46982),

Gene: Sparkdehlily_60 Start: 38797, Stop: 39039, Start Num: 81

Candidate Starts for Sparkdehlily_60:

(76, 38791), (Start: 81 @38797 has 173 MA's), (135, 38908),

Gene: Specks_6 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for Specks_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Spikelee_42 Start: 31774, Stop: 31466, Start Num: 70

Candidate Starts for Spikelee_42:

(36, 31840), (37, 31837), (39, 31834), (61, 31789), (Start: 70 @31774 has 1 MA's), (78, 31762), (Start: 85 @31747 has 1 MA's), (106, 31687), (127, 31645), (134, 31621), (153, 31573),

Gene: Spooky_78 Start: 45719, Stop: 45976, Start Num: 77

Candidate Starts for Spooky_78:

(Start: 77 @45719 has 9 MA's), (90, 45749), (Start: 92 @45758 has 1 MA's), (104, 45782),

Gene: Squid_53 Start: 47096, Stop: 46803, Start Num: 84

Candidate Starts for Squid_53:

(17, 47255), (30, 47198), (42, 47171), (50, 47150), (54, 47144), (Start: 84 @47096 has 72 MA's), (Start: 89 @47072 has 35 MA's), (122, 47024), (130, 47018), (135, 46994),

Gene: Squint_83 Start: 50044, Stop: 49775, Start Num: 81

Candidate Starts for Squint_83:

(Start: 81 @50044 has 173 MA's), (108, 49990), (135, 49942),

Gene: StAnnes_51 Start: 37319, Stop: 37621, Start Num: 96

Candidate Starts for StAnnes_51:

(Start: 62 @37253 has 1 MA's), (Start: 81 @37283 has 173 MA's), (Start: 96 @37319 has 2 MA's), (134, 37379), (135, 37382), (162, 37421), (171, 37442), (191, 37520),

Gene: Stellammi_140 Start: 62378, Stop: 62599, Start Num: 81

Candidate Starts for Stellammi_140:

(Start: 81 @62378 has 173 MA's), (135, 62471),

Gene: Sunshine924_70 Start: 43095, Stop: 42850, Start Num: 81

Candidate Starts for Sunshine924_70:

(Start: 81 @43095 has 173 MA's), (102, 43053), (110, 43041), (112, 43038), (135, 42999), (139, 42981),

Gene: SuperGrey_52 Start: 37962, Stop: 38207, Start Num: 81

Candidate Starts for SuperGrey_52:

(34, 37878), (44, 37896), (65, 37938), (Start: 81 @37962 has 173 MA's), (135, 38073),

Gene: Surely_53 Start: 47386, Stop: 47093, Start Num: 84

Candidate Starts for Surely_53:

(17, 47545), (30, 47488), (42, 47461), (50, 47440), (54, 47434), (Start: 84 @47386 has 72 MA's), (Start: 89 @47362 has 35 MA's), (122, 47314), (130, 47308), (135, 47284),

Gene: SynergyX_51 Start: 45415, Stop: 45146, Start Num: 81

Candidate Starts for SynergyX_51:

(Start: 81 @45415 has 173 MA's), (108, 45361), (135, 45313),

Gene: TDanisky_60 Start: 38797, Stop: 39039, Start Num: 81

Candidate Starts for TDanisky_60:
(76, 38791), (Start: 81 @38797 has 173 MA's), (135, 38908),

Gene: Tainan_6 Start: 1924, Stop: 2115, Start Num: 92
Candidate Starts for Tainan_6:
(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101, 1933), (135, 1987), (163, 2026),

Gene: Taj_56 Start: 38142, Stop: 38369, Start Num: 81
Candidate Starts for Taj_56:
(Start: 62 @38112 has 1 MA's), (Start: 81 @38142 has 173 MA's), (91, 38175), (116, 38199), (134, 38232),

Gene: TallGrassMM_53 Start: 47000, Stop: 46707, Start Num: 84
Candidate Starts for TallGrassMM_53:
(17, 47159), (30, 47102), (42, 47075), (50, 47054), (54, 47048), (Start: 84 @47000 has 72 MA's), (Start: 89 @46976 has 35 MA's), (122, 46928), (130, 46922), (135, 46898),

Gene: Tarzan_58 Start: 37656, Stop: 37880, Start Num: 84
Candidate Starts for Tarzan_58:
(Start: 84 @37656 has 72 MA's), (94, 37692), (147, 37785), (179, 37833),

Gene: Thibault_128 Start: 74023, Stop: 74301, Start Num: 144
Candidate Starts for Thibault_128:
(Start: 92 @73888 has 1 MA's), (132, 73978), (Start: 144 @74023 has 33 MA's), (174, 74095), (176, 74098), (186, 74140), (192, 74206), (193, 74218),

Gene: Thora_53 Start: 47382, Stop: 47089, Start Num: 84
Candidate Starts for Thora_53:
(17, 47541), (30, 47484), (42, 47457), (50, 47436), (54, 47430), (Start: 84 @47382 has 72 MA's), (Start: 89 @47358 has 35 MA's), (122, 47310), (130, 47304), (135, 47280),

Gene: ThreeRngTarjay_140 Start: 77611, Stop: 77856, Start Num: 144
Candidate Starts for ThreeRngTarjay_140:
(Start: 92 @77476 has 1 MA's), (130, 77551), (132, 77566), (Start: 144 @77611 has 33 MA's), (174, 77683), (176, 77686),

Gene: ThreeRngTarjay_87 Start: 56792, Stop: 57088, Start Num: 81
Candidate Starts for ThreeRngTarjay_87:
(Start: 81 @56792 has 173 MA's), (116, 56870), (130, 56897), (135, 56921),

Gene: Timmi_52 Start: 47085, Stop: 46792, Start Num: 84
Candidate Starts for Timmi_52:
(17, 47244), (30, 47187), (42, 47160), (50, 47139), (54, 47133), (Start: 84 @47085 has 72 MA's), (Start: 89 @47061 has 35 MA's), (122, 47013), (130, 47007), (135, 46983),

Gene: TinyTerror_52 Start: 45907, Stop: 45638, Start Num: 81
Candidate Starts for TinyTerror_52:
(Start: 81 @45907 has 173 MA's), (108, 45853), (135, 45805), (190, 45649),

Gene: TomBombadil_53 Start: 47370, Stop: 47077, Start Num: 84
Candidate Starts for TomBombadil_53:

(17, 47529), (30, 47472), (42, 47445), (50, 47424), (54, 47418), (Start: 84 @47370 has 72 MA's),
(Start: 89 @47346 has 35 MA's), (122, 47298), (130, 47292), (135, 47268),

Gene: Tonenili_49 Start: 15568, Stop: 15810, Start Num: 81

Candidate Starts for Tonenili_49:

(69, 15550), (Start: 81 @15568 has 173 MA's), (Start: 89 @15592 has 35 MA's), (118, 15634), (131,
15649), (135, 15670), (148, 15700), (162, 15718), (175, 15739),

Gene: Tonenili_50 Start: 15803, Stop: 16036, Start Num: 89

Candidate Starts for Tonenili_50:

(87, 15797), (Start: 89 @15803 has 35 MA's), (104, 15839), (126, 15875), (134, 15896), (168, 15962),
(172, 15971),

Gene: Topiatin_58 Start: 38825, Stop: 39058, Start Num: 81

Candidate Starts for Topiatin_58:

(Start: 62 @38795 has 1 MA's), (Start: 81 @38825 has 173 MA's), (109, 38879), (135, 38927),

Gene: Toron_84 Start: 50886, Stop: 51176, Start Num: 84

Candidate Starts for Toron_84:

(Start: 49 @50841 has 8 MA's), (Start: 84 @50886 has 72 MA's), (88, 50901), (Start: 89 @50910 has
35 MA's), (134, 51018), (173, 51111), (189, 51162),

Gene: Trine_55 Start: 39935, Stop: 39684, Start Num: 84

Candidate Starts for Trine_55:

(Start: 84 @39935 has 72 MA's), (129, 39860), (158, 39788),

Gene: Troll4_84 Start: 59937, Stop: 60161, Start Num: 81

Candidate Starts for Troll4_84:

(21, 59811), (23, 59820), (Start: 81 @59937 has 173 MA's), (128, 60033), (135, 60060), (170, 60111),

Gene: Tweety_52 Start: 37774, Stop: 38004, Start Num: 81

Candidate Starts for Tweety_52:

(Start: 62 @37744 has 1 MA's), (Start: 81 @37774 has 173 MA's), (Start: 96 @37810 has 2 MA's),
(134, 37870), (135, 37873),

Gene: Tyke_6 Start: 1888, Stop: 2115, Start Num: 81

Candidate Starts for Tyke_6:

(Start: 75 @1879 has 3 MA's), (Start: 81 @1888 has 173 MA's), (Start: 92 @1924 has 1 MA's), (101,
1933), (135, 1987), (163, 2026),

Gene: VanLee_73 Start: 43882, Stop: 44154, Start Num: 84

Candidate Starts for VanLee_73:

(Start: 84 @43882 has 72 MA's), (120, 43969), (130, 43987), (142, 44041),

Gene: VanLee_59 Start: 39559, Stop: 39819, Start Num: 77

Candidate Starts for VanLee_59:

(Start: 77 @39559 has 9 MA's),

Gene: VasuNzinga_8 Start: 2535, Stop: 2807, Start Num: 81

Candidate Starts for VasuNzinga_8:

(Start: 81 @2535 has 173 MA's), (116, 2598), (135, 2640),

Gene: Venti_53 Start: 36036, Stop: 36263, Start Num: 89

Candidate Starts for Venti_53:
(55, 35973), (Start: 89 @36036 has 35 MA's), (137, 36135),

Gene: Violac_55 Start: 38665, Stop: 39003, Start Num: 81
Candidate Starts for Violac_55:
(Start: 62 @38635 has 1 MA's), (Start: 81 @38665 has 173 MA's), (Start: 96 @38701 has 2 MA's),
(134, 38761), (135, 38764), (162, 38803), (171, 38824), (191, 38902),

Gene: Vortex_53 Start: 47080, Stop: 46787, Start Num: 84
Candidate Starts for Vortex_53:
(17, 47239), (30, 47182), (42, 47155), (50, 47134), (54, 47128), (Start: 84 @47080 has 72 MA's),
(Start: 89 @47056 has 35 MA's), (122, 47008), (130, 47002), (135, 46978),

Gene: Vortrix_52 Start: 16078, Stop: 16320, Start Num: 89
Candidate Starts for Vortrix_52:
(31, 15955), (Start: 89 @16078 has 35 MA's), (126, 16153), (134, 16180), (168, 16246), (172, 16255),

Gene: Vortrix_51 Start: 15836, Stop: 16081, Start Num: 81
Candidate Starts for Vortrix_51:
(69, 15818), (Start: 81 @15836 has 173 MA's), (Start: 89 @15860 has 35 MA's), (118, 15902), (131,
15917), (135, 15938), (148, 15968), (162, 15986), (175, 16007),

Gene: Wanda_94 Start: 55909, Stop: 56205, Start Num: 81
Candidate Starts for Wanda_94:
(76, 55903), (Start: 81 @55909 has 173 MA's), (116, 55987), (130, 56014), (135, 56038),

Gene: Wanda_145 Start: 75318, Stop: 75596, Start Num: 144
Candidate Starts for Wanda_145:
(Start: 92 @75183 has 1 MA's), (132, 75273), (Start: 144 @75318 has 33 MA's), (174, 75390), (176,
75393), (186, 75435), (193, 75513),

Gene: Wee_55 Start: 38414, Stop: 38641, Start Num: 81
Candidate Starts for Wee_55:
(Start: 62 @38384 has 1 MA's), (Start: 81 @38414 has 173 MA's), (91, 38447), (116, 38471), (134,
38504),

Gene: Whatsapiecost_53 Start: 36689, Stop: 36931, Start Num: 81
Candidate Starts for Whatsapiecost_53:
(Start: 81 @36689 has 173 MA's), (135, 36800),

Gene: Whitney_75 Start: 45513, Stop: 45800, Start Num: 79
Candidate Starts for Whitney_75:
(72, 45501), (Start: 73 @45504 has 5 MA's), (Start: 79 @45513 has 17 MA's), (105, 45579), (134,
45645), (137, 45657),

Gene: William_80 Start: 49369, Stop: 49632, Start Num: 84
Candidate Starts for William_80:
(7, 49048), (8, 49063), (10, 49099), (Start: 84 @49369 has 72 MA's), (Start: 92 @49405 has 1 MA's),
(124, 49456),

Gene: WilliamBoone_96 Start: 57383, Stop: 57652, Start Num: 84
Candidate Starts for WilliamBoone_96:
(Start: 84 @57383 has 72 MA's), (130, 57488), (154, 57554),

Gene: XFactor_50 Start: 36012, Stop: 36242, Start Num: 81
Candidate Starts for XFactor_50:
(Start: 62 @35982 has 1 MA's), (Start: 81 @36012 has 173 MA's), (Start: 96 @36048 has 2 MA's),
(134, 36108), (135, 36111),

Gene: Xavier_52 Start: 47087, Stop: 46794, Start Num: 84
Candidate Starts for Xavier_52:
(17, 47246), (30, 47189), (42, 47162), (50, 47141), (54, 47135), (Start: 84 @47087 has 72 MA's),
(Start: 89 @47063 has 35 MA's), (122, 47015), (130, 47009), (135, 46985),

Gene: Xiaokay_141 Start: 77151, Stop: 77429, Start Num: 144
Candidate Starts for Xiaokay_141:
(14, 76800), (Start: 92 @77016 has 1 MA's), (132, 77106), (Start: 144 @77151 has 33 MA's), (174,
77223), (176, 77226), (192, 77334), (193, 77346),

Gene: Yeet_83 Start: 55009, Stop: 55305, Start Num: 81
Candidate Starts for Yeet_83:
(Start: 81 @55009 has 173 MA's), (116, 55087), (130, 55114), (135, 55138),

Gene: Yeet_139 Start: 77084, Stop: 77329, Start Num: 144
Candidate Starts for Yeet_139:
(Start: 92 @76949 has 1 MA's), (132, 77039), (Start: 144 @77084 has 33 MA's), (174, 77156), (176,
77159),

Gene: Yoshi_64 Start: 38747, Stop: 38995, Start Num: 80
Candidate Starts for Yoshi_64:
(60, 38717), (Start: 80 @38747 has 1 MA's), (128, 38843), (134, 38867), (155, 38900),

Gene: Yoshi_44 Start: 30151, Stop: 29960, Start Num: 49
Candidate Starts for Yoshi_44:
(Start: 49 @30151 has 8 MA's), (Start: 92 @30061 has 1 MA's),

Gene: Zelda_53 Start: 47424, Stop: 47131, Start Num: 84
Candidate Starts for Zelda_53:
(17, 47583), (30, 47526), (42, 47499), (50, 47478), (54, 47472), (Start: 84 @47424 has 72 MA's),
(Start: 89 @47400 has 35 MA's), (122, 47352), (130, 47346), (135, 47322),

Gene: Zelink_87 Start: 57104, Stop: 57400, Start Num: 81
Candidate Starts for Zelink_87:
(Start: 81 @57104 has 173 MA's), (116, 57182), (130, 57209), (135, 57233),

Gene: Zelink_140 Start: 78130, Stop: 78408, Start Num: 144
Candidate Starts for Zelink_140:
(Start: 92 @77995 has 1 MA's), (130, 78070), (132, 78085), (Start: 144 @78130 has 33 MA's), (174,
78202), (176, 78205), (186, 78247), (193, 78325),

Gene: Zerg_52 Start: 37166, Stop: 37408, Start Num: 81
Candidate Starts for Zerg_52:
(Start: 62 @37136 has 1 MA's), (Start: 81 @37166 has 173 MA's), (135, 37277),