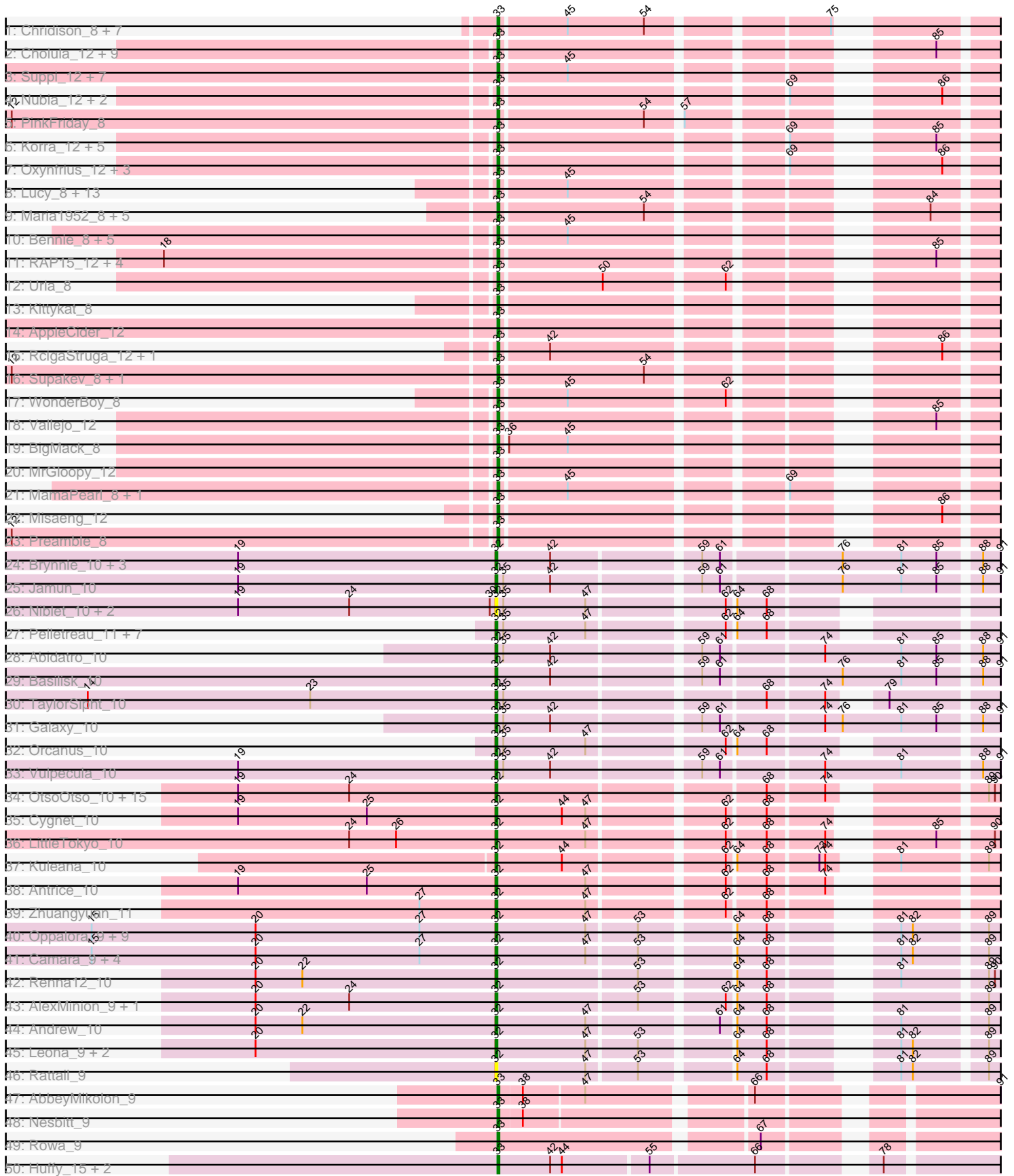
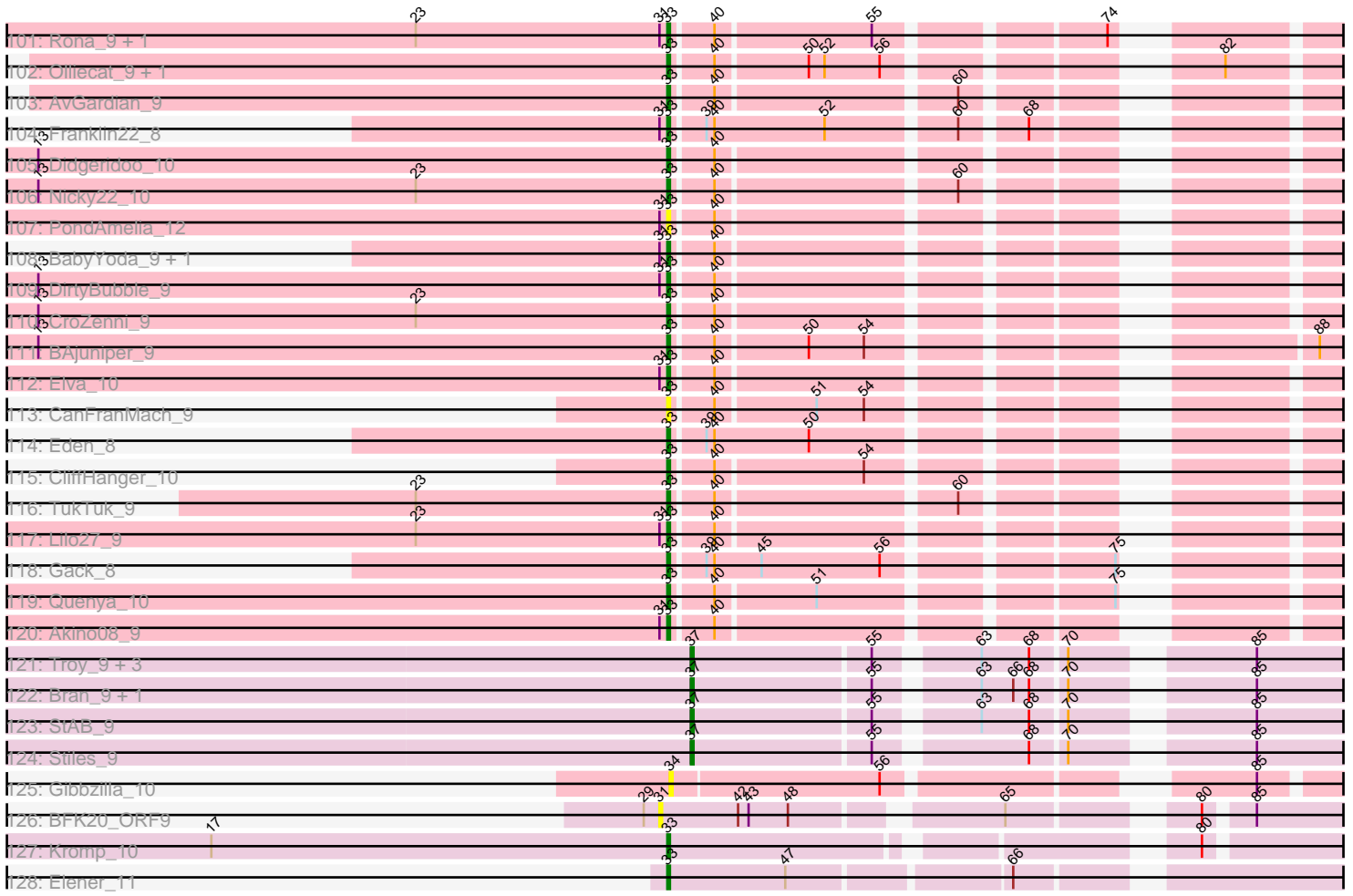


Zoomed Pham 296170



Zoomed Pham 296170



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 296170 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296170 has 318 members, 39 are drafts.

Phages represented in each track:

- Track 1 : Chridison_8, Vulture_8, HunterDalle_8, Eunoia_8, Aledel_8, OMalley_8, Riovina_8, AustinPowers_8
- Track 2 : Cholula_12, Carpal_12, Potatoes_12, Fluke_12, Glenn_12, TattModd_12, Rozby_12, Riverdale_12, Immaculata_12, Beethoven_12
- Track 3 : Suppi_12, Canowicakte_12, Litotes_12, PartyCup_12, Graynor_12, Wayne_12, MrBoss_12, CallieOMalley_12
- Track 4 : Nubia_12, Joann_12, Greenhouse_12
- Track 5 : PinkFriday_8
- Track 6 : Korra_12, Dino_12, Wawa_12, BrotherBLo_12, Kalizoi_12, Zorro_12
- Track 7 : Oxynfrius_12, Lakshmi_12, Albanese_12, GreenHearts_12
- Track 8 : Lucy_8, DrRobert_8, Lennox_8, ChewChew_8, Christian_8, Nancia_8, Makoto_8, Bodacious_8, PitaDog_8, Pterodactyl_8, CristinaYang_8, LilStuart_8, Lasagna_8, OurGirlNessie_8
- Track 9 : Maria1952_8, KingBob_8, Sergei_8, Daiboju_8, Herb_8, Temper16_8
- Track 10 : Bennie_8, HeadNerd_8, Moki_8, DreamTeam_8, Gisselle_8, Huckleberry_8
- Track 11 : RAP15_12, Savage2526_12, Jumboset_12, MeganNoll_12, Scuttle_12
- Track 12 : Urla_8
- Track 13 : Kittykat_8
- Track 14 : AppleCider_12
- Track 15 : RcigaStruga_12, Huntingdon_12
- Track 16 : Supakev_8, Pumancara_8
- Track 17 : WonderBoy_8
- Track 18 : Vallejo_12
- Track 19 : BigMack_8
- Track 20 : MrGloopy_12
- Track 21 : MamaPearl_8, EstebanJulior_8
- Track 22 : Misaeng_12
- Track 23 : Preamble_8
- Track 24 : Brynnie_10, Chickaboom_9, WileyE_9, Ruchi_10
- Track 25 : Jamun_10
- Track 26 : Niblet_10, Zixiang_10, Chicken_10
- Track 27 : Pelletreau_11, Gravel_11, Toad24_11, Westrich_11, Shen_11, Eesa_10, KendraB23_11, Amanises_11
- Track 28 : Abidatro_10
- Track 29 : Basilisk_10
- Track 30 : TaylorSipht_10

- Track 31 : Galaxy_10
- Track 32 : Orcanus_10
- Track 33 : Vulpecula_10
- Track 34 : OtsoOtso_10, Coral_10, Pineda_11, Bibble12_11, Polka_10, Cote_11, Bedetta_11, Lunar_11, PhirstandPhine_11, Colusalem_10, Melons_11, Kepler_10, Jerole_11, Daob_11, HannahPhantana_11, Amelia_11
- Track 35 : Cygnet_10
- Track 36 : LittleTokyo_10
- Track 37 : Kuleana_10
- Track 38 : Antrice_10
- Track 39 : Zhuangyuan_11
- Track 40 : Oppalora_9, AmiCi24_9, DanHam62_9, Fingolfin_9, KHumphrey_9, Juno112_9, AdoptaAdorbs_9, Glotell_9, RedFox_9, Atlantica_9
- Track 41 : Camara_9, HamCheese_9, PhluffyCoco_9, Amphitrite_9, Laphuphu24k_9
- Track 42 : Renna12_10
- Track 43 : AlexMinion_9, StuartMinion_9
- Track 44 : Andrew_10
- Track 45 : Leona_9, Azaz_9, Babushka_9
- Track 46 : Rattail_9
- Track 47 : AbbeyMikolon_9
- Track 48 : Nesbitt_9
- Track 49 : Rowa_9
- Track 50 : Huffy_15, TZGordon_15, DinoDaryn_15
- Track 51 : TinaLin_16, Banquo_17
- Track 52 : Vendetta_13, Goib_14, Splinter_13
- Track 53 : Gspu1_11
- Track 54 : Dardanus_15
- Track 55 : Schmidt_11
- Track 56 : Catfish_12
- Track 57 : Wocket_10
- Track 58 : Pipp_10
- Track 59 : Delian_9, Lysidious_9, MintFen_9, Zarbodnamra_9, Utz_9, Melba_9, Barco_9, CaptainKirk2_9, Guacamole_9, BlingBling_9, Hitter_9, JasperJr_9
- Track 60 : UmaThurman_9, Samba_9
- Track 61 : Soilmate_9, Frokostdame_9, Blino_9, CarolAnn_9
- Track 62 : William_9, Fairfaxidum_9, PrincePatrick_9
- Track 63 : Walrus_9
- Track 64 : MissRona_9, Azula_9, Blueberry_9, Gambino_9
- Track 65 : Malachai_9, Begonia_9, Mellie_9
- Track 66 : PCoral7_9, Toast_9
- Track 67 : Fenry_9
- Track 68 : Jalammah_9
- Track 69 : PhrostedPhlake_9
- Track 70 : Archis_10
- Track 71 : JuJu_9
- Track 72 : ZiggyZoo_9, Obliviate_9, Wisp_9
- Track 73 : CheeseSpider_9
- Track 74 : Murp_9
- Track 75 : Zilla_9
- Track 76 : Petra_9
- Track 77 : KappaFarmDelta_9
- Track 78 : Ghobes_7, Frizzle_7

- Track 79 : Sapo_7
- Track 80 : Archimedes_7
- Track 81 : Avocadoman_9, Arroyo_10, Burritobowl_9, Johnathan_9, Cashington_9, Abigail_9, LimaBean_9, SansAfet_9, Doobus_9, DickRichards_9, AnnaLie_10, BelmontSKP_10, Solea_10, Bengal_9, Albright_9, PhigPhack_9, Milomuff_10, Softsoap_9
- Track 82 : FlameThrower_9
- Track 83 : Vitas_8, Clayda5_8, Brahms_8, Bernstein_8, Rollins_8, Coltrane_8, Armstrong_8, Skylord_8
- Track 84 : SanaSana_10, Stoor_9
- Track 85 : Albedo_9, Kenzers_9, BubbaBear_9, Phisb_9, Lynlen_9
- Track 86 : Teagster_8
- Track 87 : Kieran_9, ChiliPepper_9
- Track 88 : Loviatar_9
- Track 89 : Jabb_9, CupcakePrincess_9, MsUbiquitous_9, Jovita_9, Pecas_9, QMacho_10, Eula_9
- Track 90 : Swervy_9, AylexOG_10, SarBear_9, Slay_9, Finalfrontier_10
- Track 91 : Sharkboy_9
- Track 92 : Icarian_10
- Track 93 : Bachaco_9, Celaena_9, Katzastrophic_9
- Track 94 : Dismas_9
- Track 95 : BabyDaisy_10, PastaFagioli_9, Lahqtemish_9
- Track 96 : IndyLu_9, Kate33_9
- Track 97 : Buldak_9
- Track 98 : WalkingDead_9
- Track 99 : SirBeanington_9
- Track 100 : Shayna_8, SunnyD_8
- Track 101 : Rona_9, Kamdara_9
- Track 102 : Olliecat_9, Squirrel_9
- Track 103 : AvGardian_9
- Track 104 : Franklin22_8
- Track 105 : Didgeridoo_10
- Track 106 : Nicky22_10
- Track 107 : PondAmelia_12
- Track 108 : BabyYoda_9, Stromboli_9
- Track 109 : DirtyBubble_9
- Track 110 : CroZenni_9
- Track 111 : BAjuniper_9
- Track 112 : Elva_10
- Track 113 : CanFranMach_9
- Track 114 : Eden_8
- Track 115 : CliffHanger_10
- Track 116 : TukTuk_9
- Track 117 : Lilo27_9
- Track 118 : Gack_8
- Track 119 : Quenya_10
- Track 120 : Akino08_9
- Track 121 : Troy_9, Lederberg_9, SamW_9, Dina_9
- Track 122 : Bran_9, Adelaide_9
- Track 123 : StAB_9
- Track 124 : Stiles_9
- Track 125 : Gibbzilla_10
- Track 126 : BFK20_ORF9

- Track 127 : Kromp_10
- Track 128 : Elener_11

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

The start number called the most often in the published annotations is 33, it was called in 222 of the 279 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbeyMikolon_9, Abigail_9, Akino08_9, Albanese_12, Albedo_9, Albright_9, Aledel_8, AnnaLie_10, AppleCider_12, Archis_10, Armstrong_8, Arroyo_10, AustinPowers_8, AvGardian_9, Avocadoman_9, AylexOG_10, Azula_9, BAJuniper_9, BabyDaisy_10, BabyYoda_9, Bachaco_9, Banquo_17, Barco_9, Beethoven_12, Begonia_9, BelmontSKP_10, Bengal_9, Bennie_8, Bernstein_8, BigMack_8, BlingBling_9, Blino_9, Blueberry_9, Bodacious_8, Brahms_8, BrotherBLo_12, BubbaBear_9, Buldak_9, Burritobowl_9, CallieOMalley_12, CanFranMach_9, Canowicakte_12, CaptainKirk2_9, CarolAnn_9, Carpal_12, Cashington_9, Catfish_12, Celaena_9, CheeseSpider_9, ChewChew_8, ChiliPepper_9, Cholula_12, Chridison_8, Christian_8, Clayda5_8, CliffHanger_10, Coltrane_8, CristinaYang_8, CroZenni_9, CupcakePrincess_9, Daiboju_8, Dardanus_15, Delian_9, DickRichards_9, Didgeridoo_10, DinoDaryn_15, Dino_12, DirtyBubble_9, Doobus_9, DrRobert_8, DreamTeam_8, Eden_8, Elener_11, Elva_10, EstebanJulior_8, Eula_9, Eunoia_8, Fairfaxidum_9, Fenry_9, Finalfrontier_10, FlameThrower_9, Fluke_12, Franklin22_8, Frokostdame_9, Gack_8, Gambino_9, Gisselle_8, Glenn_12, Goib_14, Graynor_12, GreenHearts_12, Greenhouse_12, Gsput1_11, Guacamole_9, HeadNerd_8, Herb_8, Hitter_9, Huckleberry_8, Huff_15, HunterDalle_8, Huntingdon_12, Icarian_10, Immaculata_12, IndyLu_9, Jabb_9, Jalammah_9, JasperJr_9, Joann_12, Johnathan_9, Jovita_9, JuJu_9, Jumboset_12, Kalizoi_12, Kamdara_9, KappaFarmDelta_9, Kate33_9, Katzastrophic_9, Kenzers_9, Kieran_9, KingBob_8, Kittykat_8, Korra_12, Kromp_10, Lahqtemish_9, Lakshmi_12, Lasagna_8, Lennox_8, LilStuart_8, Lilo27_9, LimaBean_9, Litotes_12, Loviatar_9, Lucy_8, Lynlen_9, Lysidious_9, Makoto_8, Malachai_9, MamaPearl_8, Maria1952_8, MeganNoll_12, Melba_9, Mellie_9, Milomuff_10, MintFen_9, Misaeng_12, MissRona_9, Moki_8, MrBoss_12, MrGloopy_12, MsUbiquitous_9, Murp_9, Nancia_8, Nesbitt_9, Nicky22_10, Nubia_12, OMalley_8, Obliviate_9, Olliecat_9, OurGirlNessie_8, Oxynfrius_12, PCoral7_9, PartyCup_12, PastaFagioli_9, Pecas_9, Petra_9, PhigPhack_9, Phisb_9, PhrostedPhlake_9, PinkFriday_8, Pipp_10, PitaDog_8, PondAmelia_12, Potatoes_12, Preamble_8, PrincePatrick_9, Pterodactyl_8, Pumancara_8, QMacho_10, Quenya_10, RAP15_12, RcigaStruga_12, Rivovina_8, Riverdale_12, Rollins_8, Rona_9, Rowa_9, Rozby_12, Samba_9, SanaSana_10, SansAfet_9, SarBear_9, Savage2526_12, Schmidt_11, Scuttle_12, Sergei_8, Sharkboy_9, Shayna_8, SirBeanington_9, Skylord_8, Slay_9, Softsoap_9, Soilmate_9, Solea_10, Splinter_13, Squircle_9, Stoor_9, Stromboli_9, SunnyD_8, Supakev_8, Suppi_12, Swervy_9, TZGordon_15, TattModd_12, Teagster_8, Temper16_8, TinaLin_16, Toast_9, TukTuk_9, UmaThurman_9, Urla_8, Utz_9, Vallejo_12, Vendetta_13, Vitas_8, Vulture_8, WalkingDead_9, Walrus_9, Wawa_12, Wayne_12, William_9, Wisp_9, Wocket_10, WonderBoy_8, Zarbodnamra_9, ZiggyZoo_9, Zilla_9, Zorro_12,

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

- Dismas_9,

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

- Abidatro_10, Adelaide_9, AdoptaAdorbs_9, AlexMinion_9, Amanises_11, Amelia_11, AmiCi24_9, Amphitrite_9, Andrew_10, Antrice_10, Archimedes_7, Atlantica_9, Azaz_9, BFK20_ORF9, Babushka_9, Basilisk_10, Bedetta_11, Bibble12_11, Bran_9, Brynnie_10, Camara_9, Chickaboom_9, Chicken_10, Colusalem_10, Coral_10, Cote_11, Cygnet_10, DanHam62_9, Daob_11, Dina_9, Eesa_10, Fingolfin_9, Frizzle_7, Galaxy_10, Ghobes_7, Gibbzilla_10, Glotell_9, Gravel_11, HamCheese_9, HannahPhantana_11, Jamun_10, Jerole_11, Juno112_9, KHumphrey_9, KendraB23_11, Kepler_10, Kuleana_10, Laphuphu24k_9, Lederberg_9, Leona_9, LittleTokyo_10, Lunar_11, Melons_11, Niblet_10, Oppalora_9, Orcanus_10, OtsoOtso_10, Pelletreau_11, PhirstandPhine_11, PhluffyCoco_9, Pineda_11, Polka_10, Rattail_9, RedFox_9, Renna12_10, Ruchi_10, SamW_9, Sapo_7, Shen_11, StAB_9, Stiles_9, StuartMinion_9, TaylorSipht_10, Toad24_11, Troy_9, Vulpecula_10, Westrich_11, WileyE_9, Zhuangyuan_11, Zixiang_10,

Summary by start number:

Start 31:

- Found in 24 of 318 (7.5%) of genes in pham
- Manual Annotations of this start: 1 of 279
- Called 8.3% of time when present
- Phage (with cluster) where this start called: BFK20_ORF9 (singleton), Dismas_9 (EB),

Start 32:

- Found in 66 of 318 (20.8%) of genes in pham
- Manual Annotations of this start: 44 of 279
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro_10 (AS1), AdoptaAdorbs_9 (AS3), AlexMinion_9 (AS3), Amanises_11 (AS1), Amelia_11 (AS2), AmiCi24_9 (AS3), Amphitrite_9 (AS3), Andrew_10 (AS3), Antrice_10 (AS2), Atlantica_9 (AS3), Azaz_9 (AS3), Babushka_9 (AS3), Basilisk_10 (AS1), Bedetta_11 (AS2), Bibble12_11 (AS2), Brynnie_10 (AS1), Camara_9 (AS3), Chickaboom_9 (AS1), Chicken_10 (AS1), Colusalem_10 (AS2), Coral_10 (AS2), Cote_11 (AS2), Cygnet_10 (AS2), DanHam62_9 (AS3), Daob_11 (AS2), Eesa_10 (AS1), Fingolfin_9 (AS3), Galaxy_10 (AS1), Glotell_9 (AS3), Gravel_11 (AS1), HamCheese_9 (AS3), HannahPhantana_11 (AS2), Jamun_10 (AS1), Jerole_11 (AS2), Juno112_9 (AS3), KHumphrey_9 (AS3), KendraB23_11 (AS1), Kepler_10 (AS2), Kuleana_10 (AS2), Laphuphu24k_9 (AS3), Leona_9 (AS3), LittleTokyo_10 (AS2), Lunar_11 (AS2), Melons_11 (AS2), Niblet_10 (AS1), Oppalora_9 (AS3), Orcanus_10 (AS1), OtsoOtso_10 (AS2), Pelletreau_11 (AS1), PhirstandPhine_11 (AS2), PhluffyCoco_9 (AS3), Pineda_11 (AS2), Polka_10 (AS2), Rattail_9 (AS3), RedFox_9 (AS3), Renna12_10 (AS3), Ruchi_10 (AS1), Shen_11 (AS1), StuartMinion_9 (AS3), TaylorSipht_10 (AS1), Toad24_11 (AS1), Vulpecula_10 (AS1), Westrich_11 (AS1), WileyE_9 (AS1), Zhuangyuan_11 (AS2), Zixiang_10 (AS1),

Start 33:

- Found in 238 of 318 (74.8%) of genes in pham
- Manual Annotations of this start: 222 of 279
- Called 99.6% of time when present

• Phage (with cluster) where this start called: AbbeyMikolon_9 (BL), Abigail_9 (EB), Akino08_9 (EB), Albanese_12 (AK), Albedo_9 (EB), Albright_9 (EB), Aledel_8 (AK), AnnaLie_10 (EB), AppleCider_12 (AK), Archis_10 (CV), Armstrong_8 (EB), Arroyo_10 (EB), AustinPowers_8 (AK), AvGardian_9 (EB), Avocadoman_9 (EB), AylexOG_10 (EB), Azula_9 (CV), BAjuniper_9 (EB), BabyDaisy_10 (EB), BabyYoda_9 (EB), Bachaco_9 (EB), Banquo_17 (CU1), Barco_9 (CV), Beethoven_12 (AK), Begonia_9 (CV), BelmontSKP_10 (EB), Bengal_9 (EB), Bennie_8 (AK), Bernstein_8 (EB), BigMack_8 (AK), BlingBling_9 (CV), Blino_9 (CV), Blueberry_9 (CV), Bodacious_8 (AK), Brahms_8 (EB), BrotherBLo_12 (AK), BubbaBear_9 (EB), Buldak_9 (EB), Burritobowl_9 (EB), CallieOMalley_12 (AK), CanFranMach_9 (EB), Canowicakte_12 (AK), CaptainKirk2_9 (CV), CarolAnn_9 (CV), Carpal_12 (AK), Cashington_9 (EB), Catfish_12 (CU5), Celaena_9 (EB), CheeseSpider_9 (CV), ChewChew_8 (AK), ChiliPepper_9 (EB), Cholula_12 (AK), Chridison_8 (AK), Christian_8 (AK), Clayda5_8 (EB), CliffHanger_10 (EB), Coltrane_8 (EB), CristinaYang_8 (AK), CroZenni_9 (EB), CupcakePrincess_9 (EB), Daiboju_8 (AK), Dardanus_15 (CU3), Delian_9 (CV), DickRichards_9 (EB), Didgeridoo_10 (EB), DinoDaryn_15 (CU1), Dino_12 (AK), DirtyBubble_9 (EB), Doobus_9 (EB), DrRobert_8 (AK), DreamTeam_8 (AK), Eden_8 (EB), Elener_11 (singleton), Elva_10 (EB), EstebanJulior_8 (AK), Eula_9 (EB), Eunoia_8 (AK), Fairfaxidum_9 (CV), Ferry_9 (CV), Finalfrontier_10 (EB), FlameThrower_9 (EB), Fluke_12 (AK), Franklin22_8 (EB), Frokostdame_9 (CV), Gack_8 (EB), Gambino_9 (CV), Gisselle_8 (AK), Glenn_12 (AK), Goib_14 (CU1), Graynor_12 (AK), GreenHearts_12 (AK), Greenhouse_12 (AK), Gsput1_11 (CU2), Guacamole_9 (CV), HeadNerd_8 (AK), Herb_8 (AK), Hitter_9 (CV), Huckleberry_8 (AK), Huffy_15 (CU1), HunterDalle_8 (AK), Huntingdon_12 (AK), Icarian_10 (EB), Immaculata_12 (AK), IndyLu_9 (EB), Jabb_9 (EB), Jalammah_9 (CV), JasperJr_9 (CV), Joann_12 (AK), Johnathan_9 (EB), Jovita_9 (EB), JuJu_9 (CV), Jumboset_12 (AK), Kalizoi_12 (AK), Kamdara_9 (EB), KappaFarmDelta_9 (CV), Kate33_9 (EB), Katzastrophic_9 (EB), Kenzers_9 (EB), Kieran_9 (EB), KingBob_8 (AK), Kittykat_8 (AK), Korra_12 (AK), Kromp_10 (singleton), Lahqtemish_9 (EB), Lakshmi_12 (AK), Lasagna_8 (AK), Lennox_8 (AK), LilStuart_8 (AK), Lilo27_9 (EB), LimaBean_9 (EB), Litotes_12 (AK), Loviatar_9 (EB), Lucy_8 (AK), Lynlen_9 (EB), Lysidious_9 (CV), Makoto_8 (AK), Malachai_9 (CV), MamaPearl_8 (AK), Maria1952_8 (AK), MeganNoll_12 (AK), Melba_9 (CV), Mellie_9 (CV), Milomuff_10 (EB), MintFen_9 (CV), Misaeng_12 (AK), MissRona_9 (CV), Moki_8 (AK), MrBoss_12 (AK), MrGloopy_12 (AK), MsUbiquitous_9 (EB), Murp_9 (CV), Nancia_8 (AK), Nesbitt_9 (BL), Nicky22_10 (EB), Nubia_12 (AK), OMalley_8 (AK), Obliviate_9 (CV), Olliecat_9 (EB), OurGirlNessie_8 (AK), Oxynfrius_12 (AK), PCoral7_9 (CV), PartyCup_12 (AK), PastaFagioli_9 (EB), Pecas_9 (EB), Petra_9 (CV), PhigPhack_9 (EB), Phisb_9 (EB), PhrostedPhlake_9 (CV), PinkFriday_8 (AK), Pipp_10 (CV), PitaDog_8 (AK), PondAmelia_12 (EB), Potatoes_12 (AK), Preamble_8 (AK), PrincePatrick_9 (CV), Pterodactyl_8 (AK), Pumancara_8 (AK), QMacho_10 (EB), Quenya_10 (EB), RAP15_12 (AK), RcigaStruga_12 (AK), Rivovina_8 (AK), Riverdale_12 (AK), Rollins_8 (EB), Rona_9 (EB), Rowa_9 (BL), Rozby_12 (AK), Samba_9 (CV), SanaSana_10 (EB), SansAfet_9 (EB), SarBear_9 (EB), Savage2526_12 (AK), Schmidt_11 (CU4), Scuttle_12 (AK), Sergei_8 (AK), Sharkboy_9 (EB), Shayna_8 (EB), SirBeanington_9 (EB), Skylord_8 (EB), Slay_9 (EB), Softsoap_9 (EB), Soilmate_9 (CV), Solea_10 (EB), Splinter_13 (CU1), Squirrel_9 (EB), Stoor_9 (EB), Stromboli_9 (EB), SunnyD_8 (EB), Supakev_8 (AK), Suppi_12 (AK), Swervy_9 (EB), TZGordon_15 (CU1), TattModd_12 (AK), Teagster_8 (EB), Temper16_8 (AK), TinaLin_16 (CU1), Toast_9 (CV), TukTuk_9 (EB), UmaThurman_9 (CV), Urla_8 (AK), Utz_9 (CV), Vallejo_12 (AK), Vendetta_13 (CU1), Vitas_8 (EB), Vulture_8 (AK), WalkingDead_9 (EB), Walrus_9 (CV), Wawa_12 (AK), Wayne_12 (AK), William_9 (CV), Wisp_9 (CV), Wocket_10 (CV), WonderBoy_8 (AK),

Zarbodnamra_9 (CV), ZiggyZoo_9 (CV), Zilla_9 (CV), Zorro_12 (AK),

Start 34:

- Found in 1 of 318 (0.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gibbzilla_10 (FB),

Start 35:

- Found in 21 of 318 (6.6%) of genes in pham
- Manual Annotations of this start: 4 of 279
- Called 19.0% of time when present
- Phage (with cluster) where this start called: Archimedes_7 (DA), Frizzle_7 (DA), Ghobes_7 (DA), Sapo_7 (DA),

Start 37:

- Found in 8 of 318 (2.5%) of genes in pham
- Manual Annotations of this start: 8 of 279
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adelaide_9 (EP), Bran_9 (EP), Dina_9 (EP), Lederberg_9 (EP), SamW_9 (EP), StAB_9 (EP), Stiles_9 (EP), Troy_9 (EP),

Summary by clusters:

There are 16 clusters represented in this pham: AS3, AS2, AS1, CU4, CU3, CU2, CU1, BL, AK, CU5, EB, FB, singleton, DA, CV, EP,

Info for manual annotations of cluster AK:

- Start number 33 was manually annotated 84 times for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 32 was manually annotated 13 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 32 was manually annotated 17 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 32 was manually annotated 14 times for cluster AS3.

Info for manual annotations of cluster BL:

- Start number 33 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster CU1:

- Start number 33 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 33 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 33 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 33 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 33 was manually annotated 43 times for cluster CV.

Info for manual annotations of cluster DA:

- Start number 35 was manually annotated 4 times for cluster DA.

Info for manual annotations of cluster EB:

- Start number 31 was manually annotated 1 time for cluster EB.
- Start number 33 was manually annotated 79 times for cluster EB.

Info for manual annotations of cluster EP:

- Start number 37 was manually annotated 8 times for cluster EP.

Gene Information:

Gene: AbbeyMikolon_9 Start: 7191, Stop: 7532, Start Num: 33

Candidate Starts for AbbeyMikolon_9:

(Start: 33 @7191 has 222 MA's), (38, 7203), (47, 7233), (66, 7308), (91, 7410), (94, 7425), (97, 7440), (117, 7521),

Gene: Abidatro_10 Start: 7704, Stop: 8066, Start Num: 32

Candidate Starts for Abidatro_10:

(Start: 32 @7704 has 44 MA's), (Start: 35 @7707 has 4 MA's), (42, 7731), (59, 7800), (61, 7809), (74, 7857), (81, 7896), (85, 7914), (88, 7932), (91, 7941), (104, 8001),

Gene: Abigail_9 Start: 7444, Stop: 7773, Start Num: 33

Candidate Starts for Abigail_9:

(Start: 33 @7444 has 222 MA's), (40, 7459), (100, 7696), (110, 7741),

Gene: Adelaide_9 Start: 6873, Stop: 7217, Start Num: 37

Candidate Starts for Adelaide_9:

(8, 6582), (Start: 37 @6873 has 8 MA's), (55, 6939), (63, 6972), (66, 6984), (68, 6990), (70, 7002), (85, 7059), (97, 7122), (109, 7176), (114, 7197), (116, 7203),

Gene: AdoptaAdorbs_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for AdoptaAdorbs_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Akino08_9 Start: 7563, Stop: 7892, Start Num: 33

Candidate Starts for Akino08_9:

(6, 7266), (Start: 31 @7560 has 1 MA's), (Start: 33 @7563 has 222 MA's), (40, 7578), (94, 7788), (100, 7815), (102, 7824), (107, 7848), (110, 7860),

Gene: Albanese_12 Start: 9846, Stop: 10184, Start Num: 33

Candidate Starts for Albanese_12:

(Start: 33 @9846 has 222 MA's), (69, 9978), (86, 10035), (109, 10143),

Gene: Albedo_9 Start: 7316, Stop: 7645, Start Num: 33
Candidate Starts for Albedo_9:
(13, 7076), (23, 7220), (Start: 33 @7316 has 222 MA's), (40, 7331), (100, 7568), (110, 7613), (112, 7619),

Gene: Albright_9 Start: 7325, Stop: 7654, Start Num: 33
Candidate Starts for Albright_9:
(Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: Aledel_8 Start: 6923, Stop: 7261, Start Num: 33
Candidate Starts for Aledel_8:
(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: AlexMinion_9 Start: 7338, Stop: 7676, Start Num: 32
Candidate Starts for AlexMinion_9:
(20, 7215), (24, 7263), (Start: 32 @7338 has 44 MA's), (53, 7407), (62, 7446), (64, 7449), (68, 7464), (89, 7548), (100, 7596), (115, 7662),

Gene: Amanises_11 Start: 7899, Stop: 8240, Start Num: 32
Candidate Starts for Amanises_11:
(Start: 32 @7899 has 44 MA's), (Start: 35 @7902 has 4 MA's), (47, 7944), (62, 8007), (64, 8010), (68, 8025), (94, 8133), (100, 8160), (110, 8211),

Gene: Amelia_11 Start: 7903, Stop: 8244, Start Num: 32
Candidate Starts for Amelia_11:
(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: AmiCi24_9 Start: 7312, Stop: 7650, Start Num: 32
Candidate Starts for AmiCi24_9:
(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Amphitrite_9 Start: 7310, Stop: 7648, Start Num: 32
Candidate Starts for Amphitrite_9:
(7, 7016), (15, 7103), (20, 7187), (27, 7271), (Start: 32 @7310 has 44 MA's), (47, 7355), (53, 7379), (64, 7421), (68, 7436), (81, 7481), (82, 7487), (89, 7520), (100, 7568),

Gene: Andrew_10 Start: 7691, Stop: 8029, Start Num: 32
Candidate Starts for Andrew_10:
(20, 7568), (22, 7592), (Start: 32 @7691 has 44 MA's), (47, 7736), (61, 7796), (64, 7802), (68, 7817), (81, 7862), (89, 7901), (96, 7931), (100, 7949),

Gene: AnnaLie_10 Start: 7671, Stop: 8000, Start Num: 33
Candidate Starts for AnnaLie_10:
(Start: 33 @7671 has 222 MA's), (40, 7686), (100, 7923), (110, 7968),

Gene: Antrice_10 Start: 7647, Stop: 7985, Start Num: 32
Candidate Starts for Antrice_10:
(19, 7515), (25, 7581), (Start: 32 @7647 has 44 MA's), (47, 7692), (62, 7755), (68, 7773), (74, 7800), (110, 7956),

Gene: AppleCider_12 Start: 9802, Stop: 10140, Start Num: 33

Candidate Starts for AppleCider_12:
(Start: 33 @9802 has 222 MA's),

Gene: Archimedes_7 Start: 6004, Stop: 6366, Start Num: 35
Candidate Starts for Archimedes_7:
(16, 5794), (Start: 35 @6004 has 4 MA's), (68, 6136), (71, 6151), (73, 6160), (110, 6334),

Gene: Archis_10 Start: 7171, Stop: 7533, Start Num: 33
Candidate Starts for Archis_10:
(21, 7069), (Start: 33 @7171 has 222 MA's), (41, 7195), (49, 7219), (55, 7249), (63, 7282), (68, 7300),
(83, 7360), (90, 7399),

Gene: Armstrong_8 Start: 7093, Stop: 7425, Start Num: 33
Candidate Starts for Armstrong_8:
(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168),
(82, 7267), (100, 7348),

Gene: Arroyo_10 Start: 7795, Stop: 8124, Start Num: 33
Candidate Starts for Arroyo_10:
(Start: 33 @7795 has 222 MA's), (40, 7810), (100, 8047), (110, 8092),

Gene: Atlantica_9 Start: 7312, Stop: 7650, Start Num: 32
Candidate Starts for Atlantica_9:
(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381),
(64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: AustinPowers_8 Start: 6924, Stop: 7262, Start Num: 33
Candidate Starts for AustinPowers_8:
(Start: 33 @6924 has 222 MA's), (45, 6957), (54, 6996), (75, 7077), (101, 7182), (103, 7191),

Gene: AvGardian_9 Start: 7373, Stop: 7702, Start Num: 33
Candidate Starts for AvGardian_9:
(Start: 33 @7373 has 222 MA's), (40, 7388), (60, 7472), (93, 7595), (100, 7625), (107, 7658), (110,
7670),

Gene: Avocadoman_9 Start: 7383, Stop: 7712, Start Num: 33
Candidate Starts for Avocadoman_9:
(Start: 33 @7383 has 222 MA's), (40, 7398), (100, 7635), (110, 7680),

Gene: AylexOG_10 Start: 7667, Stop: 7996, Start Num: 33
Candidate Starts for AylexOG_10:
(13, 7427), (23, 7571), (Start: 33 @7667 has 222 MA's), (40, 7682), (60, 7766), (61, 7769), (93, 7889),
(100, 7919), (102, 7928), (110, 7964),

Gene: Azaz_9 Start: 7363, Stop: 7701, Start Num: 32
Candidate Starts for Azaz_9:
(20, 7240), (Start: 32 @7363 has 44 MA's), (47, 7408), (53, 7432), (64, 7474), (68, 7489), (81, 7534),
(82, 7540), (89, 7573), (100, 7621), (105, 7639),

Gene: Azula_9 Start: 6835, Stop: 7194, Start Num: 33
Candidate Starts for Azula_9:
(4, 6499), (Start: 33 @6835 has 222 MA's), (41, 6859), (46, 6877), (63, 6943), (68, 6961), (83, 7021),

Gene: BAjuniper_9 Start: 7266, Stop: 7598, Start Num: 33
Candidate Starts for BAjuniper_9:
(6, 6969), (13, 7026), (Start: 33 @7266 has 222 MA's), (40, 7281), (50, 7314), (54, 7335), (88, 7470),

Gene: BFK20_ORF9 Start: 6860, Stop: 7216, Start Num: 31
Candidate Starts for BFK20_ORF9:
(29, 6854), (Start: 31 @6860 has 1 MA's), (42, 6890), (43, 6893), (48, 6908), (65, 6977), (80, 7034),
(85, 7049), (101, 7130), (110, 7184), (114, 7196), (116, 7202),

Gene: Babushka_9 Start: 7360, Stop: 7698, Start Num: 32
Candidate Starts for Babushka_9:
(20, 7237), (Start: 32 @7360 has 44 MA's), (47, 7405), (53, 7429), (64, 7471), (68, 7486), (81, 7531),
(82, 7537), (89, 7570), (100, 7618), (105, 7636),

Gene: BabyDaisy_10 Start: 7544, Stop: 7873, Start Num: 33
Candidate Starts for BabyDaisy_10:
(Start: 33 @7544 has 222 MA's), (40, 7559), (93, 7766), (100, 7796), (107, 7829), (110, 7841),

Gene: BabyYoda_9 Start: 7566, Stop: 7895, Start Num: 33
Candidate Starts for BabyYoda_9:
(Start: 31 @7563 has 1 MA's), (Start: 33 @7566 has 222 MA's), (40, 7581), (93, 7788), (94, 7791),
(100, 7818), (110, 7863),

Gene: Bachaco_9 Start: 7457, Stop: 7786, Start Num: 33
Candidate Starts for Bachaco_9:
(Start: 31 @7454 has 1 MA's), (Start: 33 @7457 has 222 MA's), (40, 7472), (50, 7505), (93, 7679),
(100, 7709), (110, 7754), (116, 7772),

Gene: Banquo_17 Start: 10497, Stop: 10856, Start Num: 33
Candidate Starts for Banquo_17:
(Start: 33 @10497 has 222 MA's), (44, 10530), (49, 10545), (60, 10602), (66, 10623), (78, 10671), (79,
10674), (87, 10710), (98, 10761), (99, 10764), (100, 10767), (106, 10800), (113, 10833),

Gene: Barco_9 Start: 6959, Stop: 7321, Start Num: 33
Candidate Starts for Barco_9:
(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037),
(68, 7088), (83, 7148),

Gene: Basilisk_10 Start: 8028, Stop: 8390, Start Num: 32
Candidate Starts for Basilisk_10:
(Start: 32 @8028 has 44 MA's), (42, 8055), (59, 8124), (61, 8133), (76, 8190), (81, 8220), (85, 8238),
(88, 8256), (91, 8265), (104, 8325),

Gene: Bedetta_11 Start: 7903, Stop: 8244, Start Num: 32
Candidate Starts for Bedetta_11:
(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119),
(94, 8137), (100, 8164), (110, 8215),

Gene: Beethoven_12 Start: 9762, Stop: 10100, Start Num: 33
Candidate Starts for Beethoven_12:
(Start: 33 @9762 has 222 MA's), (85, 9948), (103, 10029), (109, 10059),

Gene: Begonia_9 Start: 6962, Stop: 7324, Start Num: 33

Candidate Starts for Begonia_9:

(4, 6626), (28, 6935), (Start: 33 @6962 has 222 MA's), (41, 6986), (46, 7004), (49, 7010), (55, 7040), (63, 7073), (68, 7091), (83, 7151),

Gene: BelmontSKP_10 Start: 7671, Stop: 8000, Start Num: 33

Candidate Starts for BelmontSKP_10:

(Start: 33 @7671 has 222 MA's), (40, 7686), (100, 7923), (110, 7968),

Gene: Bengal_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for Bengal_9:

(Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: Bennie_8 Start: 6907, Stop: 7245, Start Num: 33

Candidate Starts for Bennie_8:

(Start: 33 @6907 has 222 MA's), (45, 6940), (109, 7204),

Gene: Bernstein_8 Start: 7153, Stop: 7485, Start Num: 33

Candidate Starts for Bernstein_8:

(6, 6856), (Start: 33 @7153 has 222 MA's), (39, 7165), (40, 7168), (50, 7204), (54, 7225), (55, 7228), (82, 7327), (100, 7408),

Gene: Bible12_11 Start: 7906, Stop: 8247, Start Num: 32

Candidate Starts for Bible12_11:

(19, 7774), (24, 7831), (Start: 32 @7906 has 44 MA's), (68, 8032), (74, 8059), (89, 8119), (90, 8122), (94, 8140), (100, 8167), (110, 8218),

Gene: BigMack_8 Start: 6907, Stop: 7245, Start Num: 33

Candidate Starts for BigMack_8:

(Start: 33 @6907 has 222 MA's), (36, 6910), (45, 6940), (109, 7204),

Gene: BlingBling_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for BlingBling_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Blino_9 Start: 6859, Stop: 7221, Start Num: 33

Candidate Starts for Blino_9:

(4, 6523), (Start: 33 @6859 has 222 MA's), (41, 6883), (49, 6907), (55, 6937), (63, 6970), (68, 6988), (83, 7048),

Gene: Blueberry_9 Start: 6835, Stop: 7194, Start Num: 33

Candidate Starts for Blueberry_9:

(4, 6499), (Start: 33 @6835 has 222 MA's), (41, 6859), (46, 6877), (63, 6943), (68, 6961), (83, 7021),

Gene: Bodacious_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Bodacious_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Brahms_8 Start: 7093, Stop: 7425, Start Num: 33

Candidate Starts for Brahms_8:

(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168), (82, 7267), (100, 7348),

Gene: Bran_9 Start: 6878, Stop: 7222, Start Num: 37

Candidate Starts for Bran_9:

(8, 6587), (Start: 37 @6878 has 8 MA's), (55, 6944), (63, 6977), (66, 6989), (68, 6995), (70, 7007), (85, 7064), (97, 7127), (109, 7181), (114, 7202), (116, 7208),

Gene: BrotherBLo_12 Start: 9769, Stop: 10107, Start Num: 33

Candidate Starts for BrotherBLo_12:

(Start: 33 @9769 has 222 MA's), (69, 9901), (85, 9955), (103, 10036), (109, 10066),

Gene: Brynnie_10 Start: 7840, Stop: 8202, Start Num: 32

Candidate Starts for Brynnie_10:

(19, 7708), (Start: 32 @7840 has 44 MA's), (42, 7867), (59, 7936), (61, 7945), (76, 8002), (81, 8032), (85, 8050), (88, 8068), (91, 8077), (104, 8137),

Gene: BubbaBear_9 Start: 7316, Stop: 7645, Start Num: 33

Candidate Starts for BubbaBear_9:

(13, 7076), (23, 7220), (Start: 33 @7316 has 222 MA's), (40, 7331), (100, 7568), (110, 7613), (112, 7619),

Gene: Buldak_9 Start: 7601, Stop: 7930, Start Num: 33

Candidate Starts for Buldak_9:

(6, 7304), (Start: 33 @7601 has 222 MA's), (40, 7616), (45, 7631), (50, 7649), (52, 7655), (56, 7676), (82, 7772), (100, 7853), (107, 7886),

Gene: Burritobowl_9 Start: 7352, Stop: 7681, Start Num: 33

Candidate Starts for Burritobowl_9:

(Start: 33 @7352 has 222 MA's), (40, 7367), (100, 7604), (110, 7649),

Gene: CallieOMalley_12 Start: 9802, Stop: 10140, Start Num: 33

Candidate Starts for CallieOMalley_12:

(Start: 33 @9802 has 222 MA's), (45, 9835),

Gene: Camara_9 Start: 7313, Stop: 7651, Start Num: 32

Candidate Starts for Camara_9:

(7, 7019), (15, 7106), (20, 7190), (27, 7274), (Start: 32 @7313 has 44 MA's), (47, 7358), (53, 7382), (64, 7424), (68, 7439), (81, 7484), (82, 7490), (89, 7523), (100, 7571),

Gene: CanFranMach_9 Start: 7340, Stop: 7669, Start Num: 33

Candidate Starts for CanFranMach_9:

(Start: 33 @7340 has 222 MA's), (40, 7355), (51, 7391), (54, 7409), (93, 7562), (100, 7592), (110, 7637),

Gene: Canowicakte_12 Start: 9837, Stop: 10175, Start Num: 33

Candidate Starts for Canowicakte_12:

(Start: 33 @9837 has 222 MA's), (45, 9870),

Gene: CaptainKirk2_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for CaptainKirk2_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: CarolAnn_9 Start: 6858, Stop: 7220, Start Num: 33

Candidate Starts for CarolAnn_9:

(4, 6522), (Start: 33 @6858 has 222 MA's), (41, 6882), (49, 6906), (55, 6936), (63, 6969), (68, 6987), (83, 7047),

Gene: Carpal_12 Start: 9769, Stop: 10107, Start Num: 33

Candidate Starts for Carpal_12:

(Start: 33 @9769 has 222 MA's), (85, 9955), (103, 10036), (109, 10066),

Gene: Cashington_9 Start: 7342, Stop: 7671, Start Num: 33

Candidate Starts for Cashington_9:

(Start: 33 @7342 has 222 MA's), (40, 7357), (100, 7594), (110, 7639),

Gene: Catfish_12 Start: 8464, Stop: 8817, Start Num: 33

Candidate Starts for Catfish_12:

(Start: 33 @8464 has 222 MA's), (42, 8488), (44, 8494), (59, 8557), (66, 8584), (84, 8650), (87, 8671), (88, 8677),

Gene: Celaena_9 Start: 7394, Stop: 7723, Start Num: 33

Candidate Starts for Celaena_9:

(Start: 31 @7391 has 1 MA's), (Start: 33 @7394 has 222 MA's), (40, 7409), (50, 7442), (93, 7616), (100, 7646), (110, 7691), (116, 7709),

Gene: CheeseSpider_9 Start: 6835, Stop: 7197, Start Num: 33

Candidate Starts for CheeseSpider_9:

(Start: 33 @6835 has 222 MA's), (41, 6859), (49, 6883), (55, 6913), (63, 6946), (68, 6964), (83, 7024),

Gene: ChewChew_8 Start: 6904, Stop: 7242, Start Num: 33

Candidate Starts for ChewChew_8:

(Start: 33 @6904 has 222 MA's), (45, 6937), (109, 7201),

Gene: Chickaboom_9 Start: 7385, Stop: 7747, Start Num: 32

Candidate Starts for Chickaboom_9:

(19, 7253), (Start: 32 @7385 has 44 MA's), (42, 7412), (59, 7481), (61, 7490), (76, 7547), (81, 7577), (85, 7595), (88, 7613), (91, 7622), (104, 7682),

Gene: Chicken_10 Start: 7688, Stop: 8029, Start Num: 32

Candidate Starts for Chicken_10:

(19, 7556), (24, 7613), (30, 7685), (Start: 32 @7688 has 44 MA's), (Start: 35 @7691 has 4 MA's), (47, 7733), (62, 7796), (64, 7799), (68, 7814), (94, 7922), (100, 7949), (104, 7964), (105, 7967), (110, 8000),

Gene: ChiliPepper_9 Start: 7553, Stop: 7882, Start Num: 33

Candidate Starts for ChiliPepper_9:

(6, 7256), (23, 7457), (Start: 31 @7550 has 1 MA's), (Start: 33 @7553 has 222 MA's), (40, 7568), (55, 7625), (58, 7643), (74, 7700), (93, 7775), (100, 7805), (110, 7850),

Gene: Cholula_12 Start: 9814, Stop: 10152, Start Num: 33

Candidate Starts for Cholula_12:

(Start: 33 @9814 has 222 MA's), (85, 10000), (103, 10081), (109, 10111),

Gene: Chridison_8 Start: 6924, Stop: 7262, Start Num: 33

Candidate Starts for Chridison_8:

(Start: 33 @6924 has 222 MA's), (45, 6957), (54, 6996), (75, 7077), (101, 7182), (103, 7191),

Gene: Christian_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Christian_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Clayda5_8 Start: 7093, Stop: 7425, Start Num: 33

Candidate Starts for Clayda5_8:

(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168), (82, 7267), (100, 7348),

Gene: CliffHanger_10 Start: 7300, Stop: 7629, Start Num: 33

Candidate Starts for CliffHanger_10:

(Start: 33 @7300 has 222 MA's), (40, 7315), (54, 7369), (100, 7552), (111, 7600),

Gene: Coltrane_8 Start: 7093, Stop: 7425, Start Num: 33

Candidate Starts for Coltrane_8:

(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168), (82, 7267), (100, 7348),

Gene: Colusalem_10 Start: 7742, Stop: 8083, Start Num: 32

Candidate Starts for Colusalem_10:

(19, 7610), (24, 7667), (Start: 32 @7742 has 44 MA's), (68, 7868), (74, 7895), (89, 7955), (90, 7958), (94, 7976), (100, 8003), (110, 8054),

Gene: Coral_10 Start: 7742, Stop: 8083, Start Num: 32

Candidate Starts for Coral_10:

(19, 7610), (24, 7667), (Start: 32 @7742 has 44 MA's), (68, 7868), (74, 7895), (89, 7955), (90, 7958), (94, 7976), (100, 8003), (110, 8054),

Gene: Cote_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for Cote_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: CristinaYang_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for CristinaYang_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: CroZenni_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for CroZenni_9:

(6, 7028), (13, 7085), (23, 7229), (Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: CupcakePrincess_9 Start: 7302, Stop: 7631, Start Num: 33

Candidate Starts for CupcakePrincess_9:

(13, 7062), (23, 7206), (Start: 33 @7302 has 222 MA's), (40, 7317), (60, 7401), (100, 7554), (110, 7599), (112, 7605),

Gene: Cygnet_10 Start: 7689, Stop: 8027, Start Num: 32

Candidate Starts for Cygnet_10:

(19, 7557), (25, 7623), (Start: 32 @7689 has 44 MA's), (44, 7722), (47, 7734), (62, 7797), (68, 7815), (100, 7947), (110, 7998),

Gene: Daiboju_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Daiboju_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: DanHam62_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for DanHam62_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Daob_11 Start: 7906, Stop: 8247, Start Num: 32

Candidate Starts for Daob_11:

(19, 7774), (24, 7831), (Start: 32 @7906 has 44 MA's), (68, 8032), (74, 8059), (89, 8119), (90, 8122), (94, 8140), (100, 8167), (110, 8218),

Gene: Dardanus_15 Start: 9541, Stop: 9897, Start Num: 33

Candidate Starts for Dardanus_15:

(Start: 33 @9541 has 222 MA's), (44, 9571), (49, 9586), (60, 9643), (66, 9664), (78, 9712), (86, 9736), (90, 9763), (106, 9841), (117, 9886),

Gene: Delian_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Delian_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: DickRichards_9 Start: 7819, Stop: 8148, Start Num: 33

Candidate Starts for DickRichards_9:

(Start: 33 @7819 has 222 MA's), (40, 7834), (100, 8071), (110, 8116),

Gene: Didgeridoo_10 Start: 7544, Stop: 7873, Start Num: 33

Candidate Starts for Didgeridoo_10:

(6, 7247), (11, 7289), (13, 7304), (Start: 33 @7544 has 222 MA's), (40, 7559), (93, 7766), (100, 7796), (107, 7829), (110, 7841),

Gene: Dina_9 Start: 6861, Stop: 7205, Start Num: 37

Candidate Starts for Dina_9:

(8, 6570), (Start: 37 @6861 has 8 MA's), (55, 6927), (63, 6960), (68, 6978), (70, 6990), (85, 7047), (97, 7110), (109, 7164), (114, 7185), (116, 7191),

Gene: Dino_12 Start: 9768, Stop: 10106, Start Num: 33

Candidate Starts for Dino_12:

(Start: 33 @9768 has 222 MA's), (69, 9900), (85, 9954), (103, 10035), (109, 10065),

Gene: DinoDaryn_15 Start: 9631, Stop: 9990, Start Num: 33

Candidate Starts for DinoDaryn_15:

(Start: 33 @9631 has 222 MA's), (42, 9658), (44, 9664), (55, 9706), (66, 9757), (78, 9805), (100, 9901), (103, 9913), (108, 9949),

Gene: DirtyBubble_9 Start: 7574, Stop: 7903, Start Num: 33

Candidate Starts for DirtyBubble_9:

(6, 7277), (13, 7334), (Start: 31 @7571 has 1 MA's), (Start: 33 @7574 has 222 MA's), (40, 7589), (93, 7796), (94, 7799), (100, 7826), (110, 7871),

Gene: Dismas_9 Start: 7550, Stop: 7882, Start Num: 31

Candidate Starts for Dismas_9:

(6, 7256), (23, 7457), (Start: 31 @7550 has 1 MA's), (Start: 33 @7553 has 222 MA's), (40, 7568), (55, 7625), (74, 7700), (93, 7775), (100, 7805), (110, 7850),

Gene: Doobus_9 Start: 7556, Stop: 7885, Start Num: 33
Candidate Starts for Doobus_9:
(Start: 33 @7556 has 222 MA's), (40, 7571), (100, 7808), (110, 7853),

Gene: DrRobert_8 Start: 6905, Stop: 7243, Start Num: 33
Candidate Starts for DrRobert_8:
(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: DreamTeam_8 Start: 6951, Stop: 7289, Start Num: 33
Candidate Starts for DreamTeam_8:
(Start: 33 @6951 has 222 MA's), (45, 6984), (109, 7248),

Gene: Eden_8 Start: 7182, Stop: 7514, Start Num: 33
Candidate Starts for Eden_8:
(Start: 33 @7182 has 222 MA's), (39, 7194), (40, 7197), (50, 7233), (95, 7416),

Gene: Eesa_10 Start: 7902, Stop: 8243, Start Num: 32
Candidate Starts for Eesa_10:
(Start: 32 @7902 has 44 MA's), (Start: 35 @7905 has 4 MA's), (47, 7947), (62, 8010), (64, 8013), (68, 8028), (94, 8136), (100, 8163), (110, 8214),

Gene: Elener_11 Start: 8954, Stop: 9316, Start Num: 33
Candidate Starts for Elener_11:
(Start: 33 @8954 has 222 MA's), (47, 8999), (66, 9077), (98, 9224),

Gene: Elva_10 Start: 7631, Stop: 7960, Start Num: 33
Candidate Starts for Elva_10:
(6, 7334), (Start: 31 @7628 has 1 MA's), (Start: 33 @7631 has 222 MA's), (40, 7646), (93, 7853), (94, 7856), (100, 7883), (110, 7928),

Gene: EstebanJulior_8 Start: 6949, Stop: 7287, Start Num: 33
Candidate Starts for EstebanJulior_8:
(Start: 33 @6949 has 222 MA's), (45, 6982), (69, 7081), (109, 7246),

Gene: Eula_9 Start: 7323, Stop: 7652, Start Num: 33
Candidate Starts for Eula_9:
(13, 7083), (23, 7227), (Start: 33 @7323 has 222 MA's), (40, 7338), (60, 7422), (100, 7575), (110, 7620), (112, 7626),

Gene: Eunoia_8 Start: 6923, Stop: 7261, Start Num: 33
Candidate Starts for Eunoia_8:
(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: Fairfaxidum_9 Start: 6937, Stop: 7305, Start Num: 33
Candidate Starts for Fairfaxidum_9:
(Start: 33 @6937 has 222 MA's), (42, 6961), (44, 6967), (59, 7039), (63, 7054), (68, 7072), (71, 7087), (83, 7132), (85, 7141),

Gene: Fenry_9 Start: 6968, Stop: 7330, Start Num: 33
Candidate Starts for Fenry_9:

(28, 6941), (Start: 33 @6968 has 222 MA's), (41, 6992), (49, 7016), (55, 7046), (63, 7079), (68, 7097), (83, 7157),

Gene: Finalfrontier_10 Start: 7834, Stop: 8163, Start Num: 33

Candidate Starts for Finalfrontier_10:

(13, 7594), (23, 7738), (Start: 33 @7834 has 222 MA's), (40, 7849), (60, 7933), (61, 7936), (93, 8056), (100, 8086), (102, 8095), (110, 8131),

Gene: Fingolfin_9 Start: 7313, Stop: 7651, Start Num: 32

Candidate Starts for Fingolfin_9:

(7, 7019), (15, 7106), (20, 7190), (27, 7274), (Start: 32 @7313 has 44 MA's), (47, 7358), (53, 7382), (64, 7424), (68, 7439), (81, 7484), (82, 7490), (89, 7523), (100, 7571), (105, 7589),

Gene: FlameThrower_9 Start: 7282, Stop: 7611, Start Num: 33

Candidate Starts for FlameThrower_9:

(1, 6853), (6, 6985), (Start: 31 @7279 has 1 MA's), (Start: 33 @7282 has 222 MA's), (40, 7297), (50, 7330), (93, 7504), (100, 7534), (110, 7579), (116, 7597),

Gene: Fluke_12 Start: 9810, Stop: 10148, Start Num: 33

Candidate Starts for Fluke_12:

(Start: 33 @9810 has 222 MA's), (85, 9996), (103, 10077), (109, 10107),

Gene: Franklin22_8 Start: 7163, Stop: 7495, Start Num: 33

Candidate Starts for Franklin22_8:

(Start: 31 @7160 has 1 MA's), (Start: 33 @7163 has 222 MA's), (39, 7175), (40, 7178), (52, 7220), (60, 7265), (68, 7286), (100, 7418),

Gene: Frizzle_7 Start: 6056, Stop: 6415, Start Num: 35

Candidate Starts for Frizzle_7:

(Start: 35 @6056 has 4 MA's), (72, 6203), (102, 6338),

Gene: Frokostdame_9 Start: 6954, Stop: 7316, Start Num: 33

Candidate Starts for Frokostdame_9:

(4, 6618), (Start: 33 @6954 has 222 MA's), (41, 6978), (49, 7002), (55, 7032), (63, 7065), (68, 7083), (83, 7143),

Gene: Gack_8 Start: 7233, Stop: 7565, Start Num: 33

Candidate Starts for Gack_8:

(Start: 33 @7233 has 222 MA's), (39, 7245), (40, 7248), (45, 7266), (56, 7311), (75, 7386), (100, 7488),

Gene: Galaxy_10 Start: 7711, Stop: 8073, Start Num: 32

Candidate Starts for Galaxy_10:

(Start: 32 @7711 has 44 MA's), (Start: 35 @7714 has 4 MA's), (42, 7738), (59, 7807), (61, 7816), (74, 7864), (76, 7873), (81, 7903), (85, 7921), (88, 7939), (91, 7948), (104, 8008),

Gene: Gambino_9 Start: 6835, Stop: 7194, Start Num: 33

Candidate Starts for Gambino_9:

(4, 6499), (Start: 33 @6835 has 222 MA's), (41, 6859), (46, 6877), (63, 6943), (68, 6961), (83, 7021),

Gene: Ghobes_7 Start: 6056, Stop: 6415, Start Num: 35

Candidate Starts for Ghobes_7:

(Start: 35 @6056 has 4 MA's), (72, 6203), (102, 6338),

Gene: Gibbzilla_10 Start: 6959, Stop: 7303, Start Num: 34
Candidate Starts for Gibbzilla_10:
(34, 6959), (56, 7037), (85, 7151),

Gene: Gisselle_8 Start: 6951, Stop: 7289, Start Num: 33
Candidate Starts for Gisselle_8:
(Start: 33 @6951 has 222 MA's), (45, 6984), (109, 7248),

Gene: Glenn_12 Start: 9820, Stop: 10158, Start Num: 33
Candidate Starts for Glenn_12:
(Start: 33 @9820 has 222 MA's), (85, 10006), (103, 10087), (109, 10117),

Gene: Glotell_9 Start: 7312, Stop: 7650, Start Num: 32
Candidate Starts for Glotell_9:
(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381),
(64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Goib_14 Start: 9406, Stop: 9765, Start Num: 33
Candidate Starts for Goib_14:
(Start: 33 @9406 has 222 MA's), (42, 9433), (44, 9439), (55, 9481), (66, 9532), (78, 9580), (103, 9688),
(108, 9724),

Gene: Gravel_11 Start: 7898, Stop: 8239, Start Num: 32
Candidate Starts for Gravel_11:
(Start: 32 @7898 has 44 MA's), (Start: 35 @7901 has 4 MA's), (47, 7943), (62, 8006), (64, 8009), (68,
8024), (94, 8132), (100, 8159), (110, 8210),

Gene: Graynor_12 Start: 9826, Stop: 10164, Start Num: 33
Candidate Starts for Graynor_12:
(Start: 33 @9826 has 222 MA's), (45, 9859),

Gene: GreenHearts_12 Start: 9892, Stop: 10230, Start Num: 33
Candidate Starts for GreenHearts_12:
(Start: 33 @9892 has 222 MA's), (69, 10024), (86, 10081), (109, 10189),

Gene: Greenhouse_12 Start: 9817, Stop: 10155, Start Num: 33
Candidate Starts for Greenhouse_12:
(Start: 33 @9817 has 222 MA's), (69, 9949), (86, 10006), (101, 10075), (103, 10084), (109, 10114),

Gene: Gspu1_11 Start: 7862, Stop: 8218, Start Num: 33
Candidate Starts for Gspu1_11:
(Start: 33 @7862 has 222 MA's), (41, 7886), (44, 7895), (47, 7907), (58, 7955), (59, 7958), (60, 7964),
(80, 8039), (86, 8057), (87, 8072), (94, 8102), (96, 8111), (101, 8132), (103, 8141), (106, 8162), (108,
8177), (116, 8204),

Gene: Guacamole_9 Start: 6963, Stop: 7325, Start Num: 33
Candidate Starts for Guacamole_9:
(4, 6627), (28, 6936), (Start: 33 @6963 has 222 MA's), (41, 6987), (46, 7005), (49, 7011), (55, 7041),
(68, 7092), (83, 7152),

Gene: HamCheese_9 Start: 7312, Stop: 7650, Start Num: 32
Candidate Starts for HamCheese_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570),

Gene: HannahPhantana_11 Start: 7906, Stop: 8247, Start Num: 32

Candidate Starts for HannahPhantana_11:

(19, 7774), (24, 7831), (Start: 32 @7906 has 44 MA's), (68, 8032), (74, 8059), (89, 8119), (90, 8122), (94, 8140), (100, 8167), (110, 8218),

Gene: HeadNerd_8 Start: 6907, Stop: 7245, Start Num: 33

Candidate Starts for HeadNerd_8:

(Start: 33 @6907 has 222 MA's), (45, 6940), (109, 7204),

Gene: Herb_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Herb_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: Hitter_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Hitter_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Huckleberry_8 Start: 6907, Stop: 7245, Start Num: 33

Candidate Starts for Huckleberry_8:

(Start: 33 @6907 has 222 MA's), (45, 6940), (109, 7204),

Gene: Huff_15 Start: 9631, Stop: 9990, Start Num: 33

Candidate Starts for Huff_15:

(Start: 33 @9631 has 222 MA's), (42, 9658), (44, 9664), (55, 9706), (66, 9757), (78, 9805), (100, 9901), (103, 9913), (108, 9949),

Gene: HunterDalle_8 Start: 6923, Stop: 7261, Start Num: 33

Candidate Starts for HunterDalle_8:

(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: Huntingdon_12 Start: 9803, Stop: 10141, Start Num: 33

Candidate Starts for Huntingdon_12:

(Start: 33 @9803 has 222 MA's), (42, 9827), (86, 9992), (103, 10070), (109, 10100), (114, 10121),

Gene: Icarian_10 Start: 7557, Stop: 7886, Start Num: 33

Candidate Starts for Icarian_10:

(6, 7260), (Start: 31 @7554 has 1 MA's), (Start: 33 @7557 has 222 MA's), (40, 7572), (94, 7782), (100, 7809), (110, 7854),

Gene: Immaculata_12 Start: 9814, Stop: 10152, Start Num: 33

Candidate Starts for Immaculata_12:

(Start: 33 @9814 has 222 MA's), (85, 10000), (103, 10081), (109, 10111),

Gene: IndyLu_9 Start: 7368, Stop: 7697, Start Num: 33

Candidate Starts for IndyLu_9:

(6, 7071), (11, 7113), (13, 7128), (Start: 33 @7368 has 222 MA's), (40, 7383), (93, 7590), (107, 7653), (110, 7665),

Gene: Jabb_9 Start: 7302, Stop: 7631, Start Num: 33

Candidate Starts for Jabb_9:

(13, 7062), (23, 7206), (Start: 33 @7302 has 222 MA's), (40, 7317), (60, 7401), (100, 7554), (110, 7599), (112, 7605),

Gene: Jalammah_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Jalammah_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (63, 7070), (68, 7088), (83, 7148), (90, 7187),

Gene: Jamun_10 Start: 8052, Stop: 8414, Start Num: 32

Candidate Starts for Jamun_10:

(19, 7920), (Start: 32 @8052 has 44 MA's), (Start: 35 @8055 has 4 MA's), (42, 8079), (59, 8148), (61, 8157), (76, 8214), (81, 8244), (85, 8262), (88, 8280), (91, 8289), (104, 8349),

Gene: JasperJr_9 Start: 6963, Stop: 7325, Start Num: 33

Candidate Starts for JasperJr_9:

(4, 6627), (28, 6936), (Start: 33 @6963 has 222 MA's), (41, 6987), (46, 7005), (49, 7011), (55, 7041), (68, 7092), (83, 7152),

Gene: Jerole_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for Jerole_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: Joann_12 Start: 9795, Stop: 10133, Start Num: 33

Candidate Starts for Joann_12:

(Start: 33 @9795 has 222 MA's), (69, 9927), (86, 9984), (101, 10053), (103, 10062), (109, 10092),

Gene: Johnathan_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for Johnathan_9:

(Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: Jovita_9 Start: 7424, Stop: 7753, Start Num: 33

Candidate Starts for Jovita_9:

(13, 7184), (23, 7328), (Start: 33 @7424 has 222 MA's), (40, 7439), (60, 7523), (100, 7676), (110, 7721), (112, 7727),

Gene: JuJu_9 Start: 6884, Stop: 7246, Start Num: 33

Candidate Starts for JuJu_9:

(4, 6548), (Start: 33 @6884 has 222 MA's), (41, 6908), (49, 6932), (55, 6962), (63, 6995), (68, 7013), (83, 7073),

Gene: Jumboset_12 Start: 9763, Stop: 10101, Start Num: 33

Candidate Starts for Jumboset_12:

(18, 9598), (Start: 33 @9763 has 222 MA's), (85, 9949), (103, 10030), (109, 10060),

Gene: Juno112_9 Start: 7313, Stop: 7651, Start Num: 32

Candidate Starts for Juno112_9:

(7, 7019), (15, 7106), (20, 7190), (27, 7274), (Start: 32 @7313 has 44 MA's), (47, 7358), (53, 7382), (64, 7424), (68, 7439), (81, 7484), (82, 7490), (89, 7523), (100, 7571), (105, 7589),

Gene: KHumphrey_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for KHumphrey_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Kalizoi_12 Start: 9762, Stop: 10100, Start Num: 33

Candidate Starts for Kalizoi_12:

(Start: 33 @9762 has 222 MA's), (69, 9894), (85, 9948), (103, 10029), (109, 10059),

Gene: Kamdara_9 Start: 7552, Stop: 7881, Start Num: 33

Candidate Starts for Kamdara_9:

(6, 7255), (23, 7456), (Start: 31 @7549 has 1 MA's), (Start: 33 @7552 has 222 MA's), (40, 7567), (55, 7624), (74, 7699), (93, 7774), (100, 7804), (110, 7849),

Gene: KappaFarmDelta_9 Start: 6997, Stop: 7359, Start Num: 33

Candidate Starts for KappaFarmDelta_9:

(28, 6970), (Start: 33 @6997 has 222 MA's), (41, 7021), (49, 7045), (55, 7075), (63, 7108), (68, 7126), (83, 7186), (90, 7225),

Gene: Kate33_9 Start: 7367, Stop: 7696, Start Num: 33

Candidate Starts for Kate33_9:

(6, 7070), (11, 7112), (13, 7127), (Start: 33 @7367 has 222 MA's), (40, 7382), (93, 7589), (107, 7652), (110, 7664),

Gene: Katzastrophic_9 Start: 7457, Stop: 7786, Start Num: 33

Candidate Starts for Katzastrophic_9:

(Start: 31 @7454 has 1 MA's), (Start: 33 @7457 has 222 MA's), (40, 7472), (50, 7505), (93, 7679), (100, 7709), (110, 7754), (116, 7772),

Gene: KendraB23_11 Start: 7899, Stop: 8240, Start Num: 32

Candidate Starts for KendraB23_11:

(Start: 32 @7899 has 44 MA's), (Start: 35 @7902 has 4 MA's), (47, 7944), (62, 8007), (64, 8010), (68, 8025), (94, 8133), (100, 8160), (110, 8211),

Gene: Kenzers_9 Start: 7339, Stop: 7668, Start Num: 33

Candidate Starts for Kenzers_9:

(13, 7099), (23, 7243), (Start: 33 @7339 has 222 MA's), (40, 7354), (100, 7591), (110, 7636), (112, 7642),

Gene: Kepler_10 Start: 7741, Stop: 8082, Start Num: 32

Candidate Starts for Kepler_10:

(19, 7609), (24, 7666), (Start: 32 @7741 has 44 MA's), (68, 7867), (74, 7894), (89, 7954), (90, 7957), (94, 7975), (100, 8002), (110, 8053),

Gene: Kieran_9 Start: 7556, Stop: 7885, Start Num: 33

Candidate Starts for Kieran_9:

(6, 7259), (23, 7460), (Start: 31 @7553 has 1 MA's), (Start: 33 @7556 has 222 MA's), (40, 7571), (55, 7628), (58, 7646), (74, 7703), (93, 7778), (100, 7808), (110, 7853),

Gene: KingBob_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for KingBob_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: Kittykat_8 Start: 6948, Stop: 7286, Start Num: 33

Candidate Starts for Kittykat_8:

(Start: 33 @6948 has 222 MA's), (109, 7245),

Gene: Korra_12 Start: 9768, Stop: 10106, Start Num: 33

Candidate Starts for Korra_12:

(Start: 33 @9768 has 222 MA's), (69, 9900), (85, 9954), (103, 10035), (109, 10065),

Gene: Kromp_10 Start: 8334, Stop: 8675, Start Num: 33

Candidate Starts for Kromp_10:

(17, 8160), (Start: 33 @8334 has 222 MA's), (80, 8508),

Gene: Kuleana_10 Start: 7701, Stop: 8042, Start Num: 32

Candidate Starts for Kuleana_10:

(Start: 32 @7701 has 44 MA's), (44, 7734), (62, 7809), (64, 7812), (68, 7827), (73, 7851), (74, 7854), (81, 7875), (89, 7914), (94, 7935), (100, 7962), (105, 7980), (110, 8013),

Gene: Lahqtemish_9 Start: 7412, Stop: 7741, Start Num: 33

Candidate Starts for Lahqtemish_9:

(Start: 33 @7412 has 222 MA's), (40, 7427), (93, 7634), (100, 7664), (107, 7697), (110, 7709),

Gene: Lakshmi_12 Start: 9822, Stop: 10160, Start Num: 33

Candidate Starts for Lakshmi_12:

(Start: 33 @9822 has 222 MA's), (69, 9954), (86, 10011), (109, 10119),

Gene: Laphuphu24k_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for Laphuphu24k_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570),

Gene: Lasagna_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Lasagna_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Lederberg_9 Start: 6861, Stop: 7205, Start Num: 37

Candidate Starts for Lederberg_9:

(8, 6570), (Start: 37 @6861 has 8 MA's), (55, 6927), (63, 6960), (68, 6978), (70, 6990), (85, 7047), (97, 7110), (109, 7164), (114, 7185), (116, 7191),

Gene: Lennox_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Lennox_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Leona_9 Start: 7363, Stop: 7701, Start Num: 32

Candidate Starts for Leona_9:

(20, 7240), (Start: 32 @7363 has 44 MA's), (47, 7408), (53, 7432), (64, 7474), (68, 7489), (81, 7534), (82, 7540), (89, 7573), (100, 7621), (105, 7639),

Gene: LilStuart_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for LilStuart_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Lilo27_9 Start: 7302, Stop: 7631, Start Num: 33

Candidate Starts for Lilo27_9:

(6, 7005), (11, 7047), (23, 7206), (Start: 31 @7299 has 1 MA's), (Start: 33 @7302 has 222 MA's), (40, 7317), (100, 7554), (110, 7599),

Gene: LimaBean_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for LimaBean_9:

(Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: Litotes_12 Start: 9790, Stop: 10128, Start Num: 33

Candidate Starts for Litotes_12:

(Start: 33 @9790 has 222 MA's), (45, 9823),

Gene: LittleTokyo_10 Start: 7645, Stop: 7983, Start Num: 32

Candidate Starts for LittleTokyo_10:

(3, 7219), (9, 7372), (24, 7570), (26, 7594), (Start: 32 @7645 has 44 MA's), (47, 7690), (62, 7753), (68, 7771), (74, 7798), (85, 7834), (90, 7858), (100, 7903), (110, 7954), (115, 7969),

Gene: Loviatar_9 Start: 7578, Stop: 7907, Start Num: 33

Candidate Starts for Loviatar_9:

(6, 7281), (Start: 31 @7575 has 1 MA's), (Start: 33 @7578 has 222 MA's), (40, 7593), (94, 7803), (100, 7830), (102, 7839), (107, 7863), (110, 7875),

Gene: Lucy_8 Start: 6896, Stop: 7234, Start Num: 33

Candidate Starts for Lucy_8:

(Start: 33 @6896 has 222 MA's), (45, 6929), (109, 7193),

Gene: Lunar_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for Lunar_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: Lynlen_9 Start: 7339, Stop: 7668, Start Num: 33

Candidate Starts for Lynlen_9:

(13, 7099), (23, 7243), (Start: 33 @7339 has 222 MA's), (40, 7354), (100, 7591), (110, 7636), (112, 7642),

Gene: Lysidious_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Lysidious_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Makoto_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Makoto_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Malachai_9 Start: 6962, Stop: 7324, Start Num: 33

Candidate Starts for Malachai_9:

(4, 6626), (28, 6935), (Start: 33 @6962 has 222 MA's), (41, 6986), (46, 7004), (49, 7010), (55, 7040), (63, 7073), (68, 7091), (83, 7151),

Gene: MamaPearl_8 Start: 6949, Stop: 7287, Start Num: 33

Candidate Starts for MamaPearl_8:

(Start: 33 @6949 has 222 MA's), (45, 6982), (69, 7081), (109, 7246),

Gene: Maria1952_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Maria1952_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: MeganNoll_12 Start: 9820, Stop: 10158, Start Num: 33

Candidate Starts for MeganNoll_12:

(18, 9655), (Start: 33 @9820 has 222 MA's), (85, 10006), (103, 10087), (109, 10117),

Gene: Melba_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Melba_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Mellie_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Mellie_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (63, 7070), (68, 7088), (83, 7148),

Gene: Melons_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for Melons_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: Milomuff_10 Start: 7711, Stop: 8040, Start Num: 33

Candidate Starts for Milomuff_10:

(Start: 33 @7711 has 222 MA's), (40, 7726), (100, 7963), (110, 8008),

Gene: MintFen_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for MintFen_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Misaeng_12 Start: 9868, Stop: 10206, Start Num: 33

Candidate Starts for Misaeng_12:

(Start: 33 @9868 has 222 MA's), (86, 10057), (103, 10135), (109, 10165), (114, 10186),

Gene: MissRona_9 Start: 6835, Stop: 7194, Start Num: 33

Candidate Starts for MissRona_9:

(4, 6499), (Start: 33 @6835 has 222 MA's), (41, 6859), (46, 6877), (63, 6943), (68, 6961), (83, 7021),

Gene: Moki_8 Start: 6907, Stop: 7245, Start Num: 33

Candidate Starts for Moki_8:

(Start: 33 @6907 has 222 MA's), (45, 6940), (109, 7204),

Gene: MrBoss_12 Start: 9790, Stop: 10128, Start Num: 33

Candidate Starts for MrBoss_12:

(Start: 33 @9790 has 222 MA's), (45, 9823),

Gene: MrGloopy_12 Start: 9753, Stop: 10091, Start Num: 33

Candidate Starts for MrGloopy_12:

(Start: 33 @9753 has 222 MA's), (103, 10020), (109, 10050),

Gene: MsUbiquitous_9 Start: 7302, Stop: 7631, Start Num: 33

Candidate Starts for MsUbiquitous_9:

(13, 7062), (23, 7206), (Start: 33 @7302 has 222 MA's), (40, 7317), (60, 7401), (100, 7554), (110, 7599), (112, 7605),

Gene: Murp_9 Start: 7000, Stop: 7362, Start Num: 33

Candidate Starts for Murp_9:

(4, 6664), (28, 6973), (Start: 33 @7000 has 222 MA's), (41, 7024), (49, 7048), (55, 7078), (63, 7111), (83, 7189),

Gene: Nancia_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for Nancia_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (109, 7202),

Gene: Nesbitt_9 Start: 7263, Stop: 7604, Start Num: 33

Candidate Starts for Nesbitt_9:

(Start: 33 @7263 has 222 MA's), (38, 7275), (94, 7497), (97, 7512), (110, 7572), (117, 7593),

Gene: Niblet_10 Start: 7688, Stop: 8029, Start Num: 32

Candidate Starts for Niblet_10:

(19, 7556), (24, 7613), (30, 7685), (Start: 32 @7688 has 44 MA's), (Start: 35 @7691 has 4 MA's), (47, 7733), (62, 7796), (64, 7799), (68, 7814), (94, 7922), (100, 7949), (104, 7964), (105, 7967), (110, 8000),

Gene: Nicky22_10 Start: 7773, Stop: 8102, Start Num: 33

Candidate Starts for Nicky22_10:

(13, 7533), (23, 7677), (Start: 33 @7773 has 222 MA's), (40, 7788), (60, 7872), (93, 7995), (100, 8025), (110, 8070),

Gene: Nubia_12 Start: 9782, Stop: 10120, Start Num: 33

Candidate Starts for Nubia_12:

(Start: 33 @9782 has 222 MA's), (69, 9914), (86, 9971), (101, 10040), (103, 10049), (109, 10079),

Gene: OMalley_8 Start: 6923, Stop: 7261, Start Num: 33

Candidate Starts for OMalley_8:

(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: Obliviate_9 Start: 6983, Stop: 7345, Start Num: 33

Candidate Starts for Obliviate_9:

(4, 6647), (28, 6956), (Start: 33 @6983 has 222 MA's), (41, 7007), (49, 7031), (55, 7061), (63, 7094), (68, 7112), (83, 7172),

Gene: Olliecat_9 Start: 7556, Stop: 7885, Start Num: 33

Candidate Starts for Olliecat_9:

(Start: 33 @7556 has 222 MA's), (40, 7571), (50, 7604), (52, 7610), (56, 7631), (82, 7727), (100, 7808), (107, 7841),

Gene: Oppalora_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for Oppalora_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Orcanus_10 Start: 7692, Stop: 8033, Start Num: 32

Candidate Starts for Orcanus_10:

(Start: 32 @7692 has 44 MA's), (Start: 35 @7695 has 4 MA's), (47, 7737), (62, 7800), (64, 7803), (68, 7818), (94, 7926), (100, 7953), (110, 8004), (112, 8010),

Gene: OtsoOtso_10 Start: 7742, Stop: 8083, Start Num: 32

Candidate Starts for OtsoOtso_10:

(19, 7610), (24, 7667), (Start: 32 @7742 has 44 MA's), (68, 7868), (74, 7895), (89, 7955), (90, 7958), (94, 7976), (100, 8003), (110, 8054),

Gene: OurGirlNessie_8 Start: 6896, Stop: 7234, Start Num: 33

Candidate Starts for OurGirlNessie_8:

(Start: 33 @6896 has 222 MA's), (45, 6929), (109, 7193),

Gene: Oxynfrius_12 Start: 9795, Stop: 10133, Start Num: 33

Candidate Starts for Oxynfrius_12:

(Start: 33 @9795 has 222 MA's), (69, 9927), (86, 9984), (109, 10092),

Gene: PCoral7_9 Start: 6937, Stop: 7305, Start Num: 33

Candidate Starts for PCoral7_9:

(4, 6607), (Start: 33 @6937 has 222 MA's), (42, 6961), (44, 6967), (59, 7039), (63, 7054), (68, 7072), (83, 7132), (85, 7141),

Gene: PartyCup_12 Start: 9837, Stop: 10175, Start Num: 33

Candidate Starts for PartyCup_12:

(Start: 33 @9837 has 222 MA's), (45, 9870),

Gene: PastaFagioli_9 Start: 7400, Stop: 7729, Start Num: 33

Candidate Starts for PastaFagioli_9:

(Start: 33 @7400 has 222 MA's), (40, 7415), (93, 7622), (100, 7652), (107, 7685), (110, 7697),

Gene: Pecas_9 Start: 7323, Stop: 7652, Start Num: 33

Candidate Starts for Pecas_9:

(13, 7083), (23, 7227), (Start: 33 @7323 has 222 MA's), (40, 7338), (60, 7422), (100, 7575), (110, 7620), (112, 7626),

Gene: Pelletreau_11 Start: 7898, Stop: 8239, Start Num: 32

Candidate Starts for Pelletreau_11:

(Start: 32 @7898 has 44 MA's), (Start: 35 @7901 has 4 MA's), (47, 7943), (62, 8006), (64, 8009), (68, 8024), (94, 8132), (100, 8159), (110, 8210),

Gene: Petra_9 Start: 6865, Stop: 7227, Start Num: 33

Candidate Starts for Petra_9:

(4, 6529), (5, 6553), (Start: 33 @6865 has 222 MA's), (41, 6889), (49, 6913), (55, 6943), (63, 6976), (68, 6994), (83, 7054),

Gene: PhigPhack_9 Start: 7354, Stop: 7683, Start Num: 33

Candidate Starts for PhigPhack_9:

(Start: 33 @7354 has 222 MA's), (40, 7369), (100, 7606), (110, 7651),

Gene: PhirstandPhine_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for PhirstandPhine_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: Phisb_9 Start: 7316, Stop: 7645, Start Num: 33

Candidate Starts for Phisb_9:

(13, 7076), (23, 7220), (Start: 33 @7316 has 222 MA's), (40, 7331), (100, 7568), (110, 7613), (112, 7619),

Gene: PhluffyCoco_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for PhluffyCoco_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570),

Gene: PhrostedPhlake_9 Start: 7040, Stop: 7402, Start Num: 33

Candidate Starts for PhrostedPhlake_9:

(4, 6704), (Start: 33 @7040 has 222 MA's), (41, 7064), (49, 7088), (55, 7118), (63, 7151), (68, 7169), (83, 7229),

Gene: Pineda_11 Start: 7903, Stop: 8244, Start Num: 32

Candidate Starts for Pineda_11:

(19, 7771), (24, 7828), (Start: 32 @7903 has 44 MA's), (68, 8029), (74, 8056), (89, 8116), (90, 8119), (94, 8137), (100, 8164), (110, 8215),

Gene: PinkFriday_8 Start: 6926, Stop: 7264, Start Num: 33

Candidate Starts for PinkFriday_8:

(2, 6494), (11, 6674), (12, 6680), (Start: 33 @6926 has 222 MA's), (54, 6998), (57, 7013), (101, 7184), (114, 7244),

Gene: Pipp_10 Start: 7195, Stop: 7557, Start Num: 33

Candidate Starts for Pipp_10:

(10, 6931), (21, 7093), (28, 7174), (Start: 33 @7195 has 222 MA's), (41, 7219), (49, 7243), (55, 7273), (63, 7306), (68, 7324), (83, 7384), (90, 7423),

Gene: PitaDog_8 Start: 6896, Stop: 7234, Start Num: 33

Candidate Starts for PitaDog_8:

(Start: 33 @6896 has 222 MA's), (45, 6929), (109, 7193),

Gene: Polka_10 Start: 7742, Stop: 8083, Start Num: 32

Candidate Starts for Polka_10:

(19, 7610), (24, 7667), (Start: 32 @7742 has 44 MA's), (68, 7868), (74, 7895), (89, 7955), (90, 7958), (94, 7976), (100, 8003), (110, 8054),

Gene: PondAmelia_12 Start: 7567, Stop: 7896, Start Num: 33

Candidate Starts for PondAmelia_12:

(6, 7270), (Start: 31 @7564 has 1 MA's), (Start: 33 @7567 has 222 MA's), (40, 7582), (100, 7819), (110, 7864),

Gene: Potatoes_12 Start: 9814, Stop: 10152, Start Num: 33

Candidate Starts for Potatoes_12:

(Start: 33 @9814 has 222 MA's), (85, 10000), (103, 10081), (109, 10111),

Gene: Preamble_8 Start: 6906, Stop: 7244, Start Num: 33

Candidate Starts for Preamble_8:

(2, 6477), (11, 6657), (12, 6663), (Start: 33 @6906 has 222 MA's), (109, 7203),

Gene: PrincePatrick_9 Start: 6938, Stop: 7306, Start Num: 33

Candidate Starts for PrincePatrick_9:

(Start: 33 @6938 has 222 MA's), (42, 6962), (44, 6968), (59, 7040), (63, 7055), (68, 7073), (71, 7088), (83, 7133), (85, 7142),

Gene: Pterodactyl_8 Start: 6897, Stop: 7235, Start Num: 33

Candidate Starts for Pterodactyl_8:

(Start: 33 @6897 has 222 MA's), (45, 6930), (109, 7194),

Gene: Pumancara_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Pumancara_8:

(2, 6493), (11, 6673), (12, 6679), (Start: 33 @6925 has 222 MA's), (54, 6997), (101, 7183), (114, 7243),

Gene: QMacho_10 Start: 7806, Stop: 8135, Start Num: 33

Candidate Starts for QMacho_10:

(13, 7566), (23, 7710), (Start: 33 @7806 has 222 MA's), (40, 7821), (60, 7905), (100, 8058), (110, 8103), (112, 8109),

Gene: Quenya_10 Start: 7452, Stop: 7781, Start Num: 33

Candidate Starts for Quenya_10:

(1, 7023), (6, 7155), (Start: 33 @7452 has 222 MA's), (40, 7467), (51, 7503), (75, 7602), (93, 7674), (105, 7722), (107, 7737),

Gene: RAP15_12 Start: 9820, Stop: 10158, Start Num: 33

Candidate Starts for RAP15_12:

(18, 9655), (Start: 33 @9820 has 222 MA's), (85, 10006), (103, 10087), (109, 10117),

Gene: Rattail_9 Start: 7363, Stop: 7701, Start Num: 32

Candidate Starts for Rattail_9:

(Start: 32 @7363 has 44 MA's), (47, 7408), (53, 7432), (64, 7474), (68, 7489), (81, 7534), (82, 7540), (89, 7573), (100, 7621), (105, 7639),

Gene: RcigaStruga_12 Start: 9803, Stop: 10141, Start Num: 33

Candidate Starts for RcigaStruga_12:

(Start: 33 @9803 has 222 MA's), (42, 9827), (86, 9992), (103, 10070), (109, 10100), (114, 10121),

Gene: RedFox_9 Start: 7312, Stop: 7650, Start Num: 32

Candidate Starts for RedFox_9:

(7, 7018), (15, 7105), (20, 7189), (27, 7273), (Start: 32 @7312 has 44 MA's), (47, 7357), (53, 7381), (64, 7423), (68, 7438), (81, 7483), (82, 7489), (89, 7522), (100, 7570), (105, 7588),

Gene: Renna12_10 Start: 7512, Stop: 7850, Start Num: 32

Candidate Starts for Renna12_10:

(20, 7389), (22, 7413), (Start: 32 @7512 has 44 MA's), (53, 7581), (64, 7623), (68, 7638), (81, 7683), (89, 7722), (90, 7725), (92, 7734), (97, 7758), (100, 7770), (105, 7788),

Gene: Riovina_8 Start: 6923, Stop: 7261, Start Num: 33

Candidate Starts for Riovina_8:

(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: Riverdale_12 Start: 9751, Stop: 10089, Start Num: 33

Candidate Starts for Riverdale_12:

(Start: 33 @9751 has 222 MA's), (85, 9937), (103, 10018), (109, 10048),

Gene: Rollins_8 Start: 7153, Stop: 7485, Start Num: 33

Candidate Starts for Rollins_8:

(6, 6856), (Start: 33 @7153 has 222 MA's), (39, 7165), (40, 7168), (50, 7204), (54, 7225), (55, 7228), (82, 7327), (100, 7408),

Gene: Rona_9 Start: 7553, Stop: 7882, Start Num: 33

Candidate Starts for Rona_9:

(6, 7256), (23, 7457), (Start: 31 @7550 has 1 MA's), (Start: 33 @7553 has 222 MA's), (40, 7568), (55, 7625), (74, 7700), (93, 7775), (100, 7805), (110, 7850),

Gene: Rowa_9 Start: 7020, Stop: 7364, Start Num: 33

Candidate Starts for Rowa_9:

(Start: 33 @7020 has 222 MA's), (67, 7143), (117, 7353),

Gene: Rozby_12 Start: 9751, Stop: 10089, Start Num: 33

Candidate Starts for Rozby_12:

(Start: 33 @9751 has 222 MA's), (85, 9937), (103, 10018), (109, 10048),

Gene: Ruchi_10 Start: 7974, Stop: 8336, Start Num: 32

Candidate Starts for Ruchi_10:

(19, 7842), (Start: 32 @7974 has 44 MA's), (42, 8001), (59, 8070), (61, 8079), (76, 8136), (81, 8166), (85, 8184), (88, 8202), (91, 8211), (104, 8271),

Gene: SamW_9 Start: 6861, Stop: 7205, Start Num: 37

Candidate Starts for SamW_9:

(8, 6570), (Start: 37 @6861 has 8 MA's), (55, 6927), (63, 6960), (68, 6978), (70, 6990), (85, 7047), (97, 7110), (109, 7164), (114, 7185), (116, 7191),

Gene: Samba_9 Start: 6960, Stop: 7322, Start Num: 33

Candidate Starts for Samba_9:

(28, 6933), (Start: 33 @6960 has 222 MA's), (41, 6984), (49, 7008), (55, 7038), (63, 7071), (68, 7089), (83, 7149),

Gene: SanaSana_10 Start: 7567, Stop: 7896, Start Num: 33

Candidate Starts for SanaSana_10:

(6, 7270), (Start: 31 @7564 has 1 MA's), (Start: 33 @7567 has 222 MA's), (40, 7582), (93, 7789), (100, 7819), (110, 7864),

Gene: SansAfet_9 Start: 7336, Stop: 7665, Start Num: 33

Candidate Starts for SansAfet_9:

(Start: 33 @7336 has 222 MA's), (40, 7351), (100, 7588), (110, 7633),

Gene: Sapo_7 Start: 6047, Stop: 6409, Start Num: 35

Candidate Starts for Sapo_7:

(Start: 35 @6047 has 4 MA's), (41, 6068), (102, 6332),

Gene: SarBear_9 Start: 7299, Stop: 7628, Start Num: 33

Candidate Starts for SarBear_9:

(13, 7059), (23, 7203), (Start: 33 @7299 has 222 MA's), (40, 7314), (60, 7398), (61, 7401), (93, 7521), (100, 7551), (102, 7560), (110, 7596),

Gene: Savage2526_12 Start: 9814, Stop: 10152, Start Num: 33

Candidate Starts for Savage2526_12:

(18, 9649), (Start: 33 @9814 has 222 MA's), (85, 10000), (103, 10081), (109, 10111),

Gene: Schmidt_11 Start: 7862, Stop: 8224, Start Num: 33

Candidate Starts for Schmidt_11:

(Start: 33 @7862 has 222 MA's), (44, 7895), (59, 7964), (63, 7979), (66, 7991), (68, 7997), (77, 8036), (87, 8078), (94, 8108), (100, 8135), (103, 8147), (108, 8183), (110, 8192),

Gene: Scuttle_12 Start: 9820, Stop: 10158, Start Num: 33

Candidate Starts for Scuttle_12:

(18, 9655), (Start: 33 @9820 has 222 MA's), (85, 10006), (103, 10087), (109, 10117),

Gene: Sergei_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Sergei_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: Sharkboy_9 Start: 7552, Stop: 7881, Start Num: 33

Candidate Starts for Sharkboy_9:

(6, 7255), (23, 7456), (Start: 31 @7549 has 1 MA's), (Start: 33 @7552 has 222 MA's), (40, 7567), (55, 7624), (74, 7699), (93, 7774), (100, 7804), (110, 7849),

Gene: Shayna_8 Start: 7158, Stop: 7490, Start Num: 33

Candidate Starts for Shayna_8:

(23, 7062), (Start: 33 @7158 has 222 MA's), (40, 7176), (54, 7230), (56, 7236), (65, 7272), (97, 7401), (110, 7458),

Gene: Shen_11 Start: 7899, Stop: 8240, Start Num: 32

Candidate Starts for Shen_11:

(Start: 32 @7899 has 44 MA's), (Start: 35 @7902 has 4 MA's), (47, 7944), (62, 8007), (64, 8010), (68, 8025), (94, 8133), (100, 8160), (110, 8211),

Gene: SirBeanington_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for SirBeanington_9:

(13, 7085), (23, 7229), (Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622), (112, 7628),

Gene: Skylord_8 Start: 7093, Stop: 7425, Start Num: 33

Candidate Starts for Skylord_8:

(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168), (82, 7267), (100, 7348),

Gene: Slay_9 Start: 7775, Stop: 8104, Start Num: 33

Candidate Starts for Slay_9:

(13, 7535), (23, 7679), (Start: 33 @7775 has 222 MA's), (40, 7790), (60, 7874), (61, 7877), (93, 7997), (100, 8027), (102, 8036), (110, 8072),

Gene: Softsoap_9 Start: 7325, Stop: 7654, Start Num: 33

Candidate Starts for Softsoap_9:

(Start: 33 @7325 has 222 MA's), (40, 7340), (100, 7577), (110, 7622),

Gene: Soilmate_9 Start: 6858, Stop: 7220, Start Num: 33

Candidate Starts for Soilmate_9:

(4, 6522), (Start: 33 @6858 has 222 MA's), (41, 6882), (49, 6906), (55, 6936), (63, 6969), (68, 6987), (83, 7047),

Gene: Solea_10 Start: 7711, Stop: 8040, Start Num: 33
Candidate Starts for Solea_10:
(Start: 33 @7711 has 222 MA's), (40, 7726), (100, 7963), (110, 8008),

Gene: Splinter_13 Start: 9406, Stop: 9765, Start Num: 33
Candidate Starts for Splinter_13:
(Start: 33 @9406 has 222 MA's), (42, 9433), (44, 9439), (55, 9481), (66, 9532), (78, 9580), (103, 9688),
(108, 9724),

Gene: Squiracle_9 Start: 7555, Stop: 7884, Start Num: 33
Candidate Starts for Squiracle_9:
(Start: 33 @7555 has 222 MA's), (40, 7570), (50, 7603), (52, 7609), (56, 7630), (82, 7726), (100, 7807),
(107, 7840),

Gene: StAB_9 Start: 6866, Stop: 7210, Start Num: 37
Candidate Starts for StAB_9:
(8, 6575), (Start: 37 @6866 has 8 MA's), (55, 6932), (63, 6965), (68, 6983), (70, 6995), (85, 7052), (95,
7106), (97, 7115), (109, 7169), (114, 7190), (116, 7196),

Gene: Stiles_9 Start: 6860, Stop: 7204, Start Num: 37
Candidate Starts for Stiles_9:
(8, 6569), (Start: 37 @6860 has 8 MA's), (55, 6926), (68, 6977), (70, 6989), (85, 7046), (95, 7100), (97,
7109), (109, 7163), (114, 7184), (116, 7190),

Gene: Stoor_9 Start: 7564, Stop: 7893, Start Num: 33
Candidate Starts for Stoor_9:
(6, 7267), (Start: 31 @7561 has 1 MA's), (Start: 33 @7564 has 222 MA's), (40, 7579), (93, 7786), (100,
7816), (110, 7861),

Gene: Stromboli_9 Start: 7565, Stop: 7894, Start Num: 33
Candidate Starts for Stromboli_9:
(Start: 31 @7562 has 1 MA's), (Start: 33 @7565 has 222 MA's), (40, 7580), (93, 7787), (94, 7790),
(100, 7817), (110, 7862),

Gene: StuartMinion_9 Start: 7338, Stop: 7676, Start Num: 32
Candidate Starts for StuartMinion_9:
(20, 7215), (24, 7263), (Start: 32 @7338 has 44 MA's), (53, 7407), (62, 7446), (64, 7449), (68, 7464),
(89, 7548), (100, 7596), (115, 7662),

Gene: SunnyD_8 Start: 7158, Stop: 7490, Start Num: 33
Candidate Starts for SunnyD_8:
(23, 7062), (Start: 33 @7158 has 222 MA's), (40, 7176), (54, 7230), (56, 7236), (65, 7272), (97, 7401),
(110, 7458),

Gene: Supakev_8 Start: 6925, Stop: 7263, Start Num: 33
Candidate Starts for Supakev_8:
(2, 6493), (11, 6673), (12, 6679), (Start: 33 @6925 has 222 MA's), (54, 6997), (101, 7183), (114, 7243),

Gene: Suppi_12 Start: 9837, Stop: 10175, Start Num: 33
Candidate Starts for Suppi_12:
(Start: 33 @9837 has 222 MA's), (45, 9870),

Gene: Swervy_9 Start: 7299, Stop: 7628, Start Num: 33

Candidate Starts for Swervy_9:

(13, 7059), (23, 7203), (Start: 33 @7299 has 222 MA's), (40, 7314), (60, 7398), (61, 7401), (93, 7521), (100, 7551), (102, 7560), (110, 7596),

Gene: TZGordon_15 Start: 9548, Stop: 9907, Start Num: 33

Candidate Starts for TZGordon_15:

(Start: 33 @9548 has 222 MA's), (42, 9575), (44, 9581), (55, 9623), (66, 9674), (78, 9722), (100, 9818), (103, 9830), (108, 9866),

Gene: TattModd_12 Start: 9814, Stop: 10152, Start Num: 33

Candidate Starts for TattModd_12:

(Start: 33 @9814 has 222 MA's), (85, 10000), (103, 10081), (109, 10111),

Gene: TaylorSipt_10 Start: 7777, Stop: 8118, Start Num: 32

Candidate Starts for TaylorSipt_10:

(11, 7525), (14, 7570), (23, 7684), (Start: 32 @7777 has 44 MA's), (Start: 35 @7780 has 4 MA's), (68, 7903), (74, 7930), (79, 7945), (94, 8011), (100, 8038), (104, 8053), (110, 8089),

Gene: Teagster_8 Start: 7158, Stop: 7490, Start Num: 33

Candidate Starts for Teagster_8:

(Start: 33 @7158 has 222 MA's), (40, 7176), (54, 7230), (56, 7236), (65, 7272), (97, 7401), (110, 7458),

Gene: Temper16_8 Start: 6925, Stop: 7263, Start Num: 33

Candidate Starts for Temper16_8:

(Start: 33 @6925 has 222 MA's), (54, 6997), (84, 7108), (101, 7183), (103, 7192), (114, 7243),

Gene: TinaLin_16 Start: 10120, Stop: 10479, Start Num: 33

Candidate Starts for TinaLin_16:

(Start: 33 @10120 has 222 MA's), (44, 10153), (49, 10168), (60, 10225), (66, 10246), (78, 10294), (79, 10297), (87, 10333), (98, 10384), (99, 10387), (100, 10390), (106, 10423), (113, 10456),

Gene: Toad24_11 Start: 7899, Stop: 8240, Start Num: 32

Candidate Starts for Toad24_11:

(Start: 32 @7899 has 44 MA's), (Start: 35 @7902 has 4 MA's), (47, 7944), (62, 8007), (64, 8010), (68, 8025), (94, 8133), (100, 8160), (110, 8211),

Gene: Toast_9 Start: 6937, Stop: 7305, Start Num: 33

Candidate Starts for Toast_9:

(4, 6607), (Start: 33 @6937 has 222 MA's), (42, 6961), (44, 6967), (59, 7039), (63, 7054), (68, 7072), (83, 7132), (85, 7141),

Gene: Troy_9 Start: 6861, Stop: 7205, Start Num: 37

Candidate Starts for Troy_9:

(8, 6570), (Start: 37 @6861 has 8 MA's), (55, 6927), (63, 6960), (68, 6978), (70, 6990), (85, 7047), (97, 7110), (109, 7164), (114, 7185), (116, 7191),

Gene: TukTuk_9 Start: 7299, Stop: 7628, Start Num: 33

Candidate Starts for TukTuk_9:

(23, 7203), (Start: 33 @7299 has 222 MA's), (40, 7314), (60, 7398), (100, 7551), (110, 7596), (112, 7602),

Gene: UmaThurman_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for UmaThurman_9:

(28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (49, 7007), (55, 7037), (63, 7070), (68, 7088), (83, 7148),

Gene: Urla_8 Start: 6952, Stop: 7290, Start Num: 33

Candidate Starts for Urla_8:

(Start: 33 @6952 has 222 MA's), (50, 7003), (62, 7060), (109, 7249),

Gene: Utz_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Utz_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (46, 7001), (49, 7007), (55, 7037), (68, 7088), (83, 7148),

Gene: Vallejo_12 Start: 9752, Stop: 10090, Start Num: 33

Candidate Starts for Vallejo_12:

(Start: 33 @9752 has 222 MA's), (85, 9938), (109, 10049),

Gene: Vendetta_13 Start: 9406, Stop: 9765, Start Num: 33

Candidate Starts for Vendetta_13:

(Start: 33 @9406 has 222 MA's), (42, 9433), (44, 9439), (55, 9481), (66, 9532), (78, 9580), (103, 9688), (108, 9724),

Gene: Vitas_8 Start: 7093, Stop: 7425, Start Num: 33

Candidate Starts for Vitas_8:

(6, 6796), (Start: 33 @7093 has 222 MA's), (39, 7105), (40, 7108), (50, 7144), (54, 7165), (55, 7168), (82, 7267), (100, 7348),

Gene: Vulpecula_10 Start: 8050, Stop: 8412, Start Num: 32

Candidate Starts for Vulpecula_10:

(19, 7918), (Start: 32 @8050 has 44 MA's), (Start: 35 @8053 has 4 MA's), (42, 8077), (59, 8146), (61, 8155), (74, 8203), (81, 8242), (88, 8278), (91, 8287), (104, 8347),

Gene: Vulture_8 Start: 6923, Stop: 7261, Start Num: 33

Candidate Starts for Vulture_8:

(Start: 33 @6923 has 222 MA's), (45, 6956), (54, 6995), (75, 7076), (101, 7181), (103, 7190),

Gene: WalkingDead_9 Start: 7553, Stop: 7882, Start Num: 33

Candidate Starts for WalkingDead_9:

(6, 7256), (Start: 31 @7550 has 1 MA's), (Start: 33 @7553 has 222 MA's), (40, 7568), (94, 7778), (100, 7805), (102, 7814), (110, 7850),

Gene: Walrus_9 Start: 6871, Stop: 7242, Start Num: 33

Candidate Starts for Walrus_9:

(Start: 33 @6871 has 222 MA's), (41, 6895), (68, 7009), (83, 7069),

Gene: Wawa_12 Start: 9789, Stop: 10127, Start Num: 33

Candidate Starts for Wawa_12:

(Start: 33 @9789 has 222 MA's), (69, 9921), (85, 9975), (103, 10056), (109, 10086),

Gene: Wayne_12 Start: 9883, Stop: 10221, Start Num: 33

Candidate Starts for Wayne_12:

(Start: 33 @9883 has 222 MA's), (45, 9916),

Gene: Westrich_11 Start: 7887, Stop: 8228, Start Num: 32

Candidate Starts for Westrich_11:

(Start: 32 @7887 has 44 MA's), (Start: 35 @7890 has 4 MA's), (47, 7932), (62, 7995), (64, 7998), (68, 8013), (94, 8121), (100, 8148), (110, 8199),

Gene: WileyE_9 Start: 7385, Stop: 7747, Start Num: 32

Candidate Starts for WileyE_9:

(19, 7253), (Start: 32 @7385 has 44 MA's), (42, 7412), (59, 7481), (61, 7490), (76, 7547), (81, 7577), (85, 7595), (88, 7613), (91, 7622), (104, 7682),

Gene: William_9 Start: 6952, Stop: 7320, Start Num: 33

Candidate Starts for William_9:

(Start: 33 @6952 has 222 MA's), (42, 6976), (44, 6982), (59, 7054), (63, 7069), (68, 7087), (71, 7102), (83, 7147), (85, 7156),

Gene: Wisp_9 Start: 6959, Stop: 7321, Start Num: 33

Candidate Starts for Wisp_9:

(4, 6623), (28, 6932), (Start: 33 @6959 has 222 MA's), (41, 6983), (49, 7007), (55, 7037), (63, 7070), (68, 7088), (83, 7148),

Gene: Wocket_10 Start: 7236, Stop: 7598, Start Num: 33

Candidate Starts for Wocket_10:

(10, 6972), (Start: 33 @7236 has 222 MA's), (41, 7260), (49, 7284), (55, 7314), (63, 7347), (68, 7365), (83, 7425), (90, 7464), (100, 7509),

Gene: WonderBoy_8 Start: 6905, Stop: 7243, Start Num: 33

Candidate Starts for WonderBoy_8:

(Start: 33 @6905 has 222 MA's), (45, 6938), (62, 7013), (109, 7202),

Gene: Zarbodnamra_9 Start: 6958, Stop: 7320, Start Num: 33

Candidate Starts for Zarbodnamra_9:

(4, 6622), (28, 6931), (Start: 33 @6958 has 222 MA's), (41, 6982), (46, 7000), (49, 7006), (55, 7036), (68, 7087), (83, 7147),

Gene: Zhuangyuan_11 Start: 8069, Stop: 8407, Start Num: 32

Candidate Starts for Zhuangyuan_11:

(27, 8030), (Start: 32 @8069 has 44 MA's), (47, 8114), (62, 8177), (68, 8195), (100, 8327), (110, 8378),

Gene: ZiggyZoo_9 Start: 6983, Stop: 7345, Start Num: 33

Candidate Starts for ZiggyZoo_9:

(4, 6647), (28, 6956), (Start: 33 @6983 has 222 MA's), (41, 7007), (49, 7031), (55, 7061), (63, 7094), (68, 7112), (83, 7172),

Gene: Zilla_9 Start: 7011, Stop: 7373, Start Num: 33

Candidate Starts for Zilla_9:

(28, 6984), (Start: 33 @7011 has 222 MA's), (41, 7035), (49, 7059), (55, 7089), (63, 7122), (68, 7140), (83, 7200),

Gene: Zixiang_10 Start: 7688, Stop: 8029, Start Num: 32

Candidate Starts for Zixiang_10:

(19, 7556), (24, 7613), (30, 7685), (Start: 32 @7688 has 44 MA's), (Start: 35 @7691 has 4 MA's), (47, 7733), (62, 7796), (64, 7799), (68, 7814), (94, 7922), (100, 7949), (104, 7964), (105, 7967), (110, 8000),

Gene: Zorro_12 Start: 9768, Stop: 10106, Start Num: 33

Candidate Starts for Zorro_12:

(Start: 33 @9768 has 222 MA's), (69, 9900), (85, 9954), (103, 10035), (109, 10065),