Pham 290764

1: Chridison_9 + 5
2: RcigaStruga_13 + 1
3: Fluke_13
4: PinkFriday_9
5: Scuttle_13 + 21
6: Oxynfrius_13 + 2
7: CallieOMalley_13 + 4
8: Maria1952_9 + 5
9: Bennie_9 + 3
10: Riovina_9 + 3
11: Christian_9 + 6
12: Greenhouse_13
13: Lennox_9 + 3
14: Kittykat_9 + 1
15: Misaeng_13
16: Lucy_9
17: GreenHearts_13
18: Gisselle_9 + 1
19: Uria_9 + 2
20: Pumancara_9
21: Litotes_13 + 1
22: Nubia_13
23: Graynor_13 + 1
24: Supakev_9
25: ChewChew_9
26: BigMack_9
27: Joann_13
28: Brynnie_11
29: Niblet_11 + 2
30: Vulpecula_11
31: Amanises_12 + 3
32: KendraB23_12 + 1
33: Eesa_11
34: Abidatro_11
35: Ruchi_11
36: Chickaboom_10 + 1
37: Westrich_12 + 1
38: Basilisk_11
39: Jamun_11
40: Galaxy_11
41: TaylorSipht_11
42: OtsoOtso_11 + 3
43: LittleTokyo_11
44: Kuleana_11
45: Amelia_12 + 5
46: Cote_12 + 3
47: Daob_12
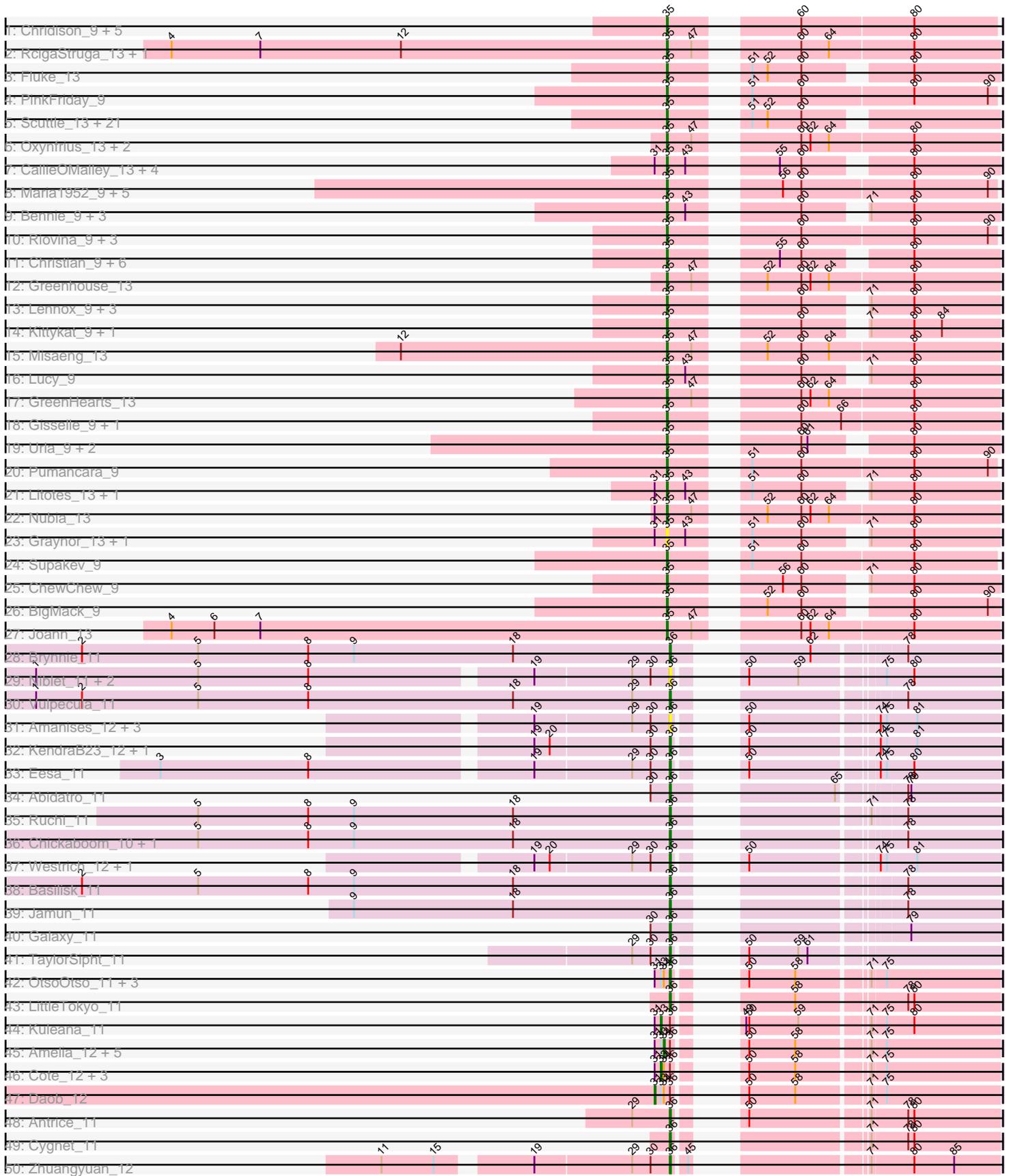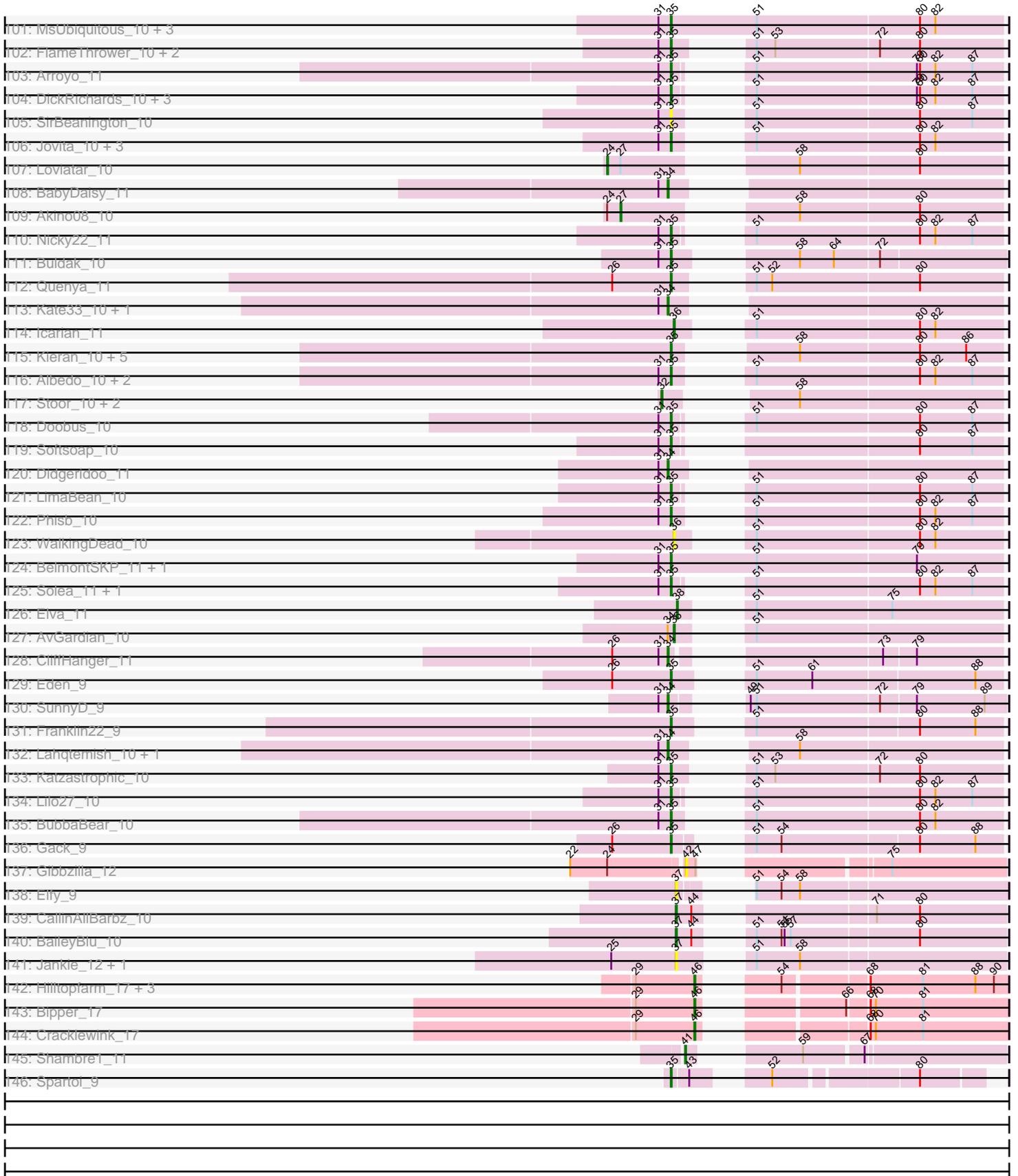48: Antrice_11
49: Cygnet_11
50: Zhuangyuan_12

Pham 290764

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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 290764 Report

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

Pham number 290764 has 311 members, 49 are drafts.

Phages represented in each track:
• Track 1 : Chridison_9, DrRobert_9, Vulture_9, HunterDalle_9, WonderBoy_9, AustinPowers_9
• Track 2 : RcigaStruga_13, Huntingdon_13
• Track 3 : Fluke_13
• Track 4 : PinkFriday_9
• Track 5 : Scuttle_13, Carpal_13, RAP15_13, Dino_13, Wawa_13, Potatoes_13, Cholula_13, Korra_13, Glenn_13, Rozby_13, Vallejo_13, Jumboset_13, TattModd_13, MrGloopy_13, Riverdale_13, Savage2526_13, Immaculata_13, MeganNoll_13, Beethoven_13, Kalizoi_13, BrotherBLo_13, Zorro_13
• Track 6 : Oxynfrius_13, Lakshmi_13, Albanese_13
• Track 7 : CallieOMalley_13, Canowicakte_13, Suppi_13, Wayne_13, AppleCider_13
• Track 8 : Maria1952_9, KingBob_9, Herb_9, Sergei_9, Daiboju_9, Temper16_9
• Track 9 : Bennie_9, HeadNerd_9, Moki_9, Huckleberry_9
• Track 10 : Riovina_9, Eunoia_9, OMalley_9, Aledel_9
• Track 11 : Christian_9, Nancia_9, Bodacious_9, LilStuart_9, Lasagna_9, OurGirlNessie_9, CristinaYang_9
• Track 12 : Greenhouse_13
• Track 13 : Lennox_9, Makoto_9, PitaDog_9, Pterodactyl_9
• Track 14 : Kittykat_9, Preamble_9
• Track 15 : Misaeng_13
• Track 16 : Lucy_9
• Track 17 : GreenHearts_13
• Track 18 : Gisselle_9, DreamTeam_9
• Track 19 : Urla_9, MamaPearl_9, EstebanJulior_9
• Track 20 : Pumancara_9
• Track 21 : Litotes_13, PartyCup_13
• Track 22 : Nubia_13
• Track 23 : Graynor_13, MrBoss_13
• Track 24 : Supakev_9
• Track 25 : ChewChew_9
• Track 26 : BigMack_9
• Track 27 : Joann_13
• Track 28 : Brynnie_11
• Track 29 : Niblet_11, Zixiang_11, Chicken_11
• Track 30 : Vulpecula_11
• Track 31 : Amanises_12, Gravel_12, Pelletreau_12, Shen_12
• Track 32 : KendraB23_12, Toad24_12

- Track 33 : Eesa_11
- Track 34 : Abidatro_11
- Track 35 : Ruchi_11
- Track 36 : Chickaboom_10, WileyE_10
- Track 37 : Westrich_12, Orcanus_11
- Track 38 : Basilisk_11
- Track 39 : Jamun_11
- Track 40 : Galaxy_11
- Track 41 : TaylorSipht_11
- Track 42 : OtsoOtso_11, Bibble12_12, PhirstandPhine_12, Pineda_12
- Track 43 : LittleTokyo_11
- Track 44 : Kuleana_11
- Track 45 : Amelia_12, Bedetta_12, Lunar_12, Colusalem_11, Jerole_12, HannahPhantana_12
- Track 46 : Cote_12, Coral_11, Melons_12, Polka_11
- Track 47 : Daob_12
- Track 48 : Antrice_11
- Track 49 : Cygnet_11
- Track 50 : Zhuangyuan_12
- Track 51 : Kepler_11
- Track 52 : Amphitrite_10, HamCheese_10, PhluffyCoco_10, Laphuphu24k_10, DanHam62_10, AdoptaAdorbs_10, Camara_10, RedFox_10
- Track 53 : Glotell_10, KHumphrey_10
- Track 54 : Fingolfin_10, Oppalora_10, Juno112_10, AmiCi24_10, Atlantica_10
- Track 55 : StuartMinion_10, AlexMinion_10
- Track 56 : Leona_10, Azaz_10, Rattail_10
- Track 57 : Babushka_10
- Track 58 : Renna12_11
- Track 59 : Andrew_11
- Track 60 : PHL060L00_09, Lauchelly_9
- Track 61 : BruceLethal_9
- Track 62 : P14.4_9, PHL071N05_09, P108C_9, Enochoraptor_9, Pirate_9, Aquarius_9
- Track 63 : P106M_9, P106I_9, P106L_9, P106C_9, P106A_9
- Track 64 : P101A_9, P100.1_9, DrParker_9, P105_9
- Track 65 : Enoki_9, PAS50_9, P100D_9, PHL067M10_09
- Track 66 : Cota_9, Keiki_9
- Track 67 : Wizzo_9
- Track 68 : P104B_9, LilBandit_9
- Track 69 : PHL111M01_09, P9.1_9
- Track 70 : SKKY_9
- Track 71 : PHL010M04_09
- Track 72 : Attacne_9
- Track 73 : MrAK_9
- Track 74 : Supernova_9
- Track 75 : P107A_9
- Track 76 : Solid_9, P104A_9, Procrass1_9, MEAK_9
- Track 77 : PHL113M01_09
- Track 78 : Kubed_9, PHL112N00_09
- Track 79 : PHL114L00_09
- Track 80 : P100A_9
- Track 81 : Ouroboros_9
- Track 82 : P107C_9, ATCC29399BC_9

- Track 83 : ATCC29399BT_9
- Track 84 : QueenBey_9
- Track 85 : P1.1_9
- Track 86 : Stormborn_9
- Track 87 : Rileysaurus_9
- Track 88 : Moyashi_9
- Track 89 : Leviosa_9
- Track 90 : PA6_9
- Track 91 : PHL037M02_09
- Track 92 : PAD20_9
- Track 93 : Swervy_10, AylexOG_11, Slay_10, Finalfrontier_11, SarBear_10
- Track 94 : DirtyBubble_10, Stromboli_10, BabyYoda_10
- Track 95 : Teagster_9, Shayna_9
- Track 96 : Olliecat_10, Squircle_10
- Track 97 : BAjuniper_10
- Track 98 : Vitas_9, Clayda5_9, Brahms_9, Bernstein_9, Rollins_9, Coltrane_9, Armstrong_9, Skylord_9
- Track 99 : Cashington_10
- Track 100 : Abigail_10, Burritobowl_10, Albright_10, Johnathan_10, Avocadoman_10, Bengal_10
- Track 101 : MsUbiquitous_10, CupcakePrincess_10, TukTuk_10, Jabb_10
- Track 102 : FlameThrower_10, Bachaco_10, Celaena_10
- Track 103 : Arroyo_11
- Track 104 : DickRichards_10, PhigPhack_10, CroZenni_10, SansAfet_10
- Track 105 : SirBeanington_10
- Track 106 : Jovita_10, QMacho_11, Pecas_10, Eula_10
- Track 107 : Loviatar_10
- Track 108 : BabyDaisy_11
- Track 109 : Akino08_10
- Track 110 : Nicky22_11
- Track 111 : Buldak_10
- Track 112 : Quenya_11
- Track 113 : Kate33_10, IndyLu_10
- Track 114 : Icarian_11
- Track 115 : Kieran_10, ChiliPepper_10, Kamdara_10, Sharkboy_10, Dismas_10, Rona_10
- Track 116 : Albedo_10, Kenzers_10, Lynlen_10
- Track 117 : Stoor_10, PondAmelia_13, SanaSana_11
- Track 118 : Doobus_10
- Track 119 : Softsoap_10
- Track 120 : Didgeridoo_11
- Track 121 : LimaBean_10
- Track 122 : Phisb_10
- Track 123 : WalkingDead_10
- Track 124 : BelmontSKP_11, AnnaLie_11
- Track 125 : Solea_11, Milomuff_11
- Track 126 : Elva_11
- Track 127 : AvGardian_10
- Track 128 : CliffHanger_11
- Track 129 : Eden_9
- Track 130 : SunnyD_9
- Track 131 : Franklin22_9
- Track 132 : Lahqtemish_10, PastaFagioli_10

- Track 133 : Katzastrophic_10
- Track 134 : Lilo27_10
- Track 135 : BubbaBear_10
- Track 136 : Gack_9
- Track 137 : Gibbzilla_12
- Track 138 : Elfy_9
- Track 139 : CallinAllBarbz_10
- Track 140 : BaileyBlu_10
- Track 141 : Jankie_12, GrimEater_11
- Track 142 : Hilltopfarm_17, Faiyaz_17, AuntGwenStacy_17, Typha_17
- Track 143 : Bipper_17
- Track 144 : Cracklewink_17
- Track 145 : Shambre1_11
- Track 146 : Spartoi_9

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

The start number called the most often in the published annotations is 35, it was called in 185 of the 262 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- ATCC29399BC_9, ATCC29399BT_9, Abigail_10, Albanese_13, Albedo_10, Albright_10, Aledel_9, AnnaLie_11, AppleCider_13, Aquarius_9, Armstrong_9, Arroyo_11, Attacne_9, AustinPowers_9, Avocadoman_10, Bachaco_10, Beethoven_13, BelmontSKP_11, Bengal_10, Bennie_9, Bernstein_9, BigMack_9, Bodacious_9, Brahms_9, BrotherBLo_13, BruceLethal_9, BubbaBear_10, Buldak_10, Burritobowl_10, CallieOMalley_13, Canowicakte_13, Carpal_13, Cashington_10, Celaena_10, ChewChew_9, ChiliPepper_10, Cholula_13, Chridison_9, Christian_9, Clayda5_9, Coltrane_9, Cota_9, CristinaYang_9, CroZenni_10, CupcakePrincess_10, Daiboju_9, DickRichards_10, Dino_13, Dismas_10, Doobus_10, DrParker_9, DrRobert_9, DreamTeam_9, Eden_9, Enochoraptor_9, Enoki_9, EstebanJulior_9, Eula_10, Eunoia_9, FlameThrower_10, Fluke_13, Franklin22_9, Gack_9, Gisselle_9, Glenn_13, Graynor_13, GreenHearts_13, Greenhouse_13, HeadNerd_9, Herb_9, Huckleberry_9, HunterDalle_9, Huntingdon_13, Immaculata_13, Jabb_10, Joann_13, Johnathan_10, Jovita_10, Jumboset_13, Kalizoi_13, Kamdara_10, Katzastrophic_10, Keiki_9, Kenzers_10, Kieran_10, KingBob_9, Kittykat_9, Korra_13, Kubed_9, Lakshmi_13, Lasagna_9, Lauchelly_9, Lennox_9, Leviosa_9, LilBandit_9, LilStuart_9, Lilo27_10, LimaBean_10, Litotes_13, Lucy_9, Lynlen_10, MEAK_9, Makoto_9, MamaPearl_9, Maria1952_9, MeganNoll_13, Milomuff_11, Misaeng_13, Moki_9, Moyashi_9, MrAK_9, MrBoss_13, MrGloopy_13, MsUbiquitous_10, Nancia_9, Nicky22_11, Nubia_13, OMalley_9, Olliecat_10, OurGirlNessie_9, Ouroboros_9, Oxynfrius_13, P1.1_9, P100.1_9, P100A_9, P100D_9, P101A_9, P104A_9, P104B_9, P105_9, P106A_9, P106C_9, P106I_9, P106L_9, P106M_9, P107A_9, P107C_9, P108C_9, P14.4_9, P9.1_9, PA6_9, PAD20_9, PAS50_9, PHL010M04_09, PHL060L00_09, PHL067M10_09, PHL071N05_09, PHL111M01_09, PHL112N00_09, PHL113M01_09, PHL114L00_09, PartyCup_13, Pecas_10, PhigPhack_10, Phisb_10, PinkFriday_9, Pirate_9, PitaDog_9, Potatoes_13, Preamble_9, Procrass1_9, Pterodactyl_9, Pumancara_9, QMacho_11, QueenBey_9, Quenya_11, RAP15_13, RcigaStruga_13, Rileysaurus_9, Riovina_9, Riverdale_13, Rollins_9, Rona_10, Rozby_13, SKKY_9, SansAfet_10,

Savage2526_13, Scuttle_13, Sergei_9, Sharkboy_10, SirBeanington_10, Skylord_9, Softsoap_10, Solea_11, Solid_9, Spartoi_9, Squircle_10, Stormborn_9, Supakev_9, Supernova_9, Suppi_13, TattModd_13, Temper16_9, TukTuk_10, Urla_9, Vallejo_13, Vitas_9, Vulture_9, Wawa_13, Wayne_13, Wizzo_9, WonderBoy_9, Zorro_13,

Genes that have the "Most Annotated" start but do not call it:
• PHL037M02_09,

Genes that do not have the "Most Annotated" start:
• Abidatro_11, AdoptaAdorbs_10, Akino08_10, AlexMinion_10, Amanises_12, Amelia_12, AmiCi24_10, Amphitrite_10, Andrew_11, Antrice_11, Atlantica_10, AuntGwenStacy_17, AvGardian_10, AylexOG_11, Azaz_10, BAjuniper_10, Babushka_10, BabyDaisy_11, BabyYoda_10, BaileyBlu_10, Basilisk_11, Bedetta_12, Bibble12_12, Bipper_17, Brynnie_11, CallinAllBarbz_10, Camara_10, Chickaboom_10, Chicken_11, CliffHanger_11, Colusalem_11, Coral_11, Cote_12, Cracklewink_17, Cygnet_11, DanHam62_10, Daob_12, Didgeridoo_11, DirtyBubble_10, Eesa_11, Elfy_9, Elva_11, Faiyaz_17, Finalfrontier_11, Fingolfin_10, Galaxy_11, Gibbzilla_12, Glotell_10, Gravel_12, GrimEater_11, HamCheese_10, HannahPhantana_12, Hilltopfarm_17, Icarian_11, IndyLu_10, Jamun_11, Jankie_12, Jerole_12, Juno112_10, KHumphrey_10, Kate33_10, KendraB23_12, Kepler_11, Kuleana_11, Lahqtemish_10, Laphuphu24k_10, Leona_10, LittleTokyo_11, Loviatar_10, Lunar_12, Melons_12, Niblet_11, Oppalora_10, Orcanus_11, OtsoOtso_11, PastaFagioli_10, Pelletreau_12, PhirstandPhine_12, PhluffyCoco_10, Pineda_12, Polka_11, PondAmelia_13, Rattail_10, RedFox_10, Renna12_11, Ruchi_11, SanaSana_11, SarBear_10, Shambre1_11, Shayna_9, Shen_12, Slay_10, Stoor_10, Stromboli_10, StuartMinion_10, SunnyD_9, Swervy_10, TaylorSipht_11, Teagster_9, Toad24_12, Typha_17, Vulpecula_11, WalkingDead_10, Westrich_12, WileyE_10, Zhuangyuan_12, Zixiang_11,

Summary by start number:

Start 24:
• Found in 3 of 311 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 262
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Loviatar_10 (EB),

Start 27:
• Found in 2 of 311 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 262
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Akino08_10 (EB),

Start 31:
• Found in 85 of 311 (27.3%) of genes in pham
• Manual Annotations of this start: 1 of 262
• Called 1.2% of time when present
• Phage (with cluster) where this start called: Daob_12 (AS2),

Start 32:
• Found in 3 of 311 (1.0%) of genes in pham
• Manual Annotations of this start: 2 of 262
• Called 100.0% of time when present

• Phage (with cluster) where this start called: PondAmelia_13 (EB), SanaSana_11 (EB), Stoor_10 (EB),

Start 33:
• Found in 22 of 311 (7.1%) of genes in pham
• Manual Annotations of this start: 6 of 262
• Called 31.8% of time when present
• Phage (with cluster) where this start called: Coral_11 (AS2), Cote_12 (AS2), Kepler_11 (AS2), Kuleana_11 (AS2), Melons_12 (AS2), PHL037M02_09 (BU), Polka_11 (AS2),

Start 34:
• Found in 36 of 311 (11.6%) of genes in pham
• Manual Annotations of this start: 23 of 262
• Called 69.4% of time when present
• Phage (with cluster) where this start called: Amelia_12 (AS2), AylexOG_11 (EB), BAjuniper_10 (EB), BabyDaisy_11 (EB), BabyYoda_10 (EB), Bedetta_12 (AS2), CliffHanger_11 (EB), Colusalem_11 (AS2), Didgeridoo_11 (EB), DirtyBubble_10 (EB), Finalfrontier_11 (EB), HannahPhantana_12 (AS2), IndyLu_10 (EB), Jerole_12 (AS2), Kate33_10 (EB), Lahqtemish_10 (EB), Lunar_12 (AS2), PastaFagioli_10 (EB), SarBear_10 (EB), Shayna_9 (EB), Slay_10 (EB), Stromboli_10 (EB), SunnyD_9 (EB), Swervy_10 (EB), Teagster_9 (EB),

Start 35:
• Found in 204 of 311 (65.6%) of genes in pham
• Manual Annotations of this start: 185 of 262
• Called 99.5% of time when present
• Phage (with cluster) where this start called: ATCC29399BC_9 (BU), ATCC29399BT_9 (BU), Abigail_10 (EB), Albanese_13 (AK), Albedo_10 (EB), Albright_10 (EB), Aledel_9 (AK), AnnaLie_11 (EB), AppleCider_13 (AK), Aquarius_9 (BU), Armstrong_9 (EB), Arroyo_11 (EB), Attacne_9 (BU), AustinPowers_9 (AK), Avocadoman_10 (EB), Bachaco_10 (EB), Beethoven_13 (AK), BelmontSKP_11 (EB), Bengal_10 (EB), Bennie_9 (AK), Bernstein_9 (EB), BigMack_9 (AK), Bodacious_9 (AK), Brahms_9 (EB), BrotherBLo_13 (AK), BruceLethal_9 (BU), BubbaBear_10 (EB), Buldak_10 (EB), Burritobowl_10 (EB), CallieOMalley_13 (AK), Canowicakte_13 (AK), Carpal_13 (AK), Cashington_10 (EB), Celaena_10 (EB), ChewChew_9 (AK), ChiliPepper_10 (EB), Cholula_13 (AK), Chridison_9 (AK), Christian_9 (AK), Clayda5_9 (EB), Coltrane_9 (EB), Cota_9 (BU), CristinaYang_9 (AK), CroZenni_10 (EB), CupcakePrincess_10 (EB), Daiboju_9 (AK), DickRichards_10 (EB), Dino_13 (AK), Dismas_10 (EB), Doobus_10 (EB), DrParker_9 (BU), DrRobert_9 (AK), DreamTeam_9 (AK), Eden_9 (EB), Enochoraptor_9 (BU), Enoki_9 (BU), EstebanJulior_9 (AK), Eula_10 (EB), Eunoia_9 (AK), FlameThrower_10 (EB), Fluke_13 (AK), Franklin22_9 (EB), Gack_9 (EB), Gisselle_9 (AK), Glenn_13 (AK), Graynor_13 (AK), GreenHearts_13 (AK), Greenhouse_13 (AK), HeadNerd_9 (AK), Herb_9 (AK), Huckleberry_9 (AK), HunterDalle_9 (AK), Huntingdon_13 (AK), Immaculata_13 (AK), Jabb_10 (EB), Joann_13 (AK), Johnathan_10 (EB), Jovita_10 (EB), Jumboset_13 (AK), Kalizoi_13 (AK), Kamdara_10 (EB), Katzastrophic_10 (EB), Keiki_9 (BU), Kenzers_10 (EB), Kieran_10 (EB), KingBob_9 (AK), Kittykat_9 (AK), Korra_13 (AK), Kubed_9 (BU), Lakshmi_13 (AK), Lasagna_9 (AK), Lauchelly_9 (BU), Lennox_9 (AK), Leviosa_9 (BU), LilBandit_9 (BU), LilStuart_9 (AK), Lilo27_10 (EB), LimaBean_10 (EB), Litotes_13 (AK), Lucy_9 (AK), Lynlen_10 (EB), MEAK_9 (BU), Makoto_9 (AK), MamaPearl_9 (AK), Maria1952_9 (AK), MeganNoll_13 (AK), Milomuff_11 (EB), Misaeng_13 (AK), Moki_9 (AK), Moyashi_9 (BU), MrAK_9 (BU),

MrBoss_13 (AK), MrGloopy_13 (AK), MsUbiquitous_10 (EB), Nancia_9 (AK), Nicky22_11 (EB), Nubia_13 (AK), OMalley_9 (AK), Olliecat_10 (EB), OurGirlNessie_9 (AK), Ouroboros_9 (BU), Oxynfrius_13 (AK), P1.1_9 (BU), P100.1_9 (BU), P100A_9 (BU), P100D_9 (BU), P101A_9 (BU), P104A_9 (BU), P104B_9 (BU), P105_9 (BU), P106A_9 (BU), P106C_9 (BU), P106I_9 (BU), P106L_9 (BU), P106M_9 (BU), P107A_9 (BU), P107C_9 (BU), P108C_9 (BU), P14.4_9 (BU), P9.1_9 (BU), PA6_9 (BU), PAD20_9 (BU), PAS50_9 (BU), PHL010M04_09 (BU), PHL060L00_09 (BU), PHL067M10_09 (BU), PHL071N05_09 (BU), PHL111M01_09 (BU), PHL112N00_09 (BU), PHL113M01_09 (BU), PHL114L00_09 (BU), PartyCup_13 (AK), Pecas_10 (EB), PhigPhack_10 (EB), Phisb_10 (EB), PinkFriday_9 (AK), Pirate_9 (BU), PitaDog_9 (AK), Potatoes_13 (AK), Preamble_9 (AK), Procrass1_9 (BU), Pterodactyl_9 (AK), Pumancara_9 (AK), QMacho_11 (EB), QueenBey_9 (BU), Quenya_11 (EB), RAP15_13 (AK), RcigaStruga_13 (AK), Rileysaurus_9 (BU), Riovina_9 (AK), Riverdale_13 (AK), Rollins_9 (EB), Rona_10 (EB), Rozby_13 (AK), SKKY_9 (BU), SansAfet_10 (EB), Savage2526_13 (AK), Scuttle_13 (AK), Sergei_9 (AK), Sharkboy_10 (EB), SirBeanington_10 (EB), Skylord_9 (EB), Softsoap_10 (EB), Solea_11 (EB), Solid_9 (BU), Spartoi_9 (singleton), Squircle_10 (EB), Stormborn_9 (BU), Supakev_9 (AK), Supernova_9 (BU), Suppi_13 (AK), TattModd_13 (AK), Temper16_9 (AK), TukTuk_10 (EB), Urla_9 (AK), Vallejo_13 (AK), Vitas_9 (EB), Vulture_9 (AK), Wawa_13 (AK), Wayne_13 (AK), Wizzo_9 (BU), WonderBoy_9 (AK), Zorro_13 (AK),

Start 36:
• Found in 69 of 311 (22.2%) of genes in pham
• Manual Annotations of this start: 34 of 262
• Called 81.2% of time when present
• Phage (with cluster) where this start called: Abidatro_11 (AS1), AdoptaAdorbs_10 (AS3), AlexMinion_10 (AS3), Amanises_12 (AS1), AmiCi24_10 (AS3), Amphitrite_10 (AS3), Andrew_11 (AS3), Antrice_11 (AS2), Atlantica_10 (AS3), AvGardian_10 (EB), Azaz_10 (AS3), Babushka_10 (AS3), Basilisk_11 (AS1), Bibble12_12 (AS2), Brynnie_11 (AS1), Camara_10 (AS3), Chickaboom_10 (AS1), Chicken_11 (AS1), Cygnet_11 (AS2), DanHam62_10 (AS3), Eesa_11 (AS1), Fingolfin_10 (AS3), Galaxy_11 (AS1), Glotell_10 (AS3), Gravel_12 (AS1), HamCheese_10 (AS3), Icarian_11 (EB), Jamun_11 (AS1), Juno112_10 (AS3), KHumphrey_10 (AS3), KendraB23_12 (AS1), Laphuphu24k_10 (AS3), Leona_10 (AS3), LittleTokyo_11 (AS2), Niblet_11 (AS1), Oppalora_10 (AS3), Orcanus_11 (AS1), OtsoOtso_11 (AS2), Pelletreau_12 (AS1), PhirstandPhine_12 (AS2), PhluffyCoco_10 (AS3), Pineda_12 (AS2), Rattail_10 (AS3), RedFox_10 (AS3), Renna12_11 (AS3), Ruchi_11 (AS1), Shen_12 (AS1), StuartMinion_10 (AS3), TaylorSipht_11 (AS1), Toad24_12 (AS1), Vulpecula_11 (AS1), WalkingDead_10 (EB), Westrich_12 (AS1), WileyE_10 (AS1), Zhuangyuan_12 (AS2), Zixiang_11 (AS1),

Start 37:
• Found in 5 of 311 (1.6%) of genes in pham
• Manual Annotations of this start: 2 of 262
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BaileyBlu_10 (FP), CallinAllBarbz_10 (FP), Elfy_9 (FP), GrimEater_11 (FP), Jankie_12 (FP),

Start 38:
• Found in 1 of 311 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 262
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Elva_11 (EB),

Start 41:
• Found in 1 of 311 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 262
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shambre1_11 (singleton),

Start 42:
• Found in 9 of 311 (2.9%) of genes in pham
• No Manual Annotations of this start.
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Gibbzilla_12 (FB),

Start 46:
• Found in 6 of 311 (1.9%) of genes in pham
• Manual Annotations of this start: 5 of 262
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AuntGwenStacy_17 (Y), Bipper_17 (Y), Cracklewink_17 (Y), Faiyaz_17 (Y), Hilltopfarm_17 (Y), Typha_17 (Y),

Summary by clusters:

There are 10 clusters represented in this pham: FP, AS2, AS1, AK, AS3, EB, BU, FB, Y, singleton,

Info for manual annotations of cluster AK:
•Start number 35 was manually annotated 84 times for cluster AK.

Info for manual annotations of cluster AS1:
•Start number 36 was manually annotated 13 times for cluster AS1.

Info for manual annotations of cluster AS2:
•Start number 31 was manually annotated 1 time for cluster AS2.
•Start number 33 was manually annotated 6 times for cluster AS2.
•Start number 34 was manually annotated 5 times for cluster AS2.
•Start number 36 was manually annotated 5 times for cluster AS2.

Info for manual annotations of cluster AS3:
•Start number 36 was manually annotated 14 times for cluster AS3.

Info for manual annotations of cluster BU:
•Start number 35 was manually annotated 45 times for cluster BU.

Info for manual annotations of cluster EB:
•Start number 24 was manually annotated 1 time for cluster EB.
•Start number 27 was manually annotated 1 time for cluster EB.
•Start number 32 was manually annotated 2 times for cluster EB.
•Start number 34 was manually annotated 18 times for cluster EB.
•Start number 35 was manually annotated 55 times for cluster EB.
•Start number 36 was manually annotated 2 times for cluster EB.
•Start number 38 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster FP:
•Start number 37 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster Y:
•Start number 46 was manually annotated 5 times for cluster Y.

Gene Information:

Gene: ATCC29399BC_9 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for ATCC29399BC_9:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (48, 6482), (50, 6500), (51, 6503), (52, 6518), (54, 6527), (55, 6530), (63, 6575), (69, 6617), (74, 6629), (87, 6713),

Gene: ATCC29399BT_9 Start: 6448, Stop: 6738, Start Num: 35
Candidate Starts for ATCC29399BT_9:
(Start: 33 @6442 has 6 MA's), (Start: 35 @6448 has 185 MA's), (43, 6466), (50, 6496), (52, 6514), (54, 6523), (55, 6526), (60, 6547), (69, 6613), (74, 6625), (77, 6649), (87, 6709),

Gene: Abidatro_11 Start: 8071, Stop: 8328, Start Num: 36
Candidate Starts for Abidatro_11:
(30, 8053), (Start: 36 @8071 has 34 MA's), (65, 8185), (78, 8239), (79, 8242),

Gene: Abigail_10 Start: 7773, Stop: 8030, Start Num: 35
Candidate Starts for Abigail_10:
(Start: 31 @7761 has 1 MA's), (Start: 35 @7773 has 185 MA's), (51, 7794), (80, 7950), (87, 8001),

Gene: AdoptaAdorbs_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for AdoptaAdorbs_10:
(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Akino08_10 Start: 7908, Stop: 8216, Start Num: 27
Candidate Starts for Akino08_10:
(Start: 24 @7896 has 1 MA's), (Start: 27 @7908 has 1 MA's), (58, 8022), (80, 8136),

Gene: Albanese_13 Start: 10184, Stop: 10474, Start Num: 35
Candidate Starts for Albanese_13:
(Start: 35 @10184 has 185 MA's), (47, 10208), (60, 10283), (62, 10292), (64, 10310), (80, 10391),

Gene: Albedo_10 Start: 7645, Stop: 7905, Start Num: 35
Candidate Starts for Albedo_10:
(Start: 31 @7633 has 1 MA's), (Start: 35 @7645 has 185 MA's), (51, 7669), (80, 7825), (82, 7840), (87, 7876),

Gene: Albright_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for Albright_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7675), (80, 7831), (87, 7882),

Gene: Aledel_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for Aledel_9:

(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468), (90, 7540),

Gene: AlexMinion_10 Start: 7681, Stop: 7935, Start Num: 36
Candidate Starts for AlexMinion_10:
(10, 7405), (13, 7444), (Start: 36 @7681 has 34 MA's), (59, 7753), (67, 7807), (74, 7819), (75, 7825), (80, 7852),

Gene: Amanises_12 Start: 8245, Stop: 8499, Start Num: 36
Candidate Starts for Amanises_12:
(19, 8116), (29, 8209), (30, 8227), (Start: 36 @8245 has 34 MA's), (50, 8269), (74, 8383), (75, 8389), (81, 8419),

Gene: Amelia_12 Start: 8244, Stop: 8504, Start Num: 34
Candidate Starts for Amelia_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: AmiCi24_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for AmiCi24_10:
(11, 7397), (14, 7421), (16, 7457), (18, 7505), (29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (59, 7727), (61, 7736), (67, 7781), (75, 7799), (80, 7826),

Gene: Amphitrite_10 Start: 7653, Stop: 7907, Start Num: 36
Candidate Starts for Amphitrite_10:
(29, 7617), (Start: 36 @7653 has 34 MA's), (50, 7677), (58, 7722), (61, 7734), (67, 7779), (71, 7785), (75, 7797), (80, 7824),

Gene: Andrew_11 Start: 8034, Stop: 8288, Start Num: 36
Candidate Starts for Andrew_11:
(5, 7596), (8, 7704), (17, 7854), (19, 7905), (21, 7923), (29, 7998), (Start: 36 @8034 has 34 MA's), (50, 8058), (59, 8106), (67, 8160), (71, 8166), (75, 8178), (80, 8205),

Gene: AnnaLie_11 Start: 8000, Stop: 8320, Start Num: 35
Candidate Starts for AnnaLie_11:
(Start: 31 @7988 has 1 MA's), (Start: 35 @8000 has 185 MA's), (51, 8084), (79, 8237),

Gene: Antrice_11 Start: 7990, Stop: 8244, Start Num: 36
Candidate Starts for Antrice_11:
(29, 7954), (Start: 36 @7990 has 34 MA's), (50, 8014), (71, 8122), (78, 8155), (80, 8161),

Gene: AppleCider_13 Start: 10140, Stop: 10409, Start Num: 35
Candidate Starts for AppleCider_13:
(Start: 31 @10128 has 1 MA's), (Start: 35 @10140 has 185 MA's), (43, 10158), (55, 10218), (60, 10239), (80, 10326),

Gene: Aquarius_9 Start: 6442, Stop: 6732, Start Num: 35
Candidate Starts for Aquarius_9:
(Start: 35 @6442 has 185 MA's), (40, 6454), (43, 6460), (48, 6472), (50, 6490), (51, 6493), (52, 6508), (54, 6517), (55, 6520), (63, 6565), (69, 6607), (74, 6619),

Gene: Armstrong_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Armstrong_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: Arroyo_11 Start: 8124, Stop: 8381, Start Num: 35
Candidate Starts for Arroyo_11:
(Start: 31 @8112 has 1 MA's), (Start: 35 @8124 has 185 MA's), (51, 8145), (79, 8298), (80, 8301), (82, 8316), (87, 8352),

Gene: Atlantica_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for Atlantica_10:
(11, 7397), (14, 7421), (16, 7457), (18, 7505), (29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (59, 7727), (61, 7736), (67, 7781), (75, 7799), (80, 7826),

Gene: Attacne_9 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for Attacne_9:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (74, 6630), (77, 6654),

Gene: AuntGwenStacy_17 Start: 11749, Stop: 11997, Start Num: 46
Candidate Starts for AuntGwenStacy_17:
(29, 11692), (Start: 46 @11749 has 5 MA's), (54, 11791), (68, 11866), (81, 11914), (88, 11965), (90, 11983),

Gene: AustinPowers_9 Start: 7262, Stop: 7549, Start Num: 35
Candidate Starts for AustinPowers_9:
(Start: 35 @7262 has 185 MA's), (60, 7361), (80, 7469),

Gene: AvGardian_10 Start: 7705, Stop: 7968, Start Num: 36
Candidate Starts for AvGardian_10:
(Start: 34 @7699 has 23 MA's), (Start: 36 @7705 has 34 MA's), (51, 7732),

Gene: Avocadoman_10 Start: 7712, Stop: 7969, Start Num: 35
Candidate Starts for Avocadoman_10:
(Start: 31 @7700 has 1 MA's), (Start: 35 @7712 has 185 MA's), (51, 7733), (80, 7889), (87, 7940),

Gene: AylexOG_11 Start: 7993, Stop: 8256, Start Num: 34
Candidate Starts for AylexOG_11:
(Start: 31 @7984 has 1 MA's), (Start: 34 @7993 has 23 MA's), (51, 8020), (80, 8176), (82, 8191),

Gene: Azaz_10 Start: 7706, Stop: 7960, Start Num: 36
Candidate Starts for Azaz_10:
(11, 7448), (14, 7472), (16, 7508), (18, 7556), (28, 7664), (29, 7670), (Start: 36 @7706 has 34 MA's), (50, 7730), (59, 7778), (61, 7787), (67, 7832), (75, 7850), (80, 7877),

Gene: BAjuniper_10 Start: 7595, Stop: 7852, Start Num: 34
Candidate Starts for BAjuniper_10:
(Start: 31 @7586 has 1 MA's), (Start: 34 @7595 has 23 MA's), (51, 7616), (79, 7769), (80, 7772), (86, 7817),

Gene: Babushka_10 Start: 7703, Stop: 7957, Start Num: 36
Candidate Starts for Babushka_10:
(11, 7445), (14, 7469), (16, 7505), (18, 7553), (29, 7667), (Start: 36 @7703 has 34 MA's), (50, 7727), (59, 7775), (67, 7829), (75, 7847), (80, 7874),

Gene: BabyDaisy_11 Start: 7870, Stop: 8133, Start Num: 34

Candidate Starts for BabyDaisy_11:
(Start: 31 @7861 has 1 MA's), (Start: 34 @7870 has 23 MA's),

Gene: BabyYoda_10 Start: 7899, Stop: 8162, Start Num: 34
Candidate Starts for BabyYoda_10:
(Start: 34 @7899 has 23 MA's), (39, 7911), (51, 7926), (72, 8043), (80, 8082), (82, 8097),

Gene: Bachaco_10 Start: 7786, Stop: 8049, Start Num: 35
Candidate Starts for Bachaco_10:
(Start: 31 @7774 has 1 MA's), (Start: 35 @7786 has 185 MA's), (51, 7813), (53, 7831), (72, 7930), (80, 7969),

Gene: BaileyBlu_10 Start: 6510, Stop: 6782, Start Num: 37
Candidate Starts for BaileyBlu_10:
(Start: 37 @6510 has 2 MA's), (44, 6525), (51, 6546), (54, 6570), (55, 6573), (57, 6579), (80, 6699),

Gene: Basilisk_11 Start: 8395, Stop: 8652, Start Num: 36
Candidate Starts for Basilisk_11:
(2, 7819), (5, 7933), (8, 8041), (9, 8086), (18, 8242), (Start: 36 @8395 has 34 MA's), (78, 8563),

Gene: Bedetta_12 Start: 8244, Stop: 8504, Start Num: 34
Candidate Starts for Bedetta_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Beethoven_13 Start: 10100, Stop: 10369, Start Num: 35
Candidate Starts for Beethoven_13:
(Start: 35 @10100 has 185 MA's), (51, 10151), (52, 10166), (60, 10199),

Gene: BelmontSKP_11 Start: 8000, Stop: 8320, Start Num: 35
Candidate Starts for BelmontSKP_11:
(Start: 31 @7988 has 1 MA's), (Start: 35 @8000 has 185 MA's), (51, 8084), (79, 8237),

Gene: Bengal_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for Bengal_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7675), (80, 7831), (87, 7882),

Gene: Bennie_9 Start: 7245, Stop: 7514, Start Num: 35
Candidate Starts for Bennie_9:
(Start: 35 @7245 has 185 MA's), (43, 7263), (60, 7344), (71, 7389), (80, 7431),

Gene: Bernstein_9 Start: 7485, Stop: 7748, Start Num: 35
Candidate Starts for Bernstein_9:
(26, 7428), (Start: 35 @7485 has 185 MA's), (42, 7500), (51, 7515), (72, 7632), (83, 7692), (88, 7722),

Gene: Bibble12_12 Start: 8253, Stop: 8507, Start Num: 36
Candidate Starts for Bibble12_12:
(Start: 31 @8238 has 1 MA's), (Start: 33 @8244 has 6 MA's), (Start: 34 @8247 has 23 MA's), (Start: 36 @8253 has 34 MA's), (50, 8277), (58, 8322), (71, 8385), (75, 8397),

Gene: BigMack_9 Start: 7245, Stop: 7514, Start Num: 35
Candidate Starts for BigMack_9:
(Start: 35 @7245 has 185 MA's), (52, 7311), (60, 7344), (80, 7431), (90, 7503),

Gene: Bipper_17 Start: 11835, Stop: 12083, Start Num: 46
Candidate Starts for Bipper_17:
(29, 11778), (Start: 46 @11835 has 5 MA's), (66, 11934), (68, 11952), (70, 11955), (81, 12000),

Gene: Bodacious_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Bodacious_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: Brahms_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Brahms_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: BrotherBLo_13 Start: 10107, Stop: 10376, Start Num: 35
Candidate Starts for BrotherBLo_13:
(Start: 35 @10107 has 185 MA's), (51, 10158), (52, 10173), (60, 10206),

Gene: BruceLethal_9 Start: 6441, Stop: 6731, Start Num: 35
Candidate Starts for BruceLethal_9:
(Start: 33 @6435 has 6 MA's), (Start: 35 @6441 has 185 MA's), (40, 6453), (43, 6459), (50, 6489), (51, 6492), (52, 6507), (54, 6516), (55, 6519), (60, 6540), (63, 6564), (69, 6606), (74, 6618), (77, 6642),

Gene: Brynnie_11 Start: 8207, Stop: 8464, Start Num: 36
Candidate Starts for Brynnie_11:
(2, 7631), (5, 7745), (8, 7853), (9, 7898), (18, 8054), (Start: 36 @8207 has 34 MA's), (62, 8297), (78, 8375),

Gene: BubbaBear_10 Start: 7645, Stop: 7905, Start Num: 35
Candidate Starts for BubbaBear_10:
(Start: 31 @7633 has 1 MA's), (Start: 35 @7645 has 185 MA's), (51, 7669), (80, 7825), (82, 7840),

Gene: Buldak_10 Start: 7930, Stop: 8196, Start Num: 35
Candidate Starts for Buldak_10:
(Start: 31 @7918 has 1 MA's), (Start: 35 @7930 has 185 MA's), (58, 8002), (64, 8035), (72, 8077),

Gene: Burritobowl_10 Start: 7681, Stop: 7938, Start Num: 35
Candidate Starts for Burritobowl_10:
(Start: 31 @7669 has 1 MA's), (Start: 35 @7681 has 185 MA's), (51, 7702), (80, 7858), (87, 7909),

Gene: CallieOMalley_13 Start: 10140, Stop: 10409, Start Num: 35
Candidate Starts for CallieOMalley_13:
(Start: 31 @10128 has 1 MA's), (Start: 35 @10140 has 185 MA's), (43, 10158), (55, 10218), (60, 10239), (80, 10326),

Gene: CallinAllBarbz_10 Start: 6520, Stop: 6792, Start Num: 37
Candidate Starts for CallinAllBarbz_10:
(Start: 37 @6520 has 2 MA's), (44, 6535), (71, 6667), (80, 6709),

Gene: Camara_10 Start: 7656, Stop: 7910, Start Num: 36
Candidate Starts for Camara_10:
(29, 7620), (Start: 36 @7656 has 34 MA's), (50, 7680), (58, 7725), (61, 7737), (67, 7782), (71, 7788), (75, 7800), (80, 7827),

Gene: Canowicakte_13 Start: 10175, Stop: 10444, Start Num: 35
Candidate Starts for Canowicakte_13:
(Start: 31 @10163 has 1 MA's), (Start: 35 @10175 has 185 MA's), (43, 10193), (55, 10253), (60, 10274), (80, 10361),

Gene: Carpal_13 Start: 10107, Stop: 10376, Start Num: 35
Candidate Starts for Carpal_13:
(Start: 35 @10107 has 185 MA's), (51, 10158), (52, 10173), (60, 10206),

Gene: Cashington_10 Start: 7671, Stop: 7928, Start Num: 35
Candidate Starts for Cashington_10:
(Start: 31 @7659 has 1 MA's), (Start: 35 @7671 has 185 MA's), (51, 7692), (80, 7848), (87, 7899),

Gene: Celaena_10 Start: 7723, Stop: 7986, Start Num: 35
Candidate Starts for Celaena_10:
(Start: 31 @7711 has 1 MA's), (Start: 35 @7723 has 185 MA's), (51, 7750), (53, 7768), (72, 7867), (80, 7906),

Gene: ChewChew_9 Start: 7242, Stop: 7511, Start Num: 35
Candidate Starts for ChewChew_9:
(Start: 35 @7242 has 185 MA's), (56, 7323), (60, 7341), (71, 7386), (80, 7428),

Gene: Chickaboom_10 Start: 7752, Stop: 8009, Start Num: 36
Candidate Starts for Chickaboom_10:
(5, 7290), (8, 7398), (9, 7443), (18, 7599), (Start: 36 @7752 has 34 MA's), (78, 7920),

Gene: Chicken_11 Start: 8034, Stop: 8288, Start Num: 36
Candidate Starts for Chicken_11:
(1, 7434), (5, 7593), (8, 7701), (19, 7905), (29, 7998), (30, 8016), (Start: 36 @8034 has 34 MA's), (50, 8058), (59, 8106), (75, 8178), (80, 8205),

Gene: ChiliPepper_10 Start: 7882, Stop: 8139, Start Num: 35
Candidate Starts for ChiliPepper_10:
(Start: 35 @7882 has 185 MA's), (58, 7945), (80, 8059), (86, 8104),

Gene: Cholula_13 Start: 10152, Stop: 10421, Start Num: 35
Candidate Starts for Cholula_13:
(Start: 35 @10152 has 185 MA's), (51, 10203), (52, 10218), (60, 10251),

Gene: Chridison_9 Start: 7262, Stop: 7549, Start Num: 35
Candidate Starts for Chridison_9:
(Start: 35 @7262 has 185 MA's), (60, 7361), (80, 7469),

Gene: Christian_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Christian_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: Clayda5_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Clayda5_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: CliffHanger_11 Start: 7626, Stop: 7886, Start Num: 34
Candidate Starts for CliffHanger_11:

(26, 7572), (Start: 31 @7617 has 1 MA's), (Start: 34 @7626 has 23 MA's), (73, 7773), (79, 7803),

Gene: Coltrane_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Coltrane_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: Colusalem_11 Start: 8083, Stop: 8343, Start Num: 34
Candidate Starts for Colusalem_11:
(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 23 MA's), (Start: 36 @8089 has 34 MA's), (50, 8113), (58, 8158), (71, 8221), (75, 8233),

Gene: Coral_11 Start: 8080, Stop: 8343, Start Num: 33
Candidate Starts for Coral_11:
(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 23 MA's), (Start: 36 @8089 has 34 MA's), (50, 8113), (58, 8158), (71, 8221), (75, 8233),

Gene: Cota_9 Start: 6460, Stop: 6750, Start Num: 35
Candidate Starts for Cota_9:
(Start: 35 @6460 has 185 MA's), (40, 6472), (43, 6478), (48, 6490), (50, 6508), (51, 6511), (52, 6526), (54, 6535), (55, 6538), (60, 6559), (63, 6583), (69, 6625), (74, 6637), (76, 6652), (77, 6661),

Gene: Cote_12 Start: 8241, Stop: 8504, Start Num: 33
Candidate Starts for Cote_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Cracklewink_17 Start: 11835, Stop: 12083, Start Num: 46
Candidate Starts for Cracklewink_17:
(29, 11778), (Start: 46 @11835 has 5 MA's), (68, 11952), (70, 11955), (81, 12000),

Gene: CristinaYang_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for CristinaYang_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: CroZenni_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for CroZenni_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7675), (79, 7828), (80, 7831), (82, 7846), (87, 7882),

Gene: CupcakePrincess_10 Start: 7631, Stop: 7951, Start Num: 35
Candidate Starts for CupcakePrincess_10:
(Start: 31 @7619 has 1 MA's), (Start: 35 @7631 has 185 MA's), (51, 7715), (80, 7871), (82, 7886),

Gene: Cygnet_11 Start: 8032, Stop: 8286, Start Num: 36
Candidate Starts for Cygnet_11:
(Start: 36 @8032 has 34 MA's), (71, 8164), (78, 8197), (80, 8203),

Gene: Daiboju_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Daiboju_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: DanHam62_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for DanHam62_10:

(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Daob_12 Start: 8238, Stop: 8507, Start Num: 31
Candidate Starts for Daob_12:
(Start: 31 @8238 has 1 MA's), (Start: 33 @8244 has 6 MA's), (Start: 34 @8247 has 23 MA's), (Start: 36 @8253 has 34 MA's), (50, 8277), (58, 8322), (71, 8385), (75, 8397),

Gene: DickRichards_10 Start: 8148, Stop: 8405, Start Num: 35
Candidate Starts for DickRichards_10:
(Start: 31 @8136 has 1 MA's), (Start: 35 @8148 has 185 MA's), (51, 8169), (79, 8322), (80, 8325), (82, 8340), (87, 8376),

Gene: Didgeridoo_11 Start: 7870, Stop: 8133, Start Num: 34
Candidate Starts for Didgeridoo_11:
(Start: 31 @7861 has 1 MA's), (Start: 34 @7870 has 23 MA's),

Gene: Dino_13 Start: 10106, Stop: 10375, Start Num: 35
Candidate Starts for Dino_13:
(Start: 35 @10106 has 185 MA's), (51, 10157), (52, 10172), (60, 10205),

Gene: DirtyBubble_10 Start: 7907, Stop: 8170, Start Num: 34
Candidate Starts for DirtyBubble_10:
(Start: 34 @7907 has 23 MA's), (39, 7919), (51, 7934), (72, 8051), (80, 8090), (82, 8105),

Gene: Dismas_10 Start: 7882, Stop: 8139, Start Num: 35
Candidate Starts for Dismas_10:
(Start: 35 @7882 has 185 MA's), (58, 7945), (80, 8059), (86, 8104),

Gene: Doobus_10 Start: 7885, Stop: 8142, Start Num: 35
Candidate Starts for Doobus_10:
(Start: 31 @7873 has 1 MA's), (Start: 35 @7885 has 185 MA's), (51, 7906), (80, 8062), (87, 8113),

Gene: DrParker_9 Start: 6467, Stop: 6757, Start Num: 35
Candidate Starts for DrParker_9:
(Start: 35 @6467 has 185 MA's), (40, 6479), (43, 6485), (48, 6497), (50, 6515), (51, 6518), (52, 6533), (54, 6542), (55, 6545), (60, 6566), (63, 6590), (69, 6632), (74, 6644), (77, 6668), (87, 6728),

Gene: DrRobert_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for DrRobert_9:
(Start: 35 @7243 has 185 MA's), (60, 7342), (80, 7429),

Gene: DreamTeam_9 Start: 7289, Stop: 7579, Start Num: 35
Candidate Starts for DreamTeam_9:
(Start: 35 @7289 has 185 MA's), (60, 7388), (66, 7427), (80, 7496),

Gene: Eden_9 Start: 7514, Stop: 7780, Start Num: 35
Candidate Starts for Eden_9:
(26, 7457), (Start: 35 @7514 has 185 MA's), (51, 7547), (61, 7601), (88, 7754),

Gene: Eesa_11 Start: 8248, Stop: 8502, Start Num: 36
Candidate Starts for Eesa_11:

(3, 7771), (8, 7915), (19, 8119), (29, 8212), (30, 8230), (Start: 36 @8248 has 34 MA's), (50, 8272), (74, 8386), (75, 8392), (80, 8419),

Gene: Elfy_9 Start: 6462, Stop: 6722, Start Num: 37
Candidate Starts for Elfy_9:
(Start: 37 @6462 has 2 MA's), (51, 6483), (54, 6507), (58, 6525),

Gene: Elva_11 Start: 7965, Stop: 8225, Start Num: 38
Candidate Starts for Elva_11:
(Start: 38 @7965 has 1 MA's), (51, 7989), (75, 8118),

Gene: Enochoraptor_9 Start: 6463, Stop: 6753, Start Num: 35
Candidate Starts for Enochoraptor_9:
(Start: 35 @6463 has 185 MA's), (40, 6475), (43, 6481), (48, 6493), (50, 6511), (51, 6514), (52, 6529), (54, 6538), (55, 6541), (63, 6586), (69, 6628), (74, 6640),

Gene: Enoki_9 Start: 6448, Stop: 6738, Start Num: 35
Candidate Starts for Enoki_9:
(Start: 35 @6448 has 185 MA's), (40, 6460), (43, 6466), (48, 6478), (50, 6496), (51, 6499), (52, 6514), (54, 6523), (55, 6526), (63, 6571), (69, 6613), (74, 6625), (77, 6649),

Gene: EstebanJulior_9 Start: 7287, Stop: 7556, Start Num: 35
Candidate Starts for EstebanJulior_9:
(Start: 35 @7287 has 185 MA's), (60, 7386), (61, 7392), (80, 7473),

Gene: Eula_10 Start: 7652, Stop: 7912, Start Num: 35
Candidate Starts for Eula_10:
(Start: 31 @7640 has 1 MA's), (Start: 35 @7652 has 185 MA's), (51, 7676), (80, 7832), (82, 7847),

Gene: Eunoia_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for Eunoia_9:
(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468), (90, 7540),

Gene: Faiyaz_17 Start: 11749, Stop: 11997, Start Num: 46
Candidate Starts for Faiyaz_17:
(29, 11692), (Start: 46 @11749 has 5 MA's), (54, 11791), (68, 11866), (81, 11914), (88, 11965), (90, 11983),

Gene: Finalfrontier_11 Start: 8160, Stop: 8423, Start Num: 34
Candidate Starts for Finalfrontier_11:
(Start: 31 @8151 has 1 MA's), (Start: 34 @8160 has 23 MA's), (51, 8187), (80, 8343), (82, 8358),

Gene: Fingolfin_10 Start: 7656, Stop: 7910, Start Num: 36
Candidate Starts for Fingolfin_10:
(11, 7398), (14, 7422), (16, 7458), (18, 7506), (29, 7620), (Start: 36 @7656 has 34 MA's), (50, 7680), (59, 7728), (61, 7737), (67, 7782), (75, 7800), (80, 7827),

Gene: FlameThrower_10 Start: 7611, Stop: 7874, Start Num: 35
Candidate Starts for FlameThrower_10:
(Start: 31 @7599 has 1 MA's), (Start: 35 @7611 has 185 MA's), (51, 7638), (53, 7656), (72, 7755), (80, 7794),

Gene: Fluke_13 Start: 10148, Stop: 10417, Start Num: 35

Candidate Starts for Fluke_13:
(Start: 35 @10148 has 185 MA's), (51, 10199), (52, 10214), (60, 10247), (80, 10334),

Gene: Franklin22_9 Start: 7495, Stop: 7761, Start Num: 35
Candidate Starts for Franklin22_9:
(Start: 35 @7495 has 185 MA's), (51, 7528), (80, 7681), (88, 7735),

Gene: Gack_9 Start: 7565, Stop: 7828, Start Num: 35
Candidate Starts for Gack_9:
(26, 7508), (Start: 35 @7565 has 185 MA's), (51, 7595), (54, 7619), (80, 7748), (88, 7802),

Gene: Galaxy_11 Start: 8078, Stop: 8335, Start Num: 36
Candidate Starts for Galaxy_11:
(30, 8060), (Start: 36 @8078 has 34 MA's), (79, 8249),

Gene: Gibbzilla_12 Start: 7535, Stop: 7786, Start Num: 42
Candidate Starts for Gibbzilla_12:
(22, 7430), (Start: 24 @7466 has 1 MA's), (42, 7535), (47, 7544), (75, 7676),

Gene: Gisselle_9 Start: 7289, Stop: 7579, Start Num: 35
Candidate Starts for Gisselle_9:
(Start: 35 @7289 has 185 MA's), (60, 7388), (66, 7427), (80, 7496),

Gene: Glenn_13 Start: 10158, Stop: 10427, Start Num: 35
Candidate Starts for Glenn_13:
(Start: 35 @10158 has 185 MA's), (51, 10209), (52, 10224), (60, 10257),

Gene: Glotell_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for Glotell_10:
(11, 7397), (14, 7421), (16, 7457), (18, 7505), (29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679),
(59, 7727), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Gravel_12 Start: 8244, Stop: 8498, Start Num: 36
Candidate Starts for Gravel_12:
(19, 8115), (29, 8208), (30, 8226), (Start: 36 @8244 has 34 MA's), (50, 8268), (74, 8382), (75, 8388),
(81, 8418),

Gene: Graynor_13 Start: 10164, Stop: 10433, Start Num: 35
Candidate Starts for Graynor_13:
(Start: 31 @10152 has 1 MA's), (Start: 35 @10164 has 185 MA's), (43, 10182), (51, 10215), (60,
10263), (71, 10308), (80, 10350),

Gene: GreenHearts_13 Start: 10230, Stop: 10520, Start Num: 35
Candidate Starts for GreenHearts_13:
(Start: 35 @10230 has 185 MA's), (47, 10254), (60, 10329), (62, 10338), (64, 10356), (80, 10437),

Gene: Greenhouse_13 Start: 10155, Stop: 10445, Start Num: 35
Candidate Starts for Greenhouse_13:
(Start: 35 @10155 has 185 MA's), (47, 10179), (52, 10221), (60, 10254), (62, 10263), (64, 10281), (80,
10362),

Gene: GrimEater_11 Start: 6522, Stop: 6794, Start Num: 37
Candidate Starts for GrimEater_11:

(25, 6459), (Start: 37 @6522 has 2 MA's), (51, 6558), (58, 6600),

Gene: HamCheese_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for HamCheese_10:
(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787),
(75, 7799), (80, 7826),

Gene: HannahPhantana_12 Start: 8247, Stop: 8507, Start Num: 34
Candidate Starts for HannahPhantana_12:
(Start: 31 @8238 has 1 MA's), (Start: 33 @8244 has 6 MA's), (Start: 34 @8247 has 23 MA's), (Start: 36
@8253 has 34 MA's), (50, 8277), (58, 8322), (71, 8385), (75, 8397),

Gene: HeadNerd_9 Start: 7245, Stop: 7514, Start Num: 35
Candidate Starts for HeadNerd_9:
(Start: 35 @7245 has 185 MA's), (43, 7263), (60, 7344), (71, 7389), (80, 7431),

Gene: Herb_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Herb_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: Hilltopfarm_17 Start: 11779, Stop: 12027, Start Num: 46
Candidate Starts for Hilltopfarm_17:
(29, 11722), (Start: 46 @11779 has 5 MA's), (54, 11821), (68, 11896), (81, 11944), (88, 11995), (90,
12013),

Gene: Huckleberry_9 Start: 7245, Stop: 7514, Start Num: 35
Candidate Starts for Huckleberry_9:
(Start: 35 @7245 has 185 MA's), (43, 7263), (60, 7344), (71, 7389), (80, 7431),

Gene: HunterDalle_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for HunterDalle_9:
(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468),

Gene: Huntingdon_13 Start: 10141, Stop: 10431, Start Num: 35
Candidate Starts for Huntingdon_13:
(4, 9655), (7, 9742), (12, 9880), (Start: 35 @10141 has 185 MA's), (47, 10165), (60, 10240), (64,
10267), (80, 10348),

Gene: Icarian_11 Start: 7889, Stop: 8152, Start Num: 36
Candidate Starts for Icarian_11:
(Start: 36 @7889 has 34 MA's), (51, 7916), (80, 8072), (82, 8087),

Gene: Immaculata_13 Start: 10152, Stop: 10421, Start Num: 35
Candidate Starts for Immaculata_13:
(Start: 35 @10152 has 185 MA's), (51, 10203), (52, 10218), (60, 10251),

Gene: IndyLu_10 Start: 7694, Stop: 7957, Start Num: 34
Candidate Starts for IndyLu_10:
(Start: 31 @7685 has 1 MA's), (Start: 34 @7694 has 23 MA's),

Gene: Jabb_10 Start: 7631, Stop: 7951, Start Num: 35
Candidate Starts for Jabb_10:
(Start: 31 @7619 has 1 MA's), (Start: 35 @7631 has 185 MA's), (51, 7715), (80, 7871), (82, 7886),

Gene: Jamun_11 Start: 8419, Stop: 8676, Start Num: 36
Candidate Starts for Jamun_11:
(9, 8110), (18, 8266), (Start: 36 @8419 has 34 MA's), (78, 8587),

Gene: Jankie_12 Start: 6521, Stop: 6793, Start Num: 37
Candidate Starts for Jankie_12:
(25, 6458), (Start: 37 @6521 has 2 MA's), (51, 6557), (58, 6599),

Gene: Jerole_12 Start: 8244, Stop: 8504, Start Num: 34
Candidate Starts for Jerole_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Joann_13 Start: 10133, Stop: 10423, Start Num: 35
Candidate Starts for Joann_13:
(4, 9647), (6, 9689), (7, 9734), (Start: 35 @10133 has 185 MA's), (47, 10157), (60, 10232), (62, 10241), (64, 10259), (80, 10340),

Gene: Johnathan_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for Johnathan_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7675), (80, 7831), (87, 7882),

Gene: Jovita_10 Start: 7753, Stop: 8013, Start Num: 35
Candidate Starts for Jovita_10:
(Start: 31 @7741 has 1 MA's), (Start: 35 @7753 has 185 MA's), (51, 7777), (80, 7933), (82, 7948),

Gene: Jumboset_13 Start: 10101, Stop: 10370, Start Num: 35
Candidate Starts for Jumboset_13:
(Start: 35 @10101 has 185 MA's), (51, 10152), (52, 10167), (60, 10200),

Gene: Juno112_10 Start: 7656, Stop: 7910, Start Num: 36
Candidate Starts for Juno112_10:
(11, 7398), (14, 7422), (16, 7458), (18, 7506), (29, 7620), (Start: 36 @7656 has 34 MA's), (50, 7680), (59, 7728), (61, 7737), (67, 7782), (75, 7800), (80, 7827),

Gene: KHumphrey_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for KHumphrey_10:
(11, 7397), (14, 7421), (16, 7457), (18, 7505), (29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (59, 7727), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Kalizoi_13 Start: 10100, Stop: 10369, Start Num: 35
Candidate Starts for Kalizoi_13:
(Start: 35 @10100 has 185 MA's), (51, 10151), (52, 10166), (60, 10199),

Gene: Kamdara_10 Start: 7881, Stop: 8138, Start Num: 35
Candidate Starts for Kamdara_10:
(Start: 35 @7881 has 185 MA's), (58, 7944), (80, 8058), (86, 8103),

Gene: Kate33_10 Start: 7693, Stop: 7956, Start Num: 34
Candidate Starts for Kate33_10:
(Start: 31 @7684 has 1 MA's), (Start: 34 @7693 has 23 MA's),

Gene: Katzastrophic_10 Start: 7786, Stop: 8049, Start Num: 35
Candidate Starts for Katzastrophic_10:
(Start: 31 @7774 has 1 MA's), (Start: 35 @7786 has 185 MA's), (51, 7813), (53, 7831), (72, 7930), (80, 7969),

Gene: Keiki_9 Start: 6460, Stop: 6750, Start Num: 35
Candidate Starts for Keiki_9:
(Start: 35 @6460 has 185 MA's), (40, 6472), (43, 6478), (48, 6490), (50, 6508), (51, 6511), (52, 6526), (54, 6535), (55, 6538), (60, 6559), (63, 6583), (69, 6625), (74, 6637), (76, 6652), (77, 6661),

Gene: KendraB23_12 Start: 8245, Stop: 8499, Start Num: 36
Candidate Starts for KendraB23_12:
(19, 8116), (20, 8131), (30, 8227), (Start: 36 @8245 has 34 MA's), (50, 8269), (74, 8383), (75, 8389), (81, 8419),

Gene: Kenzers_10 Start: 7668, Stop: 7928, Start Num: 35
Candidate Starts for Kenzers_10:
(Start: 31 @7656 has 1 MA's), (Start: 35 @7668 has 185 MA's), (51, 7692), (80, 7848), (82, 7863), (87, 7899),

Gene: Kepler_11 Start: 8079, Stop: 8342, Start Num: 33
Candidate Starts for Kepler_11:
(Start: 31 @8073 has 1 MA's), (Start: 33 @8079 has 6 MA's), (Start: 34 @8082 has 23 MA's), (Start: 36 @8088 has 34 MA's), (58, 8157), (71, 8220), (75, 8232),

Gene: Kieran_10 Start: 7885, Stop: 8142, Start Num: 35
Candidate Starts for Kieran_10:
(Start: 35 @7885 has 185 MA's), (58, 7948), (80, 8062), (86, 8107),

Gene: KingBob_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for KingBob_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: Kittykat_9 Start: 7286, Stop: 7555, Start Num: 35
Candidate Starts for Kittykat_9:
(Start: 35 @7286 has 185 MA's), (60, 7385), (71, 7430), (80, 7472), (84, 7499),

Gene: Korra_13 Start: 10106, Stop: 10375, Start Num: 35
Candidate Starts for Korra_13:
(Start: 35 @10106 has 185 MA's), (51, 10157), (52, 10172), (60, 10205),

Gene: Kubed_9 Start: 6450, Stop: 6740, Start Num: 35
Candidate Starts for Kubed_9:
(Start: 35 @6450 has 185 MA's), (40, 6462), (43, 6468), (48, 6480), (50, 6498), (51, 6501), (52, 6516), (54, 6525), (55, 6528), (63, 6573), (69, 6615), (74, 6627), (76, 6642), (77, 6651),

Gene: Kuleana_11 Start: 8039, Stop: 8302, Start Num: 33
Candidate Starts for Kuleana_11:
(Start: 31 @8033 has 1 MA's), (Start: 33 @8039 has 6 MA's), (Start: 36 @8048 has 34 MA's), (49, 8069), (50, 8072), (59, 8120), (71, 8180), (75, 8192), (80, 8219),

Gene: Lahqtemish_10 Start: 7738, Stop: 8001, Start Num: 34
Candidate Starts for Lahqtemish_10:

(Start: 31 @7729 has 1 MA's), (Start: 34 @7738 has 23 MA's), (58, 7807),

Gene: Lakshmi_13 Start: 10160, Stop: 10450, Start Num: 35
Candidate Starts for Lakshmi_13:
(Start: 35 @10160 has 185 MA's), (47, 10184), (60, 10259), (62, 10268), (64, 10286), (80, 10367),

Gene: Laphuphu24k_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for Laphuphu24k_10:
(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787),
(75, 7799), (80, 7826),

Gene: Lasagna_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Lasagna_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: Lauchelly_9 Start: 6445, Stop: 6735, Start Num: 35
Candidate Starts for Lauchelly_9:
(Start: 35 @6445 has 185 MA's), (40, 6457), (43, 6463), (48, 6475), (50, 6493), (51, 6496), (52, 6511),
(54, 6520), (55, 6523), (63, 6568), (69, 6610), (74, 6622), (77, 6646),

Gene: Lennox_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Lennox_9:
(Start: 35 @7243 has 185 MA's), (60, 7342), (71, 7387), (80, 7429),

Gene: Leona_10 Start: 7706, Stop: 7960, Start Num: 36
Candidate Starts for Leona_10:
(11, 7448), (14, 7472), (16, 7508), (18, 7556), (28, 7664), (29, 7670), (Start: 36 @7706 has 34 MA's),
(50, 7730), (59, 7778), (61, 7787), (67, 7832), (75, 7850), (80, 7877),

Gene: Leviosa_9 Start: 6466, Stop: 6756, Start Num: 35
Candidate Starts for Leviosa_9:
(Start: 35 @6466 has 185 MA's), (43, 6484), (48, 6496), (50, 6514), (51, 6517), (52, 6532), (54, 6541),
(55, 6544), (60, 6565), (63, 6589), (69, 6631), (74, 6643), (77, 6667), (87, 6727),

Gene: LilBandit_9 Start: 6450, Stop: 6740, Start Num: 35
Candidate Starts for LilBandit_9:
(Start: 35 @6450 has 185 MA's), (40, 6462), (43, 6468), (48, 6480), (50, 6498), (51, 6501), (52, 6516),
(54, 6525), (55, 6528), (60, 6549), (63, 6573), (69, 6615), (74, 6627),

Gene: LilStuart_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for LilStuart_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: Lilo27_10 Start: 7631, Stop: 7888, Start Num: 35
Candidate Starts for Lilo27_10:
(Start: 31 @7619 has 1 MA's), (Start: 35 @7631 has 185 MA's), (51, 7652), (80, 7808), (82, 7823), (87, 7859),

Gene: LimaBean_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for LimaBean_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7675), (80, 7831), (87, 7882),

Gene: Litotes_13 Start: 10128, Stop: 10397, Start Num: 35

Candidate Starts for Litotes_13:
(Start: 31 @10116 has 1 MA's), (Start: 35 @10128 has 185 MA's), (43, 10146), (51, 10179), (60, 10227), (71, 10272), (80, 10314),

Gene: LittleTokyo_11 Start: 7988, Stop: 8242, Start Num: 36
Candidate Starts for LittleTokyo_11:
(Start: 36 @7988 has 34 MA's), (58, 8057), (78, 8153), (80, 8159),

Gene: Loviatar_10 Start: 7911, Stop: 8231, Start Num: 24
Candidate Starts for Loviatar_10:
(Start: 24 @7911 has 1 MA's), (Start: 27 @7923 has 1 MA's), (58, 8037), (80, 8151),

Gene: Lucy_9 Start: 7234, Stop: 7503, Start Num: 35
Candidate Starts for Lucy_9:
(Start: 35 @7234 has 185 MA's), (43, 7252), (60, 7333), (71, 7378), (80, 7420),

Gene: Lunar_12 Start: 8244, Stop: 8504, Start Num: 34
Candidate Starts for Lunar_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Lynlen_10 Start: 7668, Stop: 7928, Start Num: 35
Candidate Starts for Lynlen_10:
(Start: 31 @7656 has 1 MA's), (Start: 35 @7668 has 185 MA's), (51, 7692), (80, 7848), (82, 7863), (87, 7899),

Gene: MEAK_9 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for MEAK_9:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (48, 6482), (50, 6500), (51, 6503), (52, 6518), (54, 6527), (55, 6530), (63, 6575), (69, 6617), (74, 6629), (77, 6653), (87, 6713),

Gene: Makoto_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Makoto_9:
(Start: 35 @7243 has 185 MA's), (60, 7342), (71, 7387), (80, 7429),

Gene: MamaPearl_9 Start: 7287, Stop: 7556, Start Num: 35
Candidate Starts for MamaPearl_9:
(Start: 35 @7287 has 185 MA's), (60, 7386), (61, 7392), (80, 7473),

Gene: Maria1952_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Maria1952_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: MeganNoll_13 Start: 10158, Stop: 10427, Start Num: 35
Candidate Starts for MeganNoll_13:
(Start: 35 @10158 has 185 MA's), (51, 10209), (52, 10224), (60, 10257),

Gene: Melons_12 Start: 8241, Stop: 8504, Start Num: 33
Candidate Starts for Melons_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Milomuff_11 Start: 8040, Stop: 8297, Start Num: 35

Candidate Starts for Milomuff_11:
(Start: 31 @8028 has 1 MA's), (Start: 35 @8040 has 185 MA's), (51, 8061), (80, 8217), (82, 8232), (87, 8268),

Gene: Misaeng_13 Start: 10206, Stop: 10496, Start Num: 35
Candidate Starts for Misaeng_13:
(12, 9945), (Start: 35 @10206 has 185 MA's), (47, 10230), (52, 10272), (60, 10305), (64, 10332), (80, 10413),

Gene: Moki_9 Start: 7245, Stop: 7514, Start Num: 35
Candidate Starts for Moki_9:
(Start: 35 @7245 has 185 MA's), (43, 7263), (60, 7344), (71, 7389), (80, 7431),

Gene: Moyashi_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for Moyashi_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (74, 6647), (77, 6671),

Gene: MrAK_9 Start: 6479, Stop: 6769, Start Num: 35
Candidate Starts for MrAK_9:
(Start: 35 @6479 has 185 MA's), (40, 6491), (43, 6497), (48, 6509), (50, 6527), (51, 6530), (52, 6545), (54, 6554), (55, 6557), (63, 6602), (74, 6656), (77, 6680), (87, 6740),

Gene: MrBoss_13 Start: 10128, Stop: 10397, Start Num: 35
Candidate Starts for MrBoss_13:
(Start: 31 @10116 has 1 MA's), (Start: 35 @10128 has 185 MA's), (43, 10146), (51, 10179), (60, 10227), (71, 10272), (80, 10314),

Gene: MrGloopy_13 Start: 10091, Stop: 10360, Start Num: 35
Candidate Starts for MrGloopy_13:
(Start: 35 @10091 has 185 MA's), (51, 10142), (52, 10157), (60, 10190),

Gene: MsUbiquitous_10 Start: 7631, Stop: 7951, Start Num: 35
Candidate Starts for MsUbiquitous_10:
(Start: 31 @7619 has 1 MA's), (Start: 35 @7631 has 185 MA's), (51, 7715), (80, 7871), (82, 7886),

Gene: Nancia_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for Nancia_9:
(Start: 35 @7243 has 185 MA's), (55, 7321), (60, 7342), (80, 7429),

Gene: Niblet_11 Start: 8034, Stop: 8288, Start Num: 36
Candidate Starts for Niblet_11:
(1, 7434), (5, 7593), (8, 7701), (19, 7905), (29, 7998), (30, 8016), (Start: 36 @8034 has 34 MA's), (50, 8058), (59, 8106), (75, 8178), (80, 8205),

Gene: Nicky22_11 Start: 8102, Stop: 8359, Start Num: 35
Candidate Starts for Nicky22_11:
(Start: 31 @8090 has 1 MA's), (Start: 35 @8102 has 185 MA's), (51, 8123), (80, 8279), (82, 8294), (87, 8330),

Gene: Nubia_13 Start: 10120, Stop: 10410, Start Num: 35
Candidate Starts for Nubia_13:

(Start: 31 @10108 has 1 MA's), (Start: 35 @10120 has 185 MA's), (47, 10144), (52, 10186), (60, 10219), (62, 10228), (64, 10246), (80, 10327),

Gene: OMalley_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for OMalley_9:
(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468), (90, 7540),

Gene: Olliecat_10 Start: 7885, Stop: 8151, Start Num: 35
Candidate Starts for Olliecat_10:
(Start: 31 @7873 has 1 MA's), (Start: 35 @7885 has 185 MA's), (49, 7909), (64, 7990), (72, 8032), (80, 8068), (82, 8083),

Gene: Oppalora_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for Oppalora_10:
(11, 7397), (14, 7421), (16, 7457), (18, 7505), (29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (59, 7727), (61, 7736), (67, 7781), (75, 7799), (80, 7826),

Gene: Orcanus_11 Start: 8038, Stop: 8292, Start Num: 36
Candidate Starts for Orcanus_11:
(19, 7909), (20, 7924), (29, 8002), (30, 8020), (Start: 36 @8038 has 34 MA's), (50, 8062), (74, 8176), (75, 8182), (81, 8212),

Gene: OtsoOtso_11 Start: 8089, Stop: 8343, Start Num: 36
Candidate Starts for OtsoOtso_11:
(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 23 MA's), (Start: 36 @8089 has 34 MA's), (50, 8113), (58, 8158), (71, 8221), (75, 8233),

Gene: OurGirlNessie_9 Start: 7234, Stop: 7503, Start Num: 35
Candidate Starts for OurGirlNessie_9:
(Start: 35 @7234 has 185 MA's), (55, 7312), (60, 7333), (80, 7420),

Gene: Ouroboros_9 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for Ouroboros_9:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (60, 6552), (63, 6576), (69, 6618), (74, 6630), (77, 6654), (87, 6714),

Gene: Oxynfrius_13 Start: 10133, Stop: 10423, Start Num: 35
Candidate Starts for Oxynfrius_13:
(Start: 35 @10133 has 185 MA's), (47, 10157), (60, 10232), (62, 10241), (64, 10259), (80, 10340),

Gene: P1.1_9 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for P1.1_9:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (74, 6630), (87, 6714),

Gene: P100.1_9 Start: 6443, Stop: 6733, Start Num: 35
Candidate Starts for P100.1_9:
(Start: 35 @6443 has 185 MA's), (40, 6455), (43, 6461), (48, 6473), (50, 6491), (51, 6494), (52, 6509), (54, 6518), (55, 6521), (60, 6542), (63, 6566), (69, 6608), (74, 6620), (77, 6644), (87, 6704),

Gene: P100A_9 Start: 6464, Stop: 6754, Start Num: 35
Candidate Starts for P100A_9:

(23, 6392), (Start: 33 @6458 has 6 MA's), (Start: 35 @6464 has 185 MA's), (40, 6476), (43, 6482), (48, 6494), (50, 6512), (51, 6515), (52, 6530), (54, 6539), (55, 6542), (60, 6563), (63, 6587), (69, 6629), (74, 6641), (77, 6665), (87, 6725),

Gene: P100D_9 Start: 6447, Stop: 6737, Start Num: 35
Candidate Starts for P100D_9:
(Start: 35 @6447 has 185 MA's), (40, 6459), (43, 6465), (48, 6477), (50, 6495), (51, 6498), (52, 6513), (54, 6522), (55, 6525), (63, 6570), (69, 6612), (74, 6624), (77, 6648),

Gene: P101A_9 Start: 6446, Stop: 6736, Start Num: 35
Candidate Starts for P101A_9:
(Start: 35 @6446 has 185 MA's), (40, 6458), (43, 6464), (48, 6476), (50, 6494), (51, 6497), (52, 6512), (54, 6521), (55, 6524), (60, 6545), (63, 6569), (69, 6611), (74, 6623), (77, 6647), (87, 6707),

Gene: P104A_9 Start: 6448, Stop: 6738, Start Num: 35
Candidate Starts for P104A_9:
(Start: 35 @6448 has 185 MA's), (40, 6460), (43, 6466), (48, 6478), (50, 6496), (51, 6499), (52, 6514), (54, 6523), (55, 6526), (63, 6571), (69, 6613), (74, 6625), (77, 6649), (87, 6709),

Gene: P104B_9 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for P104B_9:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (48, 6482), (50, 6500), (51, 6503), (52, 6518), (54, 6527), (55, 6530), (60, 6551), (63, 6575), (69, 6617), (74, 6629),

Gene: P105_9 Start: 6442, Stop: 6732, Start Num: 35
Candidate Starts for P105_9:
(Start: 35 @6442 has 185 MA's), (40, 6454), (43, 6460), (48, 6472), (50, 6490), (51, 6493), (52, 6508), (54, 6517), (55, 6520), (60, 6541), (63, 6565), (69, 6607), (74, 6619), (77, 6643), (87, 6703),

Gene: P106A_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for P106A_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (48, 6500), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (87, 6731),

Gene: P106C_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for P106C_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (48, 6500), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (87, 6731),

Gene: P106I_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for P106I_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (48, 6500), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (87, 6731),

Gene: P106L_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for P106L_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (48, 6500), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (87, 6731),

Gene: P106M_9 Start: 6470, Stop: 6760, Start Num: 35
Candidate Starts for P106M_9:
(Start: 35 @6470 has 185 MA's), (40, 6482), (43, 6488), (48, 6500), (50, 6518), (51, 6521), (52, 6536), (54, 6545), (55, 6548), (63, 6593), (87, 6731),

Gene: P107A_9 Start: 6456, Stop: 6746, Start Num: 35
Candidate Starts for P107A_9:
(Start: 35 @6456 has 185 MA's), (40, 6468), (43, 6474), (48, 6486), (50, 6504), (51, 6507), (52, 6522), (54, 6531), (55, 6534), (60, 6555), (63, 6579), (69, 6621), (72, 6627), (74, 6633), (77, 6657), (87, 6717),

Gene: P107C_9 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for P107C_9:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (48, 6482), (50, 6500), (51, 6503), (52, 6518), (54, 6527), (55, 6530), (63, 6575), (69, 6617), (74, 6629), (87, 6713),

Gene: P108C_9 Start: 6456, Stop: 6746, Start Num: 35
Candidate Starts for P108C_9:
(Start: 35 @6456 has 185 MA's), (40, 6468), (43, 6474), (48, 6486), (50, 6504), (51, 6507), (52, 6522), (54, 6531), (55, 6534), (63, 6579), (69, 6621), (74, 6633),

Gene: P14.4_9 Start: 6447, Stop: 6737, Start Num: 35
Candidate Starts for P14.4_9:
(Start: 35 @6447 has 185 MA's), (40, 6459), (43, 6465), (48, 6477), (50, 6495), (51, 6498), (52, 6513), (54, 6522), (55, 6525), (63, 6570), (69, 6612), (74, 6624),

Gene: P9.1_9 Start: 6445, Stop: 6735, Start Num: 35
Candidate Starts for P9.1_9:
(Start: 35 @6445 has 185 MA's), (40, 6457), (43, 6463), (48, 6475), (50, 6493), (51, 6496), (52, 6511), (54, 6520), (55, 6523), (63, 6568), (69, 6610), (74, 6622),

Gene: PA6_9 Start: 6455, Stop: 6745, Start Num: 35
Candidate Starts for PA6_9:
(Start: 35 @6455 has 185 MA's), (40, 6467), (43, 6473), (48, 6485), (50, 6503), (51, 6506), (52, 6521), (54, 6530), (55, 6533), (60, 6554), (69, 6620), (74, 6632), (76, 6647), (77, 6656), (87, 6716),

Gene: PAD20_9 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for PAD20_9:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (69, 6618), (74, 6630), (87, 6714),

Gene: PAS50_9 Start: 6450, Stop: 6740, Start Num: 35
Candidate Starts for PAS50_9:
(Start: 35 @6450 has 185 MA's), (40, 6462), (43, 6468), (48, 6480), (50, 6498), (51, 6501), (52, 6516), (54, 6525), (55, 6528), (63, 6573), (69, 6615), (74, 6627), (77, 6651),

Gene: PHL010M04_09 Start: 6444, Stop: 6734, Start Num: 35
Candidate Starts for PHL010M04_09:
(Start: 33 @6438 has 6 MA's), (Start: 35 @6444 has 185 MA's), (40, 6456), (43, 6462), (48, 6474), (50, 6492), (51, 6495), (52, 6510), (54, 6519), (55, 6522), (63, 6567), (69, 6609), (74, 6621), (77, 6645), (87, 6705),

Gene: PHL037M02_09 Start: 6444, Stop: 6740, Start Num: 33
Candidate Starts for PHL037M02_09:
(Start: 33 @6444 has 6 MA's), (Start: 35 @6450 has 185 MA's), (40, 6462), (43, 6468), (50, 6498), (51, 6501), (52, 6516), (54, 6525), (55, 6528), (69, 6615), (74, 6627), (87, 6711),

Gene: PHL060L00_09 Start: 6443, Stop: 6733, Start Num: 35

Candidate Starts for PHL060L00_09:
(Start: 35 @6443 has 185 MA's), (40, 6455), (43, 6461), (48, 6473), (50, 6491), (51, 6494), (52, 6509), (54, 6518), (55, 6521), (63, 6566), (69, 6608), (74, 6620), (77, 6644),

Gene: PHL067M10_09 Start: 6447, Stop: 6737, Start Num: 35
Candidate Starts for PHL067M10_09:
(Start: 35 @6447 has 185 MA's), (40, 6459), (43, 6465), (48, 6477), (50, 6495), (51, 6498), (52, 6513), (54, 6522), (55, 6525), (63, 6570), (69, 6612), (74, 6624), (77, 6648),

Gene: PHL071N05_09 Start: 6449, Stop: 6739, Start Num: 35
Candidate Starts for PHL071N05_09:
(Start: 35 @6449 has 185 MA's), (40, 6461), (43, 6467), (48, 6479), (50, 6497), (51, 6500), (52, 6515), (54, 6524), (55, 6527), (63, 6572), (69, 6614), (74, 6626),

Gene: PHL111M01_09 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for PHL111M01_09:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (69, 6618), (74, 6630),

Gene: PHL112N00_09 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for PHL112N00_09:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (69, 6618), (74, 6630), (76, 6645), (77, 6654),

Gene: PHL113M01_09 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for PHL113M01_09:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (47, 6477), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (69, 6618), (74, 6630), (77, 6654), (87, 6714),

Gene: PHL114L00_09 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for PHL114L00_09:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (50, 6500), (52, 6518), (54, 6527), (55, 6530), (60, 6551), (63, 6575), (69, 6617), (74, 6629), (77, 6653), (87, 6713),

Gene: PartyCup_13 Start: 10175, Stop: 10444, Start Num: 35
Candidate Starts for PartyCup_13:
(Start: 31 @10163 has 1 MA's), (Start: 35 @10175 has 185 MA's), (43, 10193), (51, 10226), (60, 10274), (71, 10319), (80, 10361),

Gene: PastaFagioli_10 Start: 7726, Stop: 7989, Start Num: 34
Candidate Starts for PastaFagioli_10:
(Start: 31 @7717 has 1 MA's), (Start: 34 @7726 has 23 MA's), (58, 7795),

Gene: Pecas_10 Start: 7652, Stop: 7912, Start Num: 35
Candidate Starts for Pecas_10:
(Start: 31 @7640 has 1 MA's), (Start: 35 @7652 has 185 MA's), (51, 7676), (80, 7832), (82, 7847),

Gene: Pelletreau_12 Start: 8244, Stop: 8498, Start Num: 36
Candidate Starts for Pelletreau_12:
(19, 8115), (29, 8208), (30, 8226), (Start: 36 @8244 has 34 MA's), (50, 8268), (74, 8382), (75, 8388), (81, 8418),

Gene: PhigPhack_10 Start: 7683, Stop: 7940, Start Num: 35

Candidate Starts for PhigPhack_10:
(Start: 31 @7671 has 1 MA's), (Start: 35 @7683 has 185 MA's), (51, 7704), (79, 7857), (80, 7860), (82, 7875), (87, 7911),

Gene: PhirstandPhine_12 Start: 8250, Stop: 8504, Start Num: 36
Candidate Starts for PhirstandPhine_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: Phisb_10 Start: 7645, Stop: 7905, Start Num: 35
Candidate Starts for Phisb_10:
(Start: 31 @7633 has 1 MA's), (Start: 35 @7645 has 185 MA's), (51, 7669), (80, 7825), (82, 7840), (87, 7876),

Gene: PhluffyCoco_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for PhluffyCoco_10:
(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Pineda_12 Start: 8250, Stop: 8504, Start Num: 36
Candidate Starts for Pineda_12:
(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 23 MA's), (Start: 36 @8250 has 34 MA's), (50, 8274), (58, 8319), (71, 8382), (75, 8394),

Gene: PinkFriday_9 Start: 7264, Stop: 7551, Start Num: 35
Candidate Starts for PinkFriday_9:
(Start: 35 @7264 has 185 MA's), (51, 7315), (60, 7363), (80, 7471), (90, 7543),

Gene: Pirate_9 Start: 6445, Stop: 6735, Start Num: 35
Candidate Starts for Pirate_9:
(Start: 35 @6445 has 185 MA's), (40, 6457), (43, 6463), (48, 6475), (50, 6493), (51, 6496), (52, 6511), (54, 6520), (55, 6523), (63, 6568), (69, 6610), (74, 6622),

Gene: PitaDog_9 Start: 7234, Stop: 7503, Start Num: 35
Candidate Starts for PitaDog_9:
(Start: 35 @7234 has 185 MA's), (60, 7333), (71, 7378), (80, 7420),

Gene: Polka_11 Start: 8080, Stop: 8343, Start Num: 33
Candidate Starts for Polka_11:
(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 23 MA's), (Start: 36 @8089 has 34 MA's), (50, 8113), (58, 8158), (71, 8221), (75, 8233),

Gene: PondAmelia_13 Start: 7900, Stop: 8160, Start Num: 32
Candidate Starts for PondAmelia_13:
(Start: 32 @7900 has 2 MA's), (58, 7966),

Gene: Potatoes_13 Start: 10152, Stop: 10421, Start Num: 35
Candidate Starts for Potatoes_13:
(Start: 35 @10152 has 185 MA's), (51, 10203), (52, 10218), (60, 10251),

Gene: Preamble_9 Start: 7244, Stop: 7513, Start Num: 35
Candidate Starts for Preamble_9:
(Start: 35 @7244 has 185 MA's), (60, 7343), (71, 7388), (80, 7430), (84, 7457),

Gene: Procrass1_9 Start: 6452, Stop: 6742, Start Num: 35
Candidate Starts for Procrass1_9:
(Start: 35 @6452 has 185 MA's), (40, 6464), (43, 6470), (48, 6482), (50, 6500), (51, 6503), (52, 6518), (54, 6527), (55, 6530), (63, 6575), (69, 6617), (74, 6629), (77, 6653), (87, 6713),

Gene: Pterodactyl_9 Start: 7235, Stop: 7504, Start Num: 35
Candidate Starts for Pterodactyl_9:
(Start: 35 @7235 has 185 MA's), (60, 7334), (71, 7379), (80, 7421),

Gene: Pumancara_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Pumancara_9:
(Start: 35 @7263 has 185 MA's), (51, 7314), (60, 7362), (80, 7470), (90, 7542),

Gene: QMacho_11 Start: 8135, Stop: 8395, Start Num: 35
Candidate Starts for QMacho_11:
(Start: 31 @8123 has 1 MA's), (Start: 35 @8135 has 185 MA's), (51, 8159), (80, 8315), (82, 8330),

Gene: QueenBey_9 Start: 6446, Stop: 6736, Start Num: 35
Candidate Starts for QueenBey_9:
(Start: 35 @6446 has 185 MA's), (43, 6464), (48, 6476), (50, 6494), (51, 6497), (52, 6512), (54, 6521), (55, 6524), (63, 6569), (69, 6611), (74, 6623), (77, 6647), (87, 6707),

Gene: Quenya_11 Start: 7781, Stop: 8044, Start Num: 35
Candidate Starts for Quenya_11:
(26, 7724), (Start: 35 @7781 has 185 MA's), (51, 7808), (52, 7823), (80, 7964),

Gene: RAP15_13 Start: 10158, Stop: 10427, Start Num: 35
Candidate Starts for RAP15_13:
(Start: 35 @10158 has 185 MA's), (51, 10209), (52, 10224), (60, 10257),

Gene: Rattail_10 Start: 7706, Stop: 7960, Start Num: 36
Candidate Starts for Rattail_10:
(11, 7448), (14, 7472), (16, 7508), (18, 7556), (28, 7664), (29, 7670), (Start: 36 @7706 has 34 MA's), (50, 7730), (59, 7778), (61, 7787), (67, 7832), (75, 7850), (80, 7877),

Gene: RcigaStruga_13 Start: 10141, Stop: 10431, Start Num: 35
Candidate Starts for RcigaStruga_13:
(4, 9655), (7, 9742), (12, 9880), (Start: 35 @10141 has 185 MA's), (47, 10165), (60, 10240), (64, 10267), (80, 10348),

Gene: RedFox_10 Start: 7655, Stop: 7909, Start Num: 36
Candidate Starts for RedFox_10:
(29, 7619), (Start: 36 @7655 has 34 MA's), (50, 7679), (58, 7724), (61, 7736), (67, 7781), (71, 7787), (75, 7799), (80, 7826),

Gene: Renna12_11 Start: 7855, Stop: 8109, Start Num: 36
Candidate Starts for Renna12_11:
(Start: 36 @7855 has 34 MA's), (50, 7879), (58, 7924), (61, 7936), (67, 7981), (71, 7987), (75, 7999), (80, 8026),

Gene: Rileysaurus_9 Start: 6441, Stop: 6731, Start Num: 35
Candidate Starts for Rileysaurus_9:

(Start: 35 @6441 has 185 MA's), (40, 6453), (43, 6459), (48, 6471), (50, 6489), (52, 6507), (54, 6516), (55, 6519), (63, 6564), (69, 6606), (74, 6618), (77, 6642),

Gene: Riovina_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for Riovina_9:
(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468), (90, 7540),

Gene: Riverdale_13 Start: 10089, Stop: 10358, Start Num: 35
Candidate Starts for Riverdale_13:
(Start: 35 @10089 has 185 MA's), (51, 10140), (52, 10155), (60, 10188),

Gene: Rollins_9 Start: 7485, Stop: 7748, Start Num: 35
Candidate Starts for Rollins_9:
(26, 7428), (Start: 35 @7485 has 185 MA's), (42, 7500), (51, 7515), (72, 7632), (83, 7692), (88, 7722),

Gene: Rona_10 Start: 7882, Stop: 8139, Start Num: 35
Candidate Starts for Rona_10:
(Start: 35 @7882 has 185 MA's), (58, 7945), (80, 8059), (86, 8104),

Gene: Rozby_13 Start: 10089, Stop: 10358, Start Num: 35
Candidate Starts for Rozby_13:
(Start: 35 @10089 has 185 MA's), (51, 10140), (52, 10155), (60, 10188),

Gene: Ruchi_11 Start: 8341, Stop: 8598, Start Num: 36
Candidate Starts for Ruchi_11:
(5, 7879), (8, 7987), (9, 8032), (18, 8188), (Start: 36 @8341 has 34 MA's), (71, 8479), (78, 8509),

Gene: SKKY_9 Start: 6477, Stop: 6767, Start Num: 35
Candidate Starts for SKKY_9:
(Start: 35 @6477 has 185 MA's), (40, 6489), (43, 6495), (48, 6507), (50, 6525), (51, 6528), (52, 6543), (54, 6552), (55, 6555), (63, 6600),

Gene: SanaSana_11 Start: 7900, Stop: 8160, Start Num: 32
Candidate Starts for SanaSana_11:
(Start: 32 @7900 has 2 MA's), (58, 7966),

Gene: SansAfet_10 Start: 7665, Stop: 7922, Start Num: 35
Candidate Starts for SansAfet_10:
(Start: 31 @7653 has 1 MA's), (Start: 35 @7665 has 185 MA's), (51, 7686), (79, 7839), (80, 7842), (82, 7857), (87, 7893),

Gene: SarBear_10 Start: 7625, Stop: 7888, Start Num: 34
Candidate Starts for SarBear_10:
(Start: 31 @7616 has 1 MA's), (Start: 34 @7625 has 23 MA's), (51, 7652), (80, 7808), (82, 7823),

Gene: Savage2526_13 Start: 10152, Stop: 10421, Start Num: 35
Candidate Starts for Savage2526_13:
(Start: 35 @10152 has 185 MA's), (51, 10203), (52, 10218), (60, 10251),

Gene: Scuttle_13 Start: 10158, Stop: 10427, Start Num: 35
Candidate Starts for Scuttle_13:
(Start: 35 @10158 has 185 MA's), (51, 10209), (52, 10224), (60, 10257),

Gene: Sergei_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Sergei_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: Shambre1_11 Start: 8534, Stop: 8782, Start Num: 41
Candidate Starts for Shambre1_11:
(Start: 41 @8534 has 1 MA's), (59, 8600), (67, 8654),

Gene: Sharkboy_10 Start: 7881, Stop: 8138, Start Num: 35
Candidate Starts for Sharkboy_10:
(Start: 35 @7881 has 185 MA's), (58, 7944), (80, 8058), (86, 8103),

Gene: Shayna_9 Start: 7487, Stop: 7753, Start Num: 34
Candidate Starts for Shayna_9:
(Start: 31 @7478 has 1 MA's), (Start: 34 @7487 has 23 MA's), (49, 7511), (51, 7517), (64, 7592), (72, 7634), (79, 7667), (89, 7733),

Gene: Shen_12 Start: 8245, Stop: 8499, Start Num: 36
Candidate Starts for Shen_12:
(19, 8116), (29, 8209), (30, 8227), (Start: 36 @8245 has 34 MA's), (50, 8269), (74, 8383), (75, 8389), (81, 8419),

Gene: SirBeanington_10 Start: 7654, Stop: 7914, Start Num: 35
Candidate Starts for SirBeanington_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (51, 7678), (80, 7834), (87, 7885),

Gene: Skylord_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Skylord_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: Slay_10 Start: 8101, Stop: 8364, Start Num: 34
Candidate Starts for Slay_10:
(Start: 31 @8092 has 1 MA's), (Start: 34 @8101 has 23 MA's), (51, 8128), (80, 8284), (82, 8299),

Gene: Softsoap_10 Start: 7654, Stop: 7911, Start Num: 35
Candidate Starts for Softsoap_10:
(Start: 31 @7642 has 1 MA's), (Start: 35 @7654 has 185 MA's), (80, 7831), (87, 7882),

Gene: Solea_11 Start: 8040, Stop: 8297, Start Num: 35
Candidate Starts for Solea_11:
(Start: 31 @8028 has 1 MA's), (Start: 35 @8040 has 185 MA's), (51, 8061), (80, 8217), (82, 8232), (87, 8268),

Gene: Solid_9 Start: 6453, Stop: 6743, Start Num: 35
Candidate Starts for Solid_9:
(Start: 35 @6453 has 185 MA's), (40, 6465), (43, 6471), (48, 6483), (50, 6501), (51, 6504), (52, 6519), (54, 6528), (55, 6531), (63, 6576), (69, 6618), (74, 6630), (77, 6654), (87, 6714),

Gene: Spartoi_9 Start: 6351, Stop: 6599, Start Num: 35
Candidate Starts for Spartoi_9:
(Start: 35 @6351 has 185 MA's), (43, 6366), (52, 6414), (80, 6540),

Gene: Squircle_10 Start: 7884, Stop: 8150, Start Num: 35

Candidate Starts for Squircle_10:
(Start: 31 @7872 has 1 MA's), (Start: 35 @7884 has 185 MA's), (49, 7908), (64, 7989), (72, 8031), (80, 8067), (82, 8082),

Gene: Stoor_10 Start: 7897, Stop: 8157, Start Num: 32
Candidate Starts for Stoor_10:
(Start: 32 @7897 has 2 MA's), (58, 7963),

Gene: Stormborn_9 Start: 6448, Stop: 6738, Start Num: 35
Candidate Starts for Stormborn_9:
(Start: 35 @6448 has 185 MA's), (40, 6460), (43, 6466), (48, 6478), (50, 6496), (51, 6499), (52, 6514), (54, 6523), (55, 6526), (63, 6571), (69, 6613), (74, 6625), (77, 6649), (87, 6709),

Gene: Stromboli_10 Start: 7898, Stop: 8161, Start Num: 34
Candidate Starts for Stromboli_10:
(Start: 34 @7898 has 23 MA's), (39, 7910), (51, 7925), (72, 8042), (80, 8081), (82, 8096),

Gene: StuartMinion_10 Start: 7681, Stop: 7935, Start Num: 36
Candidate Starts for StuartMinion_10:
(10, 7405), (13, 7444), (Start: 36 @7681 has 34 MA's), (59, 7753), (67, 7807), (74, 7819), (75, 7825), (80, 7852),

Gene: SunnyD_9 Start: 7487, Stop: 7753, Start Num: 34
Candidate Starts for SunnyD_9:
(Start: 31 @7478 has 1 MA's), (Start: 34 @7487 has 23 MA's), (49, 7511), (51, 7517), (72, 7634), (79, 7667), (89, 7733),

Gene: Supakev_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Supakev_9:
(Start: 35 @7263 has 185 MA's), (51, 7314), (60, 7362), (80, 7470),

Gene: Supernova_9 Start: 6445, Stop: 6735, Start Num: 35
Candidate Starts for Supernova_9:
(Start: 35 @6445 has 185 MA's), (40, 6457), (43, 6463), (50, 6493), (51, 6496), (52, 6511), (54, 6520), (55, 6523), (60, 6544), (63, 6568), (69, 6610), (74, 6622), (77, 6646), (87, 6706),

Gene: Suppi_13 Start: 10175, Stop: 10444, Start Num: 35
Candidate Starts for Suppi_13:
(Start: 31 @10163 has 1 MA's), (Start: 35 @10175 has 185 MA's), (43, 10193), (55, 10253), (60, 10274), (80, 10361),

Gene: Swervy_10 Start: 7625, Stop: 7888, Start Num: 34
Candidate Starts for Swervy_10:
(Start: 31 @7616 has 1 MA's), (Start: 34 @7625 has 23 MA's), (51, 7652), (80, 7808), (82, 7823),

Gene: TattModd_13 Start: 10152, Stop: 10421, Start Num: 35
Candidate Starts for TattModd_13:
(Start: 35 @10152 has 185 MA's), (51, 10203), (52, 10218), (60, 10251),

Gene: TaylorSipht_11 Start: 8123, Stop: 8377, Start Num: 36
Candidate Starts for TaylorSipht_11:
(29, 8087), (30, 8105), (Start: 36 @8123 has 34 MA's), (50, 8147), (59, 8195), (61, 8204),

Gene: Teagster_9 Start: 7487, Stop: 7753, Start Num: 34
Candidate Starts for Teagster_9:
(Start: 31 @7478 has 1 MA's), (Start: 34 @7487 has 23 MA's), (49, 7511), (51, 7517), (64, 7592), (72, 7634), (79, 7667), (89, 7733),

Gene: Temper16_9 Start: 7263, Stop: 7550, Start Num: 35
Candidate Starts for Temper16_9:
(Start: 35 @7263 has 185 MA's), (56, 7344), (60, 7362), (80, 7470), (90, 7542),

Gene: Toad24_12 Start: 8245, Stop: 8499, Start Num: 36
Candidate Starts for Toad24_12:
(19, 8116), (20, 8131), (30, 8227), (Start: 36 @8245 has 34 MA's), (50, 8269), (74, 8383), (75, 8389), (81, 8419),

Gene: TukTuk_10 Start: 7628, Stop: 7948, Start Num: 35
Candidate Starts for TukTuk_10:
(Start: 31 @7616 has 1 MA's), (Start: 35 @7628 has 185 MA's), (51, 7712), (80, 7868), (82, 7883),

Gene: Typha_17 Start: 11749, Stop: 11997, Start Num: 46
Candidate Starts for Typha_17:
(29, 11692), (Start: 46 @11749 has 5 MA's), (54, 11791), (68, 11866), (81, 11914), (88, 11965), (90, 11983),

Gene: Urla_9 Start: 7290, Stop: 7559, Start Num: 35
Candidate Starts for Urla_9:
(Start: 35 @7290 has 185 MA's), (60, 7389), (61, 7395), (80, 7476),

Gene: Vallejo_13 Start: 10090, Stop: 10359, Start Num: 35
Candidate Starts for Vallejo_13:
(Start: 35 @10090 has 185 MA's), (51, 10141), (52, 10156), (60, 10189),

Gene: Vitas_9 Start: 7425, Stop: 7688, Start Num: 35
Candidate Starts for Vitas_9:
(26, 7368), (Start: 35 @7425 has 185 MA's), (42, 7440), (51, 7455), (72, 7572), (83, 7632), (88, 7662),

Gene: Vulpecula_11 Start: 8417, Stop: 8674, Start Num: 36
Candidate Starts for Vulpecula_11:
(1, 7796), (2, 7841), (5, 7955), (8, 8063), (18, 8264), (29, 8381), (Start: 36 @8417 has 34 MA's), (78, 8585),

Gene: Vulture_9 Start: 7261, Stop: 7548, Start Num: 35
Candidate Starts for Vulture_9:
(Start: 35 @7261 has 185 MA's), (60, 7360), (80, 7468),

Gene: WalkingDead_10 Start: 7885, Stop: 8148, Start Num: 36
Candidate Starts for WalkingDead_10:
(Start: 36 @7885 has 34 MA's), (51, 7912), (80, 8068), (82, 8083),

Gene: Wawa_13 Start: 10127, Stop: 10396, Start Num: 35
Candidate Starts for Wawa_13:
(Start: 35 @10127 has 185 MA's), (51, 10178), (52, 10193), (60, 10226),

Gene: Wayne_13 Start: 10221, Stop: 10490, Start Num: 35

Candidate Starts for Wayne_13:
(Start: 31 @10209 has 1 MA's), (Start: 35 @10221 has 185 MA's), (43, 10239), (55, 10299), (60, 10320), (80, 10407),

Gene: Westrich_12 Start: 8233, Stop: 8487, Start Num: 36
Candidate Starts for Westrich_12:
(19, 8104), (20, 8119), (29, 8197), (30, 8215), (Start: 36 @8233 has 34 MA's), (50, 8257), (74, 8371), (75, 8377), (81, 8407),

Gene: WileyE_10 Start: 7752, Stop: 8009, Start Num: 36
Candidate Starts for WileyE_10:
(5, 7290), (8, 7398), (9, 7443), (18, 7599), (Start: 36 @7752 has 34 MA's), (78, 7920),

Gene: Wizzo_9 Start: 6457, Stop: 6747, Start Num: 35
Candidate Starts for Wizzo_9:
(Start: 35 @6457 has 185 MA's), (40, 6469), (43, 6475), (48, 6487), (50, 6505), (51, 6508), (52, 6523), (54, 6532), (55, 6535), (69, 6622), (74, 6634),

Gene: WonderBoy_9 Start: 7243, Stop: 7512, Start Num: 35
Candidate Starts for WonderBoy_9:
(Start: 35 @7243 has 185 MA's), (60, 7342), (80, 7429),

Gene: Zhuangyuan_12 Start: 8412, Stop: 8666, Start Num: 36
Candidate Starts for Zhuangyuan_12:
(11, 8154), (15, 8205), (19, 8283), (29, 8376), (30, 8394), (Start: 36 @8412 has 34 MA's), (45, 8424), (71, 8544), (80, 8583), (85, 8622),

Gene: Zixiang_11 Start: 8034, Stop: 8288, Start Num: 36
Candidate Starts for Zixiang_11:
(1, 7434), (5, 7593), (8, 7701), (19, 7905), (29, 7998), (30, 8016), (Start: 36 @8034 has 34 MA's), (50, 8058), (59, 8106), (75, 8178), (80, 8205),

Gene: Zorro_13 Start: 10106, Stop: 10375, Start Num: 35
Candidate Starts for Zorro_13:
(Start: 35 @10106 has 185 MA's), (51, 10157), (52, 10172), (60, 10205),