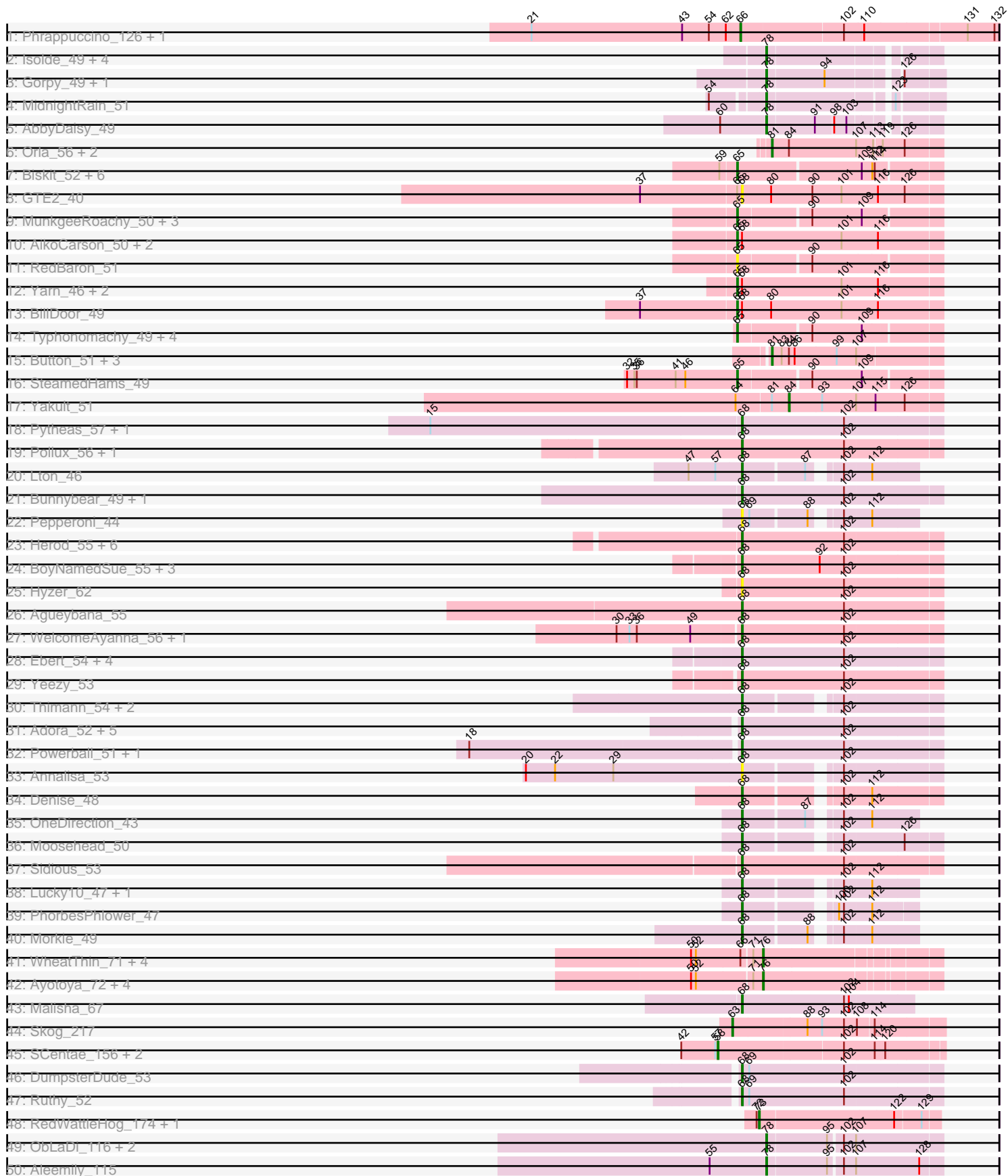
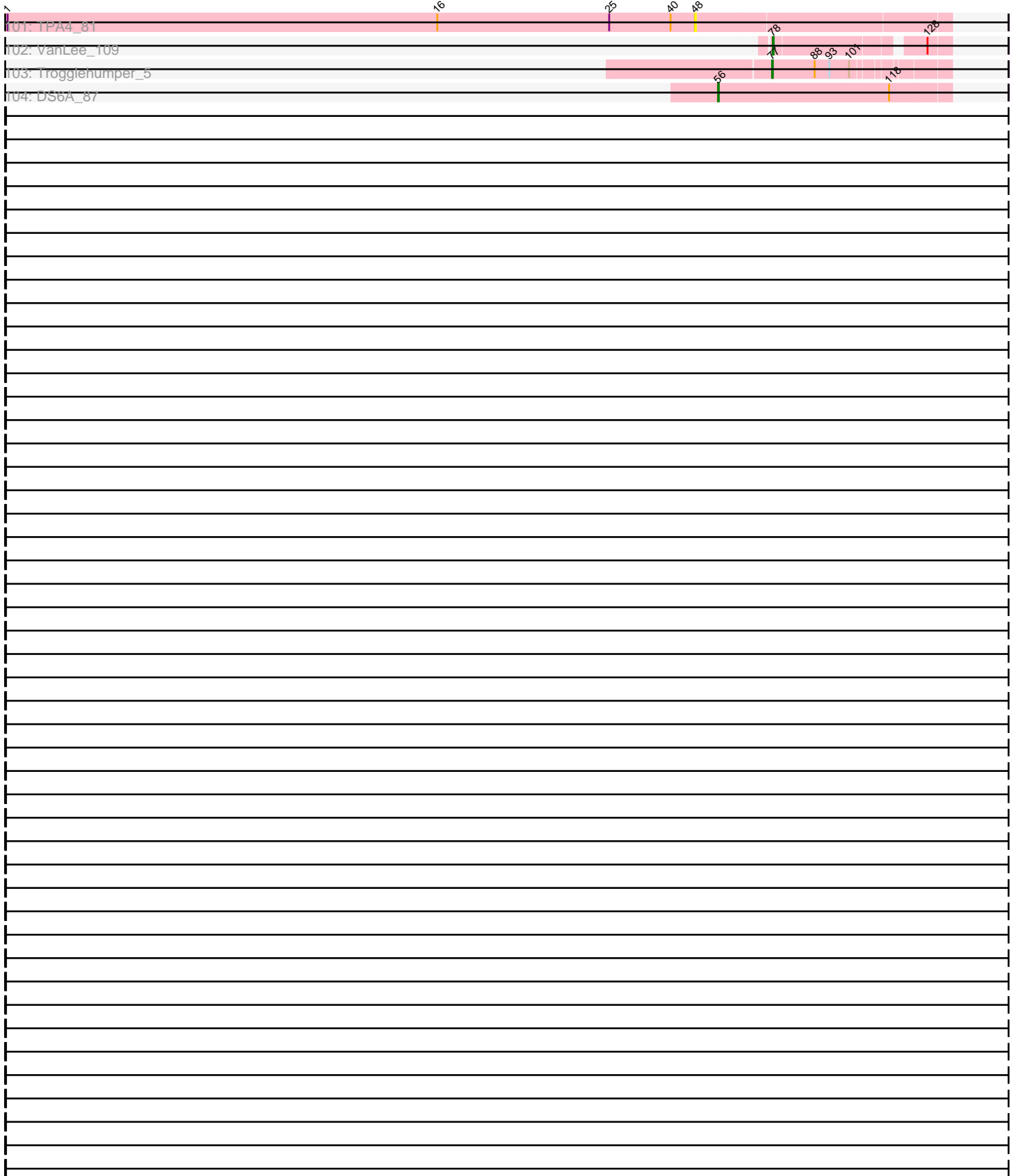


Pham 171156



Pham 171156



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 171156 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171156 has 291 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Phrappuccino_126, Settecandela_126
- Track 2 : Isolde_49, Raphaella_49, Auxilium_46, Tiff81_50, YoungHarleezy_50
- Track 3 : Gorpy_49, Sakai_48
- Track 4 : MidnightRain_51
- Track 5 : AbbyDaisy_49
- Track 6 : Orla_56, Nodigi_56, Hexbug_56
- Track 7 : Biskit_52, Troje_52, Buttrmilkdreams_52, Horseradish_52, MScarn_54, SketchMex_50, Yummy_52
- Track 8 : GTE2_40
- Track 9 : MunkgeeRoachy_50, Quasar_49, Nina_48, SweatNTears_51
- Track 10 : AikoCarson_50, Emalyn_48, Amok_50
- Track 11 : RedBaron_51
- Track 12 : Yarn_46, AndPeggy_46, Tolls_50
- Track 13 : BillDoor_49
- Track 14 : Typhonmarchy_49, Burnsey_49, Agatha_49, Axym_48, Cozz_47
- Track 15 : Button_51, Margaret_54, GiKK_53, Jamzy_53
- Track 16 : SteamedHams_49
- Track 17 : Yakult_51
- Track 18 : Pytheas_57, Jablanski_57
- Track 19 : Pollux_56, Floral_54
- Track 20 : Lton_46
- Track 21 : Bunnybear_49, Maridalia_57
- Track 22 : Pepperoni_44
- Track 23 : Herod_55, Eviarto_57, Hugley_53, Nymphadora_57, TimTam_57, PantheRoc_57, BatStarr_56
- Track 24 : BoyNamedSue_55, Marteena_52, AlumE_55, EMSquaredA_53
- Track 25 : Hyzer_62
- Track 26 : Agueybana_55
- Track 27 : WelcomeAyanna_56, ThankyouJordi_56
- Track 28 : Ebert_54, Cashline_53, BaxterFox_57, Ohgeesy_54, Madeline_54
- Track 29 : Yeezy_53
- Track 30 : Thimann_54, Easley_49, Oregano_54
- Track 31 : Adora_52, Shlim410_53, Mcklovin_51, Hortense_55, Twinkle_54, Howe_55
- Track 32 : Powerball_51, PhriskyACE_50
- Track 33 : Annalisa_53
- Track 34 : Denise_48

- Track 35 : OneDirection_43
- Track 36 : Moosehead_50
- Track 37 : Sidious_53
- Track 38 : Lucky10_47, Faith5x5_42
- Track 39 : PhorbessPhlower_47
- Track 40 : Morkie_49
- Track 41 : WheatThin_71, Brylie_71, Nadeem_71, Parada_71, Mulch_71
- Track 42 : Ayotoya_72, GrandSlam_73, Hamood_73, DelRio_72, Chop_73
- Track 43 : Malisha_67
- Track 44 : Skog_217
- Track 45 : SCentae_156, CherryTomatoes_158, Pupper_157
- Track 46 : DumpsterDude_53
- Track 47 : Ruthy_52
- Track 48 : RedWattleHog_174, Stormageddon_175
- Track 49 : ObLaDi_116, Cafasso_117, ModicumRichard_117
- Track 50 : Aleemily_115
- Track 51 : Morgana_124
- Track 52 : Boiii_63, BGlluviae_63, Jarvi_63, Twitch_63, Blizzard_63, Beezoo_65, Atiba_64, Hyperbowlee_63, Adephegia_63, Asayake_63, Ramen_64, Homura_63, Tachez_63, CaseJules_65, Spock_63, Jeckyll_63, Rosmarinus_63, QuincyRose_62, ShiaSurprise_64, Lunahalos_63, Apocalypse_66, Durfee_63, Sulley_63, Joy99_63, Zabiza_59, Tiri_64, Peel_63, Ganymede_64, Belladonna_63, Adonis_63, Piatt_63, Padfoot_63, Topper_63, Angelica_63, CREW_63, Inky_63, Capricorn_63, MeaningOfLife_64, Dalmuri_63, HedwigODU_63, Geraldini_66, ActinUp_63, BEEST_63
- Track 53 : Nibb_66
- Track 54 : Veliki_65, JAWS_64, Efra2_69, BaghaKamala_63, Zavala_66, Yunkel11_68, Mynx_65, Guanica15_68
- Track 55 : LaterM_64
- Track 56 : Stinson_65
- Track 57 : Ageofdapage_67, Emerson_65, Padpat_66
- Track 58 : Scarlett_68, KiSi_68, Oscar_67, LeMond_67
- Track 59 : Prithvi_65, Devera_71, Rapunzel97_65, BarrelRoll_64, Pokerus_63, YoureAdopted_63, TaiwanKao_66, Slimphazie_64, CrimD_65, Dole_69, Murucutumbu_65, TreyKay_65, LindNT_63, TruffulaTree_64, Illumine_69
- Track 60 : TiniBug_64, DrHayes_64, Urkel_64, SamuelLPlaqson_64, Bella96_64, Anaya_66
- Track 61 : Chris_66
- Track 62 : Shaobing_66, Peanam_66
- Track 63 : Deby_64, Jayhawk_65, CheetoDust_63
- Track 64 : LastHope_68
- Track 65 : LilPharaoh_52, SgtBeansprout_52
- Track 66 : MarkPhew_66
- Track 67 : Niklas_66
- Track 68 : Curiosium_67
- Track 69 : Megsy_66
- Track 70 : Validus_68
- Track 71 : Keshu_66
- Track 72 : ShedlockHolmes_65, Hurricane_64, Pixie_63
- Track 73 : MacnCheese_66
- Track 74 : TribbleTrouble_64
- Track 75 : Pharb_63

- Track 76 : Eponine_68, Juliette_68, Y2_64, Cheetobro_66, SamScheppers_64, Malthus_67, Taquito_65, Y10_64, Fionnbharth_66, Mitti_66, Wintermute_66, Ruthiejr_67, Chancellor_66, OmniCritical_65, JF1_66, Slarp_66
- Track 77 : Reptar3000_63, MissDaisy_63, Patt_62
- Track 78 : Larva_58, AlleyCat_59, Psycho_57, Dadosky_59
- Track 79 : OkiRoe_58, Miryou_62, Gengar_57
- Track 80 : SoSeph_58, Leston_57, Heftyboy_58, Feyre_60, Guillsminger_58, Paola_57, Thyatira_60, Waterfoul_59
- Track 81 : Agent47_57, Collard_55, InvictusManeo_55
- Track 82 : Edugator_56
- Track 83 : Omnicron_61
- Track 84 : Kratio_55
- Track 85 : Rando14_59
- Track 86 : Ximenita_69, Syra333_67
- Track 87 : Fefferhead_61, Amgine_62, Ellie_59
- Track 88 : Shadow1_68, Sunflower1121_69
- Track 89 : Tierra_67, Cain_67, Bryler_67, Phrank_67
- Track 90 : PhelpsODU_65, Unicorn_65
- Track 91 : Hammy_63
- Track 92 : Amohnition_63, DARTH_P_63
- Track 93 : Marshawn_63
- Track 94 : Krueger_68
- Track 95 : TClif_65
- Track 96 : Aminay_62
- Track 97 : Kevin1_59
- Track 98 : Hilltopfarm_91, Typha_89
- Track 99 : Bipper_99
- Track 100 : Cracklewink_99
- Track 101 : TPA4_81
- Track 102 : VanLee_109
- Track 103 : Trogglehumper_5
- Track 104 : DS6A_87

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

The start number called the most often in the published annotations is 70, it was called in 79 of the 271 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_63, Adephegia_63, Adonis_63, Ageofdapage_67, Anaya_66, Angelica_63, Apocalypse_66, Asayake_63, Atiba_64, BEEST_63, BGIlluviae_63, BaghaKamala_63, BarrelRoll_64, Beezoo_65, Bella96_64, Belladonna_63, Blizzard_63, Boiiii_63, CREW_63, Capricorn_63, CaseJules_65, CheetoDust_63, CrimD_65, Curiosium_67, Dalmuri_63, Deby_64, Devera_71, Dole_69, DrHayes_64, Durfee_63, Efra2_69, Emerson_65, Ganymede_64, Geraldini_66, Guanica15_68, HedwigODU_63, Homura_63, Hyperbowlee_63, Illumine_69, Inky_63, JAWS_64, Jarvi_63, Jayhawk_65, Jeckyll_63, Joy99_63, LaterM_64, LindNT_63, Lunahalos_63, MeaningOfLife_64, Megsy_66, Murucutumbu_65, Mynx_65, Padfoot_63, Padpat_66, Peel_63, Piatt_63, Pokerus_63, Prithvi_65, QuincyRose_62, Ramen_64, Rapunzel97_65, Rosmarinus_63, SamuelLPlaqson_64, ShiaSurprise_64,

Slimphazie_64, Spock_63, Stinson_65, Sulley_63, Tachez_63, TaiwanKao_66, TiniBug_64, Tiri_64, Topper_63, TreyKay_65, TruffulaTree_64, Twitch_63, Urkel_64, Veliki_65, YoureAdopted_63, Yunkel11_68, Zabiza_59, Zavala_66,

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

- MacnCheese_66,

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

- AbbyDaisy_49, Adora_52, Agatha_49, Agent47_57, Agueybana_55, AikoCarson_50, Aleemily_115, AlleyCat_59, AlumE_55, Amgine_62, Aminay_62, Amohntion_63, Amok_50, AndPeggy_46, Annalisa_53, Auxilium_46, Axym_48, Ayotoya_72, BatStarr_56, BaxterFox_57, BillDoor_49, Bipper_99, Biskit_52, BoyNamedSue_55, Bryler_67, Brylie_71, Bunnybear_49, Burnsey_49, Button_51, Buttrmlkdreams_52, Cafasso_117, Cain_67, Cashline_53, Chancellor_66, Cheetobro_66, CherryTomatoes_158, Chop_73, Chris_66, Collard_55, Cozz_47, Cracklewink_99, DS6A_87, Dadosky_59, DARTH_P_63, DelRio_72, Denise_48, DumpsterDude_53, EMSquaredA_53, Easley_49, Ebert_54, Edugator_56, Ellie_59, Emalyn_48, Eponine_68, Eviarto_57, Faith5x5_42, Fefferhead_61, Feyre_60, Fionnbharth_66, Floral_54, GTE2_40, Gengar_57, GiKK_53, Gorpy_49, GrandSlam_73, Guillsminger_58, Hammy_63, Hamood_73, Heftyboy_58, Herod_55, Hexbug_56, Hilltopfarm_91, Horseradish_52, Hortense_55, Howe_55, Hugley_53, Hurricane_64, Hyzer_62, InvictusManeo_55, Isolde_49, JF1_66, Jablanski_57, Jamzy_53, Juliette_68, Keshu_66, Kevin1_59, KiSi_68, Kratio_55, Krueger_68, Larva_58, LastHope_68, LeMond_67, Leston_57, LilPharaoh_52, Lton_46, Lucky10_47, MScarn_54, Madeline_54, Malisha_67, Malthus_67, Margaret_54, Maridalia_57, MarkPhew_66, Marshawn_63, Marteena_52, Mcklovin_51, MidnightRain_51, Miryou_62, MissDaisy_63, Mitti_66, ModicumRichard_117, Moosehead_50, Morgana_124, Morkie_49, Mulch_71, MunkgeeRoachy_50, Nadeem_71, Nibb_66, Niklas_66, Nina_48, Nodigi_56, Nymphadora_57, ObLaDi_116, Ohgeesy_54, OkiRoe_58, OmniCritical_65, Omnicron_61, OneDirection_43, Oregano_54, Orla_56, Oscar_67, PantheRoc_57, Paola_57, Parada_71, Patt_62, Peanam_66, Pepperoni_44, Pharb_63, PhelpsODU_65, PhorbesPhlower_47, Phrank_67, Phrappuccino_126, PhriskyACE_50, Pixie_63, Pollux_56, Powerball_51, Psycho_57, Pupper_157, Pytheas_57, Quasar_49, Rando14_59, Raphaella_49, RedBaron_51, RedWattleHog_174, Reptar3000_63, Ruthiejr_67, Ruthy_52, SCentae_156, Sakai_48, SamScheppers_64, Scarlett_68, Settecandela_126, SgtBeansprout_52, Shadow1_68, Shaobing_66, ShedlockHolmes_65, Shlim410_53, Sidious_53, SketchMex_50, Skog_217, Slarp_66, SoSeph_58, SteamedHams_49, Stormageddon_175, Sunflower1121_69, SweatNTears_51, Syra333_67, TClif_65, TPA4_81, Taquito_65, ThankyouJordi_56, Thimann_54, Thyatira_60, Tierra_67, Tiff81_50, TimTam_57, Tolls_50, TribbleTrouble_64, Trogglehumper_5, Troje_52, Twinkle_54, Typha_89, Typhonomachy_49, Unicorn_65, Validus_68, VanLee_109, Waterfoul_59, WelcomeAyanna_56, WheatThin_71, Wintermute_66, Ximenita_69, Y10_64, Y2_64, Yakult_51, Yarn_46, Yeezy_53, YoungHarleezy_50, Yummy_52,

Summary by start number:

Start 48:

- Found in 1 of 291 (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: TPA4_81 (singleton),

Start 56:

- Found in 1 of 291 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DS6A_87 (singleton),

Start 58:

- Found in 3 of 291 (1.0%) of genes in pham
- Manual Annotations of this start: 3 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes_158 (DO), Pupper_157 (DO), SCentae_156 (DO),

Start 63:

- Found in 1 of 291 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Skog_217 (DO),

Start 65:

- Found in 26 of 291 (8.9%) of genes in pham
- Manual Annotations of this start: 22 of 271
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Agatha_49 (CT), AikoCarson_50 (CT), Amok_50 (CT), AndPeggy_46 (CT), Axym_48 (CT), BillDoor_49 (CT), Biskit_52 (CT), Burnsey_49 (CT), Buttrmlkdreams_52 (CT), Cozz_47 (CT), Emalyn_48 (CT), Horseradish_52 (CT), MScarn_54 (CT), MunkgeeRoachy_50 (CT), Nina_48 (CT), Quasar_49 (CT), RedBaron_51 (CT), SketchMex_50 (CT), SteamedHams_49 (CT), SweatNTears_51 (CT), Tolls_50 (CT), Troje_52 (CT), Typhonmarchy_49 (CT), Yarn_46 (CT), Yummy_52 (CT),

Start 66:

- Found in 7 of 291 (2.4%) of genes in pham
- Manual Annotations of this start: 2 of 271
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Phrappuccino_126 (AA), Settecandela_126 (AA),

Start 68:

- Found in 60 of 291 (20.6%) of genes in pham
- Manual Annotations of this start: 46 of 271
- Called 88.3% of time when present
- Phage (with cluster) where this start called: Adora_52 (CZ4), Agueybana_55 (CZ1), AlumE_55 (CZ1), Annalisa_53 (CZ4), BatStarr_56 (CZ1), BaxterFox_57 (CZ3), BoyNamedSue_55 (CZ1), Bunnybear_49 (CZ), Cashline_53 (CY), Denise_48 (CZ5), DumpsterDude_53 (DW), EMSquaredA_53 (CY1), Easley_49 (CZ4), Ebert_54 (CZ2), Eviarto_57 (CZ1), Faith5x5_42 (CZ6), Floral_54 (CY1), GTE2_40 (CT), Herod_55 (CZ1), Hortense_55 (CZ4), Howe_55 (CZ4), Hugley_53 (CZ1), Hyzer_62 (CZ1), Jablanski_57 (CY), Lton_46 (CZ), Lucky10_47 (DH), Madeline_54 (CZ1), Malisha_67 (DN), Maridalia_57 (CZ1), Marteenaa_52 (CY1), Mcklovin_51 (CZ4), Moosehead_50 (CZ6), Morkie_49 (DH), Nymphadora_57 (CZ1), Ohgeesy_54 (CZ), OneDirection_43 (CZ6), Oregano_54 (CZ4), PantheRoc_57 (CZ3), Pepperoni_44 (CZ),

PhorbesPhlower_47 (DH), PhriskyACE_50 (CZ4), Pollux_56 (CY1), Powerball_51 (CZ4), Pytheas_57 (CY), Ruthy_52 (DW), Shlim410_53 (CZ4), Sidious_53 (CZ7), ThankyouJordi_56 (CZ1), Thimann_54 (CZ4), TimTam_57 (CZ1), Twinkle_54 (CZ4), WelcomeAyanna_56 (CZ1), Yeezy_53 (CZ3),

Start 70:

- Found in 83 of 291 (28.5%) of genes in pham
- Manual Annotations of this start: 79 of 271
- Called 98.8% of time when present
- Phage (with cluster) where this start called: ActinUp_63 (K1), Adephagia_63 (K1), Adonis_63 (K1), Ageofdapage_67 (K1), Anaya_66 (K1), Angelica_63 (K1), Apocalypse_66 (K1), Asayake_63 (K1), Atiba_64 (K1), BEEST_63 (K1), BGIlluviae_63 (K1), BaghaKamala_63 (K1), BarrelRoll_64 (K1), Beezoo_65 (K1), Bella96_64 (K1), Belladonna_63 (K1), Blizzard_63 (K1), Boiiii_63 (K1), CREW_63 (K1), Capricorn_63 (K1), CaseJules_65 (K1), CheetoDust_63 (K1), CrimD_65 (K1), Curiosium_67 (K1), Dalmuri_63 (K1), Deby_64 (K1), Devera_71 (K1), Dole_69 (K1), DrHayes_64 (K1), Durfee_63 (K1), Efra2_69 (K1), Emerson_65 (K1), Ganymede_64 (K1), Geraldini_66 (K1), Guanica15_68 (K1), HedwigODU_63 (K1), Homura_63 (K1), Hyperbowlee_63 (K1), Illumine_69 (K1), Inky_63 (K1), JAWS_64 (K1), Jarvi_63 (K1), Jayhawk_65 (K1), Jeckyll_63 (K1), Joy99_63 (K1), LaterM_64 (K1), LindNT_63 (K1), Lunahalos_63 (K1), MeaningOfLife_64 (K1), Megsy_66 (K1), Murucutumbu_65 (K1), Mynx_65 (K1), Padfoot_63 (K1), Padpat_66 (K1), Peel_63 (K1), Piatt_63 (K1), Pokerus_63 (K1), Prithvi_65 (K1), QuincyRose_62 (K1), Ramen_64 (K1), Rapunzel97_65 (K1), Rosmarinus_63 (K1), SamuelLPlaqson_64 (K1), ShiaSurprise_64 (K1), Slimphazie_64 (K1), Spock_63 (K1), Stinson_65 (K1), Sulley_63 (K1), Tachez_63 (K1), TaiwanKao_66 (K1), TiniBug_64 (K1), Tiri_64 (K1), Topper_63 (K1), TreyKay_65 (K1), TruffulaTree_64 (K1), Twitch_63 (K1), Urkel_64 (K1), Veliki_65 (K1), YoureAdopted_63 (K1), Yunkel11_68 (K1), Zabiza_59 (K1), Zavala_66 (K1),

Start 71:

- Found in 11 of 291 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Aminay_62 (K7),

Start 72:

- Found in 83 of 291 (28.5%) of genes in pham
- Manual Annotations of this start: 79 of 271
- Called 97.6% of time when present
- Phage (with cluster) where this start called: Agent47_57 (K5), AlleyCat_59 (K5), Amgine_62 (K6), Amohnition_63 (K6), Bryler_67 (K6), Cain_67 (K6), Chancellor_66 (K4), Cheetobro_66 (K4), Chris_66 (K1), Collard_55 (K5), Dadosky_59 (K5), DARTH_63 (K6), Edugator_56 (K5), Ellie_59 (K6), Eponine_68 (K4), Fefferhead_61 (K6), Feyre_60 (K5), Fionnbharth_66 (K4), Gengar_57 (K5), Guillsminger_58 (K5), Hammy_63 (K6), Heftyboy_58 (K5), Hurricane_64 (K3), InvictusManeo_55 (K5), JF1_66 (K4), Juliette_68 (K4), Keshu_66 (K3), KiSi_68 (K1), Kratio_55 (K5), Krueger_68 (K6), Larva_58 (K5), LastHope_68 (K1), LeMond_67 (K1), Leston_57 (K5), LilPharaoh_52 (K1), MacnCheese_66 (K3), Malthus_67 (K4), MarkPhew_66 (K1), Marshawn_63 (K6), Miryou_62 (K5), MissDaisy_63 (K4), Mitti_66 (K4), Nibb_66 (K1), Niklas_66 (K1), OkiRoe_58 (K5), OmniCritical_65 (K4), Omnicron_61 (K5), Oscar_67 (K1), Paola_57 (K5), Patt_62 (K4), Peanam_66 (K1), Pharb_63 (K3), PhelpsODU_65 (K6), Phrank_67 (K6), Pixie_63 (K3), Psycho_57 (K5), Rando14_59

(K5), Reptar3000_63 (K4), Ruthiejr_67 (K4), SamScheppers_64 (K4), Scarlett_68 (K1), SgtBeansprout_52 (K1), Shadow1_68 (K6), Shaobing_66 (K1), ShedlockHolmes_65 (K3), Slarp_66 (K4), SoSeph_58 (K5), Sunflower1121_69 (K6), Syra333_67 (K6), TClif_65 (K6), Taquito_65 (K4), Thyatira_60 (K5), Tierra_67 (K6), TribbleTrouble_64 (K3), Unicorn_65 (K6), Validus_68 (K1), Waterfoul_59 (K5), Wintermute_66 (K4), Ximenita_69 (K6), Y10_64 (K4), Y2_64 (K4),

Start 73:

- Found in 6 of 291 (2.1%) of genes in pham
- Manual Annotations of this start: 6 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper_99 (Y), Cracklewink_99 (Y), Hilltopfarm_91 (Y), RedWattleHog_174 (DX), Stormageddon_175 (DX), Typha_89 (Y),

Start 74:

- Found in 1 of 291 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kevin1_59 (N),

Start 76:

- Found in 10 of 291 (3.4%) of genes in pham
- Manual Annotations of this start: 9 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ayotoya_72 (DI), Brylie_71 (DI), Chop_73 (DI), DelRio_72 (DI), GrandSlam_73 (DI), Hamood_73 (DI), Mulch_71 (DI), Nadeem_71 (DI), Parada_71 (DI), WheatThin_71 (DI),

Start 77:

- Found in 1 of 291 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trogglehumper_5 (singleton),

Start 78:

- Found in 15 of 291 (5.2%) of genes in pham
- Manual Annotations of this start: 12 of 271
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_49 (AY), Aleemily_115 (DZ), Auxilium_46 (AY), Cafasso_117 (DZ), Gorpy_49 (AY), Isolde_49 (AY), MidnightRain_51 (AY), ModicumRichard_117 (DZ), Morgana_124 (DZ), ObLaDi_116 (DZ), Raphaella_49 (AY), Sakai_48 (AY), Tiff81_50 (AY), VanLee_109 (singleton), YoungHarleezy_50 (AY),

Start 81:

- Found in 8 of 291 (2.7%) of genes in pham
- Manual Annotations of this start: 7 of 271
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Button_51 (CT), GiKK_53 (CT), Hexbug_56 (CT), Jamzy_53 (CT), Margaret_54 (CT), Nodigi_56 (CT), Orla_56 (CT),

Start 84:

- Found in 8 of 291 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 271
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Yakult_51 (CT),

Summary by clusters:

There are 29 clusters represented in this pham: DN, DO, singleton, K5, DH, DI, CZ2, CZ3, CZ1, CZ6, CZ7, CZ4, CZ5, K3, AY, K1, DZ, K6, DX, K4, DW, AA, CY1, N, CZ, CY, Y, CT, K7,

Info for manual annotations of cluster AA:

- Start number 66 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AY:

- Start number 78 was manually annotated 7 times for cluster AY.

Info for manual annotations of cluster CT:

- Start number 65 was manually annotated 22 times for cluster CT.
- Start number 81 was manually annotated 7 times for cluster CT.
- Start number 84 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster CY:

- Start number 68 was manually annotated 3 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 68 was manually annotated 4 times for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 68 was manually annotated 3 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 68 was manually annotated 12 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 68 was manually annotated 1 time for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 68 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 68 was manually annotated 10 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 68 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 68 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 68 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DH:

- Start number 68 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DI:

- Start number 76 was manually annotated 9 times for cluster DI.

Info for manual annotations of cluster DN:

- Start number 68 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DO:

- Start number 58 was manually annotated 3 times for cluster DO.
- Start number 63 was manually annotated 1 time for cluster DO.

Info for manual annotations of cluster DW:

- Start number 68 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster DX:

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

Info for manual annotations of cluster DZ:

- Start number 78 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster K1:

- Start number 70 was manually annotated 79 times for cluster K1.
- Start number 72 was manually annotated 14 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 72 was manually annotated 7 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 72 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 72 was manually annotated 21 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 72 was manually annotated 18 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 71 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster N:

- Start number 74 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster Y:

- Start number 73 was manually annotated 4 times for cluster Y.

Gene Information:

Gene: AbbyDaisy_49 Start: 31179, Stop: 31364, Start Num: 78

Candidate Starts for AbbyDaisy_49:

(60, 31122), (Start: 78 @31179 has 12 MA's), (91, 31236), (98, 31257), (103, 31272),

Gene: ActinUp_63 Start: 42440, Stop: 42655, Start Num: 70
Candidate Starts for ActinUp_63:
(Start: 70 @42440 has 79 MA's), (94, 42527), (97, 42536),

Gene: Adephagia_63 Start: 42477, Stop: 42692, Start Num: 70
Candidate Starts for Adephagia_63:
(Start: 70 @42477 has 79 MA's), (94, 42564), (97, 42573),

Gene: Adonis_63 Start: 42712, Stop: 42927, Start Num: 70
Candidate Starts for Adonis_63:
(Start: 70 @42712 has 79 MA's), (94, 42799), (97, 42808),

Gene: Adora_52 Start: 38735, Stop: 38977, Start Num: 68
Candidate Starts for Adora_52:
(Start: 68 @38735 has 46 MA's), (102, 38861),

Gene: Agatha_49 Start: 36030, Stop: 35797, Start Num: 65
Candidate Starts for Agatha_49:
(Start: 65 @36030 has 22 MA's), (90, 35946), (109, 35886),

Gene: Agent47_57 Start: 39612, Stop: 39824, Start Num: 72
Candidate Starts for Agent47_57:
(51, 39537), (53, 39546), (55, 39558), (Start: 72 @39612 has 79 MA's), (82, 39630), (94, 39690), (102, 39714), (103, 39717), (111, 39744), (124, 39771), (130, 39819),

Gene: Ageofdapage_67 Start: 43868, Stop: 44083, Start Num: 70
Candidate Starts for Ageofdapage_67:
(Start: 70 @43868 has 79 MA's), (94, 43955), (97, 43964),

Gene: Agueybana_55 Start: 39414, Stop: 39656, Start Num: 68
Candidate Starts for Agueybana_55:
(Start: 68 @39414 has 46 MA's), (102, 39540),

Gene: AikoCarson_50 Start: 36349, Stop: 36098, Start Num: 65
Candidate Starts for AikoCarson_50:
(Start: 65 @36349 has 22 MA's), (Start: 68 @36343 has 46 MA's), (101, 36220), (116, 36175),

Gene: Aleemily_115 Start: 64180, Stop: 63974, Start Num: 78
Candidate Starts for Aleemily_115:
(55, 64249), (Start: 78 @64180 has 12 MA's), (95, 64108), (102, 64093), (107, 64078), (128, 64000),

Gene: AlleyCat_59 Start: 39910, Stop: 40122, Start Num: 72
Candidate Starts for AlleyCat_59:
(Start: 72 @39910 has 79 MA's), (94, 39988), (102, 40012), (103, 40015), (111, 40042), (124, 40069),

Gene: AlumE_55 Start: 39196, Stop: 39438, Start Num: 68
Candidate Starts for AlumE_55:
(Start: 68 @39196 has 46 MA's), (92, 39292), (102, 39322),

Gene: Amgine_62 Start: 43547, Stop: 43759, Start Num: 72
Candidate Starts for Amgine_62:
(Start: 72 @43547 has 79 MA's), (94, 43628), (97, 43637),

Gene: Aminay_62 Start: 41845, Stop: 42069, Start Num: 71

Candidate Starts for Aminay_62:

(Start: 71 @41845 has 1 MA's), (93, 41926), (96, 41935), (103, 41956), (126, 42025),

Gene: Amohnition_63 Start: 43082, Stop: 43294, Start Num: 72

Candidate Starts for Amohnition_63:

(2, 42395), (5, 42482), (7, 42530), (8, 42557), (9, 42581), (12, 42623), (27, 42905), (Start: 72 @43082 has 79 MA's), (94, 43163), (97, 43172), (126, 43247),

Gene: Amok_50 Start: 36274, Stop: 36023, Start Num: 65

Candidate Starts for Amok_50:

(Start: 65 @36274 has 22 MA's), (Start: 68 @36268 has 46 MA's), (101, 36145), (116, 36100),

Gene: Anaya_66 Start: 43420, Stop: 43638, Start Num: 70

Candidate Starts for Anaya_66:

(Start: 70 @43420 has 79 MA's), (94, 43507), (97, 43516),

Gene: AndPeggy_46 Start: 35560, Stop: 35309, Start Num: 65

Candidate Starts for AndPeggy_46:

(Start: 65 @35560 has 22 MA's), (Start: 68 @35554 has 46 MA's), (101, 35431), (116, 35386),

Gene: Angelica_63 Start: 42629, Stop: 42844, Start Num: 70

Candidate Starts for Angelica_63:

(Start: 70 @42629 has 79 MA's), (94, 42716), (97, 42725),

Gene: Annalisa_53 Start: 35580, Stop: 35795, Start Num: 68

Candidate Starts for Annalisa_53:

(20, 35316), (22, 35352), (29, 35424), (Start: 68 @35580 has 46 MA's), (102, 35679),

Gene: Apocalypse_66 Start: 43395, Stop: 43610, Start Num: 70

Candidate Starts for Apocalypse_66:

(Start: 70 @43395 has 79 MA's), (94, 43482), (97, 43491),

Gene: Asayake_63 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for Asayake_63:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Atiba_64 Start: 42440, Stop: 42655, Start Num: 70

Candidate Starts for Atiba_64:

(Start: 70 @42440 has 79 MA's), (94, 42527), (97, 42536),

Gene: Auxilium_46 Start: 28442, Stop: 28633, Start Num: 78

Candidate Starts for Auxilium_46:

(Start: 78 @28442 has 12 MA's),

Gene: Axym_48 Start: 35927, Stop: 35694, Start Num: 65

Candidate Starts for Axym_48:

(Start: 65 @35927 has 22 MA's), (90, 35843), (109, 35783),

Gene: Ayotoya_72 Start: 48939, Stop: 49139, Start Num: 76

Candidate Starts for Ayotoya_72:

(50, 48855), (52, 48861), (Start: 71 @48927 has 1 MA's), (Start: 76 @48939 has 9 MA's),

Gene: BEEST_63 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for BEEST_63:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: BGlluviae_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for BGlluviae_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: BaghaKamala_63 Start: 42253, Stop: 42471, Start Num: 70

Candidate Starts for BaghaKamala_63:

(44, 42175), (Start: 70 @42253 has 79 MA's), (94, 42340), (97, 42349),

Gene: BarrelRoll_64 Start: 42877, Stop: 43092, Start Num: 70

Candidate Starts for BarrelRoll_64:

(45, 42799), (Start: 70 @42877 has 79 MA's), (94, 42964), (97, 42973),

Gene: BatStarr_56 Start: 40720, Stop: 40962, Start Num: 68

Candidate Starts for BatStarr_56:

(Start: 68 @40720 has 46 MA's), (102, 40846),

Gene: BaxterFox_57 Start: 40474, Stop: 40716, Start Num: 68

Candidate Starts for BaxterFox_57:

(Start: 68 @40474 has 46 MA's), (102, 40600),

Gene: Beezoo_65 Start: 43389, Stop: 43604, Start Num: 70

Candidate Starts for Beezoo_65:

(Start: 70 @43389 has 79 MA's), (94, 43476), (97, 43485),

Gene: Bella96_64 Start: 43173, Stop: 43388, Start Num: 70

Candidate Starts for Bella96_64:

(Start: 70 @43173 has 79 MA's), (94, 43260), (97, 43269),

Gene: Belladonna_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for Belladonna_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: BillDoor_49 Start: 35229, Stop: 34978, Start Num: 65

Candidate Starts for BillDoor_49:

(37, 35346), (Start: 65 @35229 has 22 MA's), (Start: 68 @35223 has 46 MA's), (80, 35187), (101, 35100), (116, 35055),

Gene: Bipper_99 Start: 62157, Stop: 62378, Start Num: 73

Candidate Starts for Bipper_99:

(28, 61980), (38, 62025), (39, 62028), (43, 62067), (61, 62115), (Start: 73 @62157 has 6 MA's), (85, 62193),

Gene: Biskit_52 Start: 36207, Stop: 35971, Start Num: 65

Candidate Starts for Biskit_52:

(59, 36225), (Start: 65 @36207 has 22 MA's), (109, 36060), (112, 36048), (114, 36045),

Gene: Blizzard_63 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for Blizzard_63:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Boiiii_63 Start: 42794, Stop: 43009, Start Num: 70

Candidate Starts for Boiiii_63:

(Start: 70 @42794 has 79 MA's), (94, 42881), (97, 42890),

Gene: BoyNamedSue_55 Start: 39196, Stop: 39438, Start Num: 68

Candidate Starts for BoyNamedSue_55:

(Start: 68 @39196 has 46 MA's), (92, 39292), (102, 39322),

Gene: Bryler_67 Start: 42423, Stop: 42635, Start Num: 72

Candidate Starts for Bryler_67:

(3, 41757), (4, 41781), (6, 41856), (14, 42009), (26, 42240), (Start: 72 @42423 has 79 MA's), (94, 42504), (97, 42513),

Gene: Brylie_71 Start: 47955, Stop: 48155, Start Num: 76

Candidate Starts for Brylie_71:

(50, 47871), (52, 47877), (Start: 66 @47931 has 2 MA's), (Start: 71 @47943 has 1 MA's), (Start: 76 @47955 has 9 MA's),

Gene: Bunnybear_49 Start: 37204, Stop: 37446, Start Num: 68

Candidate Starts for Bunnybear_49:

(Start: 68 @37204 has 46 MA's), (102, 37330),

Gene: Burnsey_49 Start: 36021, Stop: 35788, Start Num: 65

Candidate Starts for Burnsey_49:

(Start: 65 @36021 has 22 MA's), (90, 35937), (109, 35877),

Gene: Button_51 Start: 36058, Stop: 35855, Start Num: 81

Candidate Starts for Button_51:

(Start: 81 @36058 has 7 MA's), (83, 36046), (Start: 84 @36037 has 1 MA's), (86, 36031), (99, 35980), (107, 35956),

Gene: Buttrmlkdreams_52 Start: 36654, Stop: 36418, Start Num: 65

Candidate Starts for Buttrmlkdreams_52:

(59, 36672), (Start: 65 @36654 has 22 MA's), (109, 36507), (112, 36495), (114, 36492),

Gene: CREW_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for CREW_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: Cafasso_117 Start: 64785, Stop: 64579, Start Num: 78

Candidate Starts for Cafasso_117:

(Start: 78 @64785 has 12 MA's), (95, 64713), (102, 64698), (107, 64683),

Gene: Cain_67 Start: 42411, Stop: 42623, Start Num: 72

Candidate Starts for Cain_67:

(3, 41745), (4, 41769), (6, 41844), (14, 41997), (26, 42228), (Start: 72 @42411 has 79 MA's), (94, 42492), (97, 42501),

Gene: Capricorn_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for Capricorn_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: CaseJules_65 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for CaseJules_65:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Cashline_53 Start: 39714, Stop: 39956, Start Num: 68

Candidate Starts for Cashline_53:

(Start: 68 @39714 has 46 MA's), (102, 39840),

Gene: Chancellor_66 Start: 41921, Stop: 42139, Start Num: 72

Candidate Starts for Chancellor_66:

(31, 41762), (34, 41771), (Start: 72 @41921 has 79 MA's), (106, 42038), (120, 42074), (125, 42089),

Gene: CheetoDust_63 Start: 42300, Stop: 42518, Start Num: 70

Candidate Starts for CheetoDust_63:

(Start: 70 @42300 has 79 MA's), (94, 42387), (97, 42396),

Gene: Cheetobro_66 Start: 41918, Stop: 42136, Start Num: 72

Candidate Starts for Cheetobro_66:

(31, 41759), (34, 41768), (Start: 72 @41918 has 79 MA's), (106, 42035), (120, 42071), (125, 42086),

Gene: CherryTomatoes_158 Start: 111644, Stop: 111907, Start Num: 58

Candidate Starts for CherryTomatoes_158:

(42, 111599), (57, 111641), (Start: 58 @111644 has 3 MA's), (102, 111794), (114, 111830), (120, 111842),

Gene: Chop_73 Start: 49004, Stop: 49204, Start Num: 76

Candidate Starts for Chop_73:

(50, 48920), (52, 48926), (Start: 71 @48992 has 1 MA's), (Start: 76 @49004 has 9 MA's),

Gene: Chris_66 Start: 43655, Stop: 43864, Start Num: 72

Candidate Starts for Chris_66:

(11, 43181), (Start: 72 @43655 has 79 MA's), (89, 43718), (94, 43736), (97, 43745), (105, 43769),

Gene: Collard_55 Start: 39573, Stop: 39785, Start Num: 72

Candidate Starts for Collard_55:

(51, 39498), (53, 39507), (55, 39519), (Start: 72 @39573 has 79 MA's), (82, 39591), (94, 39651), (102, 39675), (103, 39678), (111, 39705), (124, 39732), (130, 39780),

Gene: Cozz_47 Start: 35618, Stop: 35385, Start Num: 65

Candidate Starts for Cozz_47:

(Start: 65 @35618 has 22 MA's), (90, 35534), (109, 35474),

Gene: Cracklewink_99 Start: 61392, Stop: 61613, Start Num: 73

Candidate Starts for Cracklewink_99:

(28, 61215), (38, 61260), (39, 61263), (43, 61302), (61, 61350), (Start: 73 @61392 has 6 MA's), (79, 61404), (85, 61428),

Gene: CrimD_65 Start: 43416, Stop: 43631, Start Num: 70

Candidate Starts for CrimD_65:

(45, 43338), (Start: 70 @43416 has 79 MA's), (94, 43503), (97, 43512),

Gene: Curiosium_67 Start: 42105, Stop: 42323, Start Num: 70

Candidate Starts for Curiosium_67:

(Start: 70 @42105 has 79 MA's), (75, 42117), (94, 42192), (97, 42201),

Gene: DS6A_87 Start: 56210, Stop: 56485, Start Num: 56

Candidate Starts for DS6A_87:

(Start: 56 @56210 has 1 MA's), (118, 56414),

Gene: Dadosky_59 Start: 39912, Stop: 40124, Start Num: 72

Candidate Starts for Dadosky_59:

(Start: 72 @39912 has 79 MA's), (94, 39990), (102, 40014), (103, 40017), (111, 40044), (124, 40071),

Gene: Dalmuri_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for Dalmuri_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: DarthP_63 Start: 42936, Stop: 43148, Start Num: 72

Candidate Starts for DarthP_63:

(2, 42249), (5, 42336), (7, 42384), (8, 42411), (9, 42435), (12, 42477), (27, 42759), (Start: 72 @42936 has 79 MA's), (94, 43017), (97, 43026), (126, 43101),

Gene: Deby_64 Start: 43078, Stop: 43293, Start Num: 70

Candidate Starts for Deby_64:

(Start: 70 @43078 has 79 MA's), (94, 43165), (97, 43174),

Gene: DelRio_72 Start: 49046, Stop: 49246, Start Num: 76

Candidate Starts for DelRio_72:

(50, 48962), (52, 48968), (Start: 71 @49034 has 1 MA's), (Start: 76 @49046 has 9 MA's),

Gene: Denise_48 Start: 33091, Stop: 33306, Start Num: 68

Candidate Starts for Denise_48:

(Start: 68 @33091 has 46 MA's), (102, 33190), (112, 33223),

Gene: Devera_71 Start: 44431, Stop: 44646, Start Num: 70

Candidate Starts for Devera_71:

(45, 44353), (Start: 70 @44431 has 79 MA's), (94, 44518), (97, 44527),

Gene: Dole_69 Start: 44434, Stop: 44649, Start Num: 70

Candidate Starts for Dole_69:

(45, 44356), (Start: 70 @44434 has 79 MA's), (94, 44521), (97, 44530),

Gene: DrHayes_64 Start: 43328, Stop: 43543, Start Num: 70

Candidate Starts for DrHayes_64:

(Start: 70 @43328 has 79 MA's), (94, 43415), (97, 43424),

Gene: DumpsterDude_53 Start: 41558, Stop: 41800, Start Num: 68

Candidate Starts for DumpsterDude_53:

(Start: 68 @41558 has 46 MA's), (69, 41567), (102, 41684),

Gene: Durfee_63 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for Durfee_63:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: EMSquaredA_53 Start: 38371, Stop: 38613, Start Num: 68

Candidate Starts for EMSquaredA_53:
(Start: 68 @38371 has 46 MA's), (92, 38467), (102, 38497),

Gene: Easley_49 Start: 35528, Stop: 35743, Start Num: 68
Candidate Starts for Easley_49:
(Start: 68 @35528 has 46 MA's), (102, 35627),

Gene: Ebert_54 Start: 34571, Stop: 34813, Start Num: 68
Candidate Starts for Ebert_54:
(Start: 68 @34571 has 46 MA's), (102, 34697),

Gene: Edugator_56 Start: 41333, Stop: 41545, Start Num: 72
Candidate Starts for Edugator_56:
(Start: 72 @41333 has 79 MA's), (82, 41351), (94, 41411), (102, 41435), (103, 41438), (111, 41465),
(124, 41492), (130, 41540),

Gene: Efra2_69 Start: 43158, Stop: 43376, Start Num: 70
Candidate Starts for Efra2_69:
(44, 43080), (Start: 70 @43158 has 79 MA's), (94, 43245), (97, 43254),

Gene: Ellie_59 Start: 42407, Stop: 42619, Start Num: 72
Candidate Starts for Ellie_59:
(Start: 72 @42407 has 79 MA's), (94, 42488), (97, 42497),

Gene: Emalyn_48 Start: 35066, Stop: 34815, Start Num: 65
Candidate Starts for Emalyn_48:
(Start: 65 @35066 has 22 MA's), (Start: 68 @35060 has 46 MA's), (101, 34937), (116, 34892),

Gene: Emerson_65 Start: 42909, Stop: 43127, Start Num: 70
Candidate Starts for Emerson_65:
(Start: 70 @42909 has 79 MA's), (94, 42996), (97, 43005),

Gene: Eponine_68 Start: 42764, Stop: 42982, Start Num: 72
Candidate Starts for Eponine_68:
(31, 42605), (34, 42614), (Start: 72 @42764 has 79 MA's), (106, 42881), (120, 42917), (125, 42932),

Gene: Eviarto_57 Start: 40695, Stop: 40937, Start Num: 68
Candidate Starts for Eviarto_57:
(Start: 68 @40695 has 46 MA's), (102, 40821),

Gene: Faith5x5_42 Start: 30278, Stop: 30463, Start Num: 68
Candidate Starts for Faith5x5_42:
(Start: 68 @30278 has 46 MA's), (102, 30377), (112, 30410),

Gene: Fefferhead_61 Start: 42316, Stop: 42528, Start Num: 72
Candidate Starts for Fefferhead_61:
(Start: 72 @42316 has 79 MA's), (94, 42397), (97, 42406),

Gene: Feyre_60 Start: 43292, Stop: 43504, Start Num: 72
Candidate Starts for Feyre_60:
(Start: 72 @43292 has 79 MA's), (94, 43370), (102, 43394), (103, 43397), (116, 43430), (124, 43451),
(128, 43478),

Gene: Fionnbharth_66 Start: 42162, Stop: 42380, Start Num: 72
Candidate Starts for Fionnbharth_66:
(31, 42003), (34, 42012), (Start: 72 @42162 has 79 MA's), (106, 42279), (120, 42315), (125, 42330),

Gene: Floral_54 Start: 40277, Stop: 40519, Start Num: 68
Candidate Starts for Floral_54:
(Start: 68 @40277 has 46 MA's), (102, 40403),

Gene: GTE2_40 Start: 35662, Stop: 35417, Start Num: 68
Candidate Starts for GTE2_40:
(37, 35785), (Start: 65 @35668 has 22 MA's), (Start: 68 @35662 has 46 MA's), (80, 35626), (90, 35575), (101, 35539), (116, 35494), (126, 35461),

Gene: Ganymede_64 Start: 42817, Stop: 43032, Start Num: 70
Candidate Starts for Ganymede_64:
(Start: 70 @42817 has 79 MA's), (94, 42904), (97, 42913),

Gene: Gengar_57 Start: 41311, Stop: 41523, Start Num: 72
Candidate Starts for Gengar_57:
(Start: 72 @41311 has 79 MA's), (94, 41389), (102, 41413), (103, 41416), (111, 41443), (124, 41470), (128, 41497),

Gene: Geraldini_66 Start: 43474, Stop: 43689, Start Num: 70
Candidate Starts for Geraldini_66:
(Start: 70 @43474 has 79 MA's), (94, 43561), (97, 43570),

Gene: GiKK_53 Start: 36382, Stop: 36179, Start Num: 81
Candidate Starts for GiKK_53:
(Start: 81 @36382 has 7 MA's), (83, 36370), (Start: 84 @36361 has 1 MA's), (86, 36355), (99, 36304), (107, 36280),

Gene: Gorpy_49 Start: 31480, Stop: 31674, Start Num: 78
Candidate Starts for Gorpy_49:
(Start: 78 @31480 has 12 MA's), (94, 31549), (126, 31627),

Gene: GrandSlam_73 Start: 49004, Stop: 49204, Start Num: 76
Candidate Starts for GrandSlam_73:
(50, 48920), (52, 48926), (Start: 71 @48992 has 1 MA's), (Start: 76 @49004 has 9 MA's),

Gene: Guanica15_68 Start: 42899, Stop: 43117, Start Num: 70
Candidate Starts for Guanica15_68:
(44, 42821), (Start: 70 @42899 has 79 MA's), (94, 42986), (97, 42995),

Gene: Guillsminger_58 Start: 41282, Stop: 41494, Start Num: 72
Candidate Starts for Guillsminger_58:
(Start: 72 @41282 has 79 MA's), (94, 41360), (102, 41384), (103, 41387), (116, 41420), (124, 41441), (128, 41468),

Gene: Hammy_63 Start: 42924, Stop: 43136, Start Num: 72
Candidate Starts for Hammy_63:
(27, 42747), (Start: 72 @42924 has 79 MA's), (94, 43005), (97, 43014), (126, 43089),

Gene: Hamood_73 Start: 49004, Stop: 49204, Start Num: 76

Candidate Starts for Hamood_73:
(50, 48920), (52, 48926), (Start: 71 @48992 has 1 MA's), (Start: 76 @49004 has 9 MA's),

Gene: HedwigODU_63 Start: 42440, Stop: 42655, Start Num: 70
Candidate Starts for HedwigODU_63:
(Start: 70 @42440 has 79 MA's), (94, 42527), (97, 42536),

Gene: Heftyboy_58 Start: 41654, Stop: 41866, Start Num: 72
Candidate Starts for Heftyboy_58:
(Start: 72 @41654 has 79 MA's), (94, 41732), (102, 41756), (103, 41759), (116, 41792), (124, 41813),
(128, 41840),

Gene: Herod_55 Start: 40739, Stop: 40981, Start Num: 68
Candidate Starts for Herod_55:
(Start: 68 @40739 has 46 MA's), (102, 40865),

Gene: Hexbug_56 Start: 38441, Stop: 38238, Start Num: 81
Candidate Starts for Hexbug_56:
(Start: 81 @38441 has 7 MA's), (Start: 84 @38420 has 1 MA's), (107, 38339), (113, 38318), (119,
38309), (126, 38282),

Gene: Hilltopfarm_91 Start: 59257, Stop: 59478, Start Num: 73
Candidate Starts for Hilltopfarm_91:
(Start: 73 @59257 has 6 MA's), (85, 59293), (91, 59323),

Gene: Homura_63 Start: 42595, Stop: 42810, Start Num: 70
Candidate Starts for Homura_63:
(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: Horseradish_52 Start: 36140, Stop: 35904, Start Num: 65
Candidate Starts for Horseradish_52:
(59, 36158), (Start: 65 @36140 has 22 MA's), (109, 35993), (112, 35981), (114, 35978),

Gene: Hortense_55 Start: 40090, Stop: 40332, Start Num: 68
Candidate Starts for Hortense_55:
(Start: 68 @40090 has 46 MA's), (102, 40216),

Gene: Howe_55 Start: 40090, Stop: 40332, Start Num: 68
Candidate Starts for Howe_55:
(Start: 68 @40090 has 46 MA's), (102, 40216),

Gene: Hugley_53 Start: 40719, Stop: 40961, Start Num: 68
Candidate Starts for Hugley_53:
(Start: 68 @40719 has 46 MA's), (102, 40845),

Gene: Hurricane_64 Start: 42910, Stop: 43122, Start Num: 72
Candidate Starts for Hurricane_64:
(Start: 72 @42910 has 79 MA's), (97, 43000), (126, 43075),

Gene: Hyperbowlee_63 Start: 42792, Stop: 43007, Start Num: 70
Candidate Starts for Hyperbowlee_63:
(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Hyzer_62 Start: 42111, Stop: 42353, Start Num: 68
Candidate Starts for Hyzer_62:
(Start: 68 @42111 has 46 MA's), (102, 42237),

Gene: Illumine_69 Start: 44433, Stop: 44648, Start Num: 70
Candidate Starts for Illumine_69:
(45, 44355), (Start: 70 @44433 has 79 MA's), (94, 44520), (97, 44529),

Gene: Inky_63 Start: 42595, Stop: 42810, Start Num: 70
Candidate Starts for Inky_63:
(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: InvictusManeo_55 Start: 39616, Stop: 39828, Start Num: 72
Candidate Starts for InvictusManeo_55:
(51, 39541), (53, 39550), (55, 39562), (Start: 72 @39616 has 79 MA's), (82, 39634), (94, 39694), (102, 39718), (103, 39721), (111, 39748), (124, 39775), (130, 39823),

Gene: Isolde_49 Start: 30525, Stop: 30716, Start Num: 78
Candidate Starts for Isolde_49:
(Start: 78 @30525 has 12 MA's),

Gene: JAWS_64 Start: 42868, Stop: 43086, Start Num: 70
Candidate Starts for JAWS_64:
(44, 42790), (Start: 70 @42868 has 79 MA's), (94, 42955), (97, 42964),

Gene: JF1_66 Start: 42079, Stop: 42297, Start Num: 72
Candidate Starts for JF1_66:
(31, 41920), (34, 41929), (Start: 72 @42079 has 79 MA's), (106, 42196), (120, 42232), (125, 42247),

Gene: Jablanski_57 Start: 41777, Stop: 42019, Start Num: 68
Candidate Starts for Jablanski_57:
(15, 41396), (Start: 68 @41777 has 46 MA's), (102, 41903),

Gene: Jamzy_53 Start: 36362, Stop: 36159, Start Num: 81
Candidate Starts for Jamzy_53:
(Start: 81 @36362 has 7 MA's), (83, 36350), (Start: 84 @36341 has 1 MA's), (86, 36335), (99, 36284), (107, 36260),

Gene: Jarvi_63 Start: 42595, Stop: 42810, Start Num: 70
Candidate Starts for Jarvi_63:
(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: Jayhawk_65 Start: 42937, Stop: 43152, Start Num: 70
Candidate Starts for Jayhawk_65:
(Start: 70 @42937 has 79 MA's), (94, 43024), (97, 43033),

Gene: Jeckyll_63 Start: 42595, Stop: 42810, Start Num: 70
Candidate Starts for Jeckyll_63:
(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: Joy99_63 Start: 42524, Stop: 42739, Start Num: 70
Candidate Starts for Joy99_63:
(Start: 70 @42524 has 79 MA's), (94, 42611), (97, 42620),

Gene: Juliette_68 Start: 42226, Stop: 42444, Start Num: 72

Candidate Starts for Juliette_68:

(31, 42067), (34, 42076), (Start: 72 @42226 has 79 MA's), (106, 42343), (120, 42379), (125, 42394),

Gene: Keshu_66 Start: 43008, Stop: 43220, Start Num: 72

Candidate Starts for Keshu_66:

(26, 42825), (Start: 72 @43008 has 79 MA's), (97, 43098), (126, 43173),

Gene: Kevin1_59 Start: 36836, Stop: 37027, Start Num: 74

Candidate Starts for Kevin1_59:

(Start: 74 @36836 has 1 MA's), (120, 36968),

Gene: KiSi_68 Start: 43636, Stop: 43845, Start Num: 72

Candidate Starts for KiSi_68:

(Start: 72 @43636 has 79 MA's), (82, 43657), (89, 43699), (94, 43717), (97, 43726), (105, 43750),

Gene: Kratio_55 Start: 39352, Stop: 39564, Start Num: 72

Candidate Starts for Kratio_55:

(10, 38872), (17, 38959), (19, 39010), (23, 39118), (24, 39124), (51, 39277), (53, 39286), (55, 39298),
(Start: 72 @39352 has 79 MA's), (82, 39370), (102, 39454), (103, 39457), (111, 39484), (124, 39511),
(130, 39559),

Gene: Krueger_68 Start: 42699, Stop: 42911, Start Num: 72

Candidate Starts for Krueger_68:

(26, 42516), (Start: 72 @42699 has 79 MA's), (94, 42780), (97, 42789), (127, 42873),

Gene: Larva_58 Start: 40784, Stop: 40996, Start Num: 72

Candidate Starts for Larva_58:

(Start: 72 @40784 has 79 MA's), (94, 40862), (102, 40886), (103, 40889), (111, 40916), (124, 40943),

Gene: LastHope_68 Start: 42025, Stop: 42237, Start Num: 72

Candidate Starts for LastHope_68:

(Start: 72 @42025 has 79 MA's), (94, 42106), (97, 42115),

Gene: LaterM_64 Start: 43287, Stop: 43502, Start Num: 70

Candidate Starts for LaterM_64:

(Start: 70 @43287 has 79 MA's), (94, 43374), (97, 43383),

Gene: LeMond_67 Start: 43270, Stop: 43479, Start Num: 72

Candidate Starts for LeMond_67:

(Start: 72 @43270 has 79 MA's), (82, 43291), (89, 43333), (94, 43351), (97, 43360), (105, 43384),

Gene: Leston_57 Start: 41411, Stop: 41623, Start Num: 72

Candidate Starts for Leston_57:

(Start: 72 @41411 has 79 MA's), (94, 41489), (102, 41513), (103, 41516), (116, 41549), (124, 41570),
(128, 41597),

Gene: LilPharaoh_52 Start: 39482, Stop: 39691, Start Num: 72

Candidate Starts for LilPharaoh_52:

(Start: 72 @39482 has 79 MA's), (94, 39563), (97, 39572),

Gene: LindNT_63 Start: 43082, Stop: 43297, Start Num: 70

Candidate Starts for LindNT_63:

(45, 43004), (Start: 70 @43082 has 79 MA's), (94, 43169), (97, 43178),

Gene: Lton_46 Start: 30324, Stop: 30512, Start Num: 68

Candidate Starts for Lton_46:

(47, 30261), (57, 30294), (Start: 68 @30324 has 46 MA's), (87, 30396), (102, 30423), (112, 30456),

Gene: Lucky10_47 Start: 33042, Stop: 33230, Start Num: 68

Candidate Starts for Lucky10_47:

(Start: 68 @33042 has 46 MA's), (102, 33141), (112, 33174),

Gene: Lunahalos_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for Lunahalos_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: MScarn_54 Start: 36322, Stop: 36086, Start Num: 65

Candidate Starts for MScarn_54:

(59, 36340), (Start: 65 @36322 has 22 MA's), (109, 36175), (112, 36163), (114, 36160),

Gene: MacnCheese_66 Start: 43527, Stop: 43739, Start Num: 72

Candidate Starts for MacnCheese_66:

(Start: 70 @43521 has 79 MA's), (Start: 72 @43527 has 79 MA's), (97, 43617), (121, 43677), (126, 43692),

Gene: Madeline_54 Start: 39604, Stop: 39846, Start Num: 68

Candidate Starts for Madeline_54:

(Start: 68 @39604 has 46 MA's), (102, 39730),

Gene: Malisha_67 Start: 41399, Stop: 41608, Start Num: 68

Candidate Starts for Malisha_67:

(Start: 68 @41399 has 46 MA's), (102, 41525), (104, 41531),

Gene: Malthus_67 Start: 41914, Stop: 42132, Start Num: 72

Candidate Starts for Malthus_67:

(31, 41755), (34, 41764), (Start: 72 @41914 has 79 MA's), (106, 42031), (120, 42067), (125, 42082),

Gene: Margaret_54 Start: 37114, Stop: 36911, Start Num: 81

Candidate Starts for Margaret_54:

(Start: 81 @37114 has 7 MA's), (83, 37102), (Start: 84 @37093 has 1 MA's), (86, 37087), (99, 37036), (107, 37012),

Gene: Maridalia_57 Start: 38950, Stop: 39192, Start Num: 68

Candidate Starts for Maridalia_57:

(Start: 68 @38950 has 46 MA's), (102, 39076),

Gene: MarkPhew_66 Start: 42770, Stop: 42982, Start Num: 72

Candidate Starts for MarkPhew_66:

(Start: 72 @42770 has 79 MA's), (89, 42833), (94, 42851), (97, 42860), (105, 42884),

Gene: Marshawn_63 Start: 43120, Stop: 43332, Start Num: 72

Candidate Starts for Marshawn_63:

(Start: 72 @43120 has 79 MA's), (94, 43201),

Gene: Marteena_52 Start: 38371, Stop: 38613, Start Num: 68
Candidate Starts for Marteena_52:
(Start: 68 @38371 has 46 MA's), (92, 38467), (102, 38497),

Gene: Mcklovin_51 Start: 41557, Stop: 41799, Start Num: 68
Candidate Starts for Mcklovin_51:
(Start: 68 @41557 has 46 MA's), (102, 41683),

Gene: MeaningOfLife_64 Start: 43347, Stop: 43562, Start Num: 70
Candidate Starts for MeaningOfLife_64:
(Start: 70 @43347 has 79 MA's), (94, 43434), (97, 43443),

Gene: Megsy_66 Start: 43003, Stop: 43218, Start Num: 70
Candidate Starts for Megsy_66:
(Start: 70 @43003 has 79 MA's), (94, 43090), (97, 43099),

Gene: MidnightRain_51 Start: 31618, Stop: 31809, Start Num: 78
Candidate Starts for MidnightRain_51:
(54, 31558), (Start: 78 @31618 has 12 MA's), (123, 31756),

Gene: Miryou_62 Start: 44008, Stop: 44220, Start Num: 72
Candidate Starts for Miryou_62:
(Start: 72 @44008 has 79 MA's), (94, 44086), (102, 44110), (103, 44113), (111, 44140), (124, 44167),
(128, 44194),

Gene: MissDaisy_63 Start: 40826, Stop: 41044, Start Num: 72
Candidate Starts for MissDaisy_63:
(31, 40667), (34, 40676), (Start: 72 @40826 has 79 MA's), (106, 40943), (120, 40979), (125, 40994),
(126, 41000),

Gene: Mitti_66 Start: 42093, Stop: 42311, Start Num: 72
Candidate Starts for Mitti_66:
(31, 41934), (34, 41943), (Start: 72 @42093 has 79 MA's), (106, 42210), (120, 42246), (125, 42261),

Gene: ModicumRichard_117 Start: 65073, Stop: 64867, Start Num: 78
Candidate Starts for ModicumRichard_117:
(Start: 78 @65073 has 12 MA's), (95, 65001), (102, 64986), (107, 64971),

Gene: Moosehead_50 Start: 31430, Stop: 31645, Start Num: 68
Candidate Starts for Moosehead_50:
(Start: 68 @31430 has 46 MA's), (102, 31529), (126, 31601),

Gene: Morgana_124 Start: 67243, Stop: 67037, Start Num: 78
Candidate Starts for Morgana_124:
(55, 67312), (Start: 78 @67243 has 12 MA's), (95, 67171), (102, 67156), (107, 67141),

Gene: Morkie_49 Start: 32379, Stop: 32567, Start Num: 68
Candidate Starts for Morkie_49:
(Start: 68 @32379 has 46 MA's), (88, 32454), (102, 32478), (112, 32511),

Gene: Mulch_71 Start: 47994, Stop: 48194, Start Num: 76
Candidate Starts for Mulch_71:

(50, 47910), (52, 47916), (Start: 66 @47970 has 2 MA's), (Start: 71 @47982 has 1 MA's), (Start: 76 @47994 has 9 MA's),

Gene: MunkgeeRoachy_50 Start: 35379, Stop: 35146, Start Num: 65

Candidate Starts for MunkgeeRoachy_50:

(Start: 65 @35379 has 22 MA's), (90, 35295), (109, 35235),

Gene: Murucutumbu_65 Start: 43862, Stop: 44077, Start Num: 70

Candidate Starts for Murucutumbu_65:

(45, 43784), (Start: 70 @43862 has 79 MA's), (94, 43949), (97, 43958),

Gene: Mynx_65 Start: 43204, Stop: 43422, Start Num: 70

Candidate Starts for Mynx_65:

(44, 43126), (Start: 70 @43204 has 79 MA's), (94, 43291), (97, 43300),

Gene: Nadeem_71 Start: 47982, Stop: 48182, Start Num: 76

Candidate Starts for Nadeem_71:

(50, 47898), (52, 47904), (Start: 66 @47958 has 2 MA's), (Start: 71 @47970 has 1 MA's), (Start: 76 @47982 has 9 MA's),

Gene: Nibb_66 Start: 42981, Stop: 43193, Start Num: 72

Candidate Starts for Nibb_66:

(11, 42507), (Start: 72 @42981 has 79 MA's), (89, 43044), (94, 43062), (97, 43071), (117, 43122),

Gene: Niklas_66 Start: 43145, Stop: 43354, Start Num: 72

Candidate Starts for Niklas_66:

(Start: 72 @43145 has 79 MA's), (94, 43226), (97, 43235),

Gene: Nina_48 Start: 36199, Stop: 35966, Start Num: 65

Candidate Starts for Nina_48:

(Start: 65 @36199 has 22 MA's), (90, 36115), (109, 36055),

Gene: Nodigi_56 Start: 38471, Stop: 38268, Start Num: 81

Candidate Starts for Nodigi_56:

(Start: 81 @38471 has 7 MA's), (Start: 84 @38450 has 1 MA's), (107, 38369), (113, 38348), (119, 38339), (126, 38312),

Gene: Nymphadora_57 Start: 40719, Stop: 40961, Start Num: 68

Candidate Starts for Nymphadora_57:

(Start: 68 @40719 has 46 MA's), (102, 40845),

Gene: ObLaDi_116 Start: 64475, Stop: 64269, Start Num: 78

Candidate Starts for ObLaDi_116:

(Start: 78 @64475 has 12 MA's), (95, 64403), (102, 64388), (107, 64373),

Gene: Ohgeesy_54 Start: 38818, Stop: 39060, Start Num: 68

Candidate Starts for Ohgeesy_54:

(Start: 68 @38818 has 46 MA's), (102, 38944),

Gene: OkiRoe_58 Start: 41679, Stop: 41891, Start Num: 72

Candidate Starts for OkiRoe_58:

(Start: 72 @41679 has 79 MA's), (94, 41757), (102, 41781), (103, 41784), (111, 41811), (124, 41838), (128, 41865),

Gene: OmniCritical_65 Start: 41983, Stop: 42201, Start Num: 72
Candidate Starts for OmniCritical_65:
(31, 41824), (34, 41833), (Start: 72 @41983 has 79 MA's), (106, 42100), (120, 42136), (125, 42151),

Gene: Omnicron_61 Start: 41791, Stop: 42003, Start Num: 72
Candidate Starts for Omnicron_61:
(55, 41737), (Start: 72 @41791 has 79 MA's), (91, 41857), (94, 41869), (103, 41896), (124, 41950),
(128, 41977),

Gene: OneDirection_43 Start: 29772, Stop: 29960, Start Num: 68
Candidate Starts for OneDirection_43:
(Start: 68 @29772 has 46 MA's), (87, 29844), (102, 29871), (112, 29904),

Gene: Oregano_54 Start: 36212, Stop: 36427, Start Num: 68
Candidate Starts for Oregano_54:
(Start: 68 @36212 has 46 MA's), (102, 36311),

Gene: Orla_56 Start: 38400, Stop: 38197, Start Num: 81
Candidate Starts for Orla_56:
(Start: 81 @38400 has 7 MA's), (Start: 84 @38379 has 1 MA's), (107, 38298), (113, 38277), (119,
38268), (126, 38241),

Gene: Oscar_67 Start: 43187, Stop: 43396, Start Num: 72
Candidate Starts for Oscar_67:
(Start: 72 @43187 has 79 MA's), (82, 43208), (89, 43250), (94, 43268), (97, 43277), (105, 43301),

Gene: Padfoot_63 Start: 42792, Stop: 43007, Start Num: 70
Candidate Starts for Padfoot_63:
(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Padpat_66 Start: 42909, Stop: 43127, Start Num: 70
Candidate Starts for Padpat_66:
(Start: 70 @42909 has 79 MA's), (94, 42996), (97, 43005),

Gene: PantheRoc_57 Start: 39540, Stop: 39782, Start Num: 68
Candidate Starts for PantheRoc_57:
(Start: 68 @39540 has 46 MA's), (102, 39666),

Gene: Paola_57 Start: 41282, Stop: 41494, Start Num: 72
Candidate Starts for Paola_57:
(Start: 72 @41282 has 79 MA's), (94, 41360), (102, 41384), (103, 41387), (116, 41420), (124, 41441),
(128, 41468),

Gene: Parada_71 Start: 47994, Stop: 48194, Start Num: 76
Candidate Starts for Parada_71:
(50, 47910), (52, 47916), (Start: 66 @47970 has 2 MA's), (Start: 71 @47982 has 1 MA's), (Start: 76
@47994 has 9 MA's),

Gene: Patt_62 Start: 40550, Stop: 40768, Start Num: 72
Candidate Starts for Patt_62:
(31, 40391), (34, 40400), (Start: 72 @40550 has 79 MA's), (106, 40667), (120, 40703), (125, 40718),
(126, 40724),

Gene: Peanam_66 Start: 43103, Stop: 43312, Start Num: 72
Candidate Starts for Peanam_66:
(26, 42923), (Start: 72 @43103 has 79 MA's), (94, 43184), (97, 43193),

Gene: Peel_63 Start: 42597, Stop: 42812, Start Num: 70
Candidate Starts for Peel_63:
(Start: 70 @42597 has 79 MA's), (94, 42684), (97, 42693),

Gene: Pepperoni_44 Start: 31534, Stop: 31722, Start Num: 68
Candidate Starts for Pepperoni_44:
(Start: 68 @31534 has 46 MA's), (69, 31543), (88, 31609), (102, 31633), (112, 31666),

Gene: Pharb_63 Start: 42257, Stop: 42469, Start Num: 72
Candidate Starts for Pharb_63:
(67, 42242), (Start: 72 @42257 has 79 MA's), (97, 42347),

Gene: PhelpsODU_65 Start: 42337, Stop: 42549, Start Num: 72
Candidate Starts for PhelpsODU_65:
(3, 41674), (4, 41698), (6, 41770), (14, 41923), (26, 42154), (Start: 72 @42337 has 79 MA's), (94, 42418), (97, 42427),

Gene: PhorbesPhlower_47 Start: 31528, Stop: 31713, Start Num: 68
Candidate Starts for PhorbesPhlower_47:
(Start: 68 @31528 has 46 MA's), (100, 31621), (102, 31627), (112, 31660),

Gene: Phrank_67 Start: 42401, Stop: 42613, Start Num: 72
Candidate Starts for Phrank_67:
(3, 41735), (4, 41759), (6, 41834), (14, 41987), (26, 42218), (Start: 72 @42401 has 79 MA's), (94, 42482), (97, 42491),

Gene: Phrappuccino_126 Start: 92677, Stop: 92982, Start Num: 66
Candidate Starts for Phrappuccino_126:
(21, 92419), (43, 92605), (54, 92638), (62, 92659), (Start: 66 @92677 has 2 MA's), (102, 92800), (110, 92824), (131, 92944), (132, 92977),

Gene: PhriskyACE_50 Start: 36177, Stop: 36419, Start Num: 68
Candidate Starts for PhriskyACE_50:
(18, 35853), (Start: 68 @36177 has 46 MA's), (102, 36303),

Gene: Piatt_63 Start: 42792, Stop: 43007, Start Num: 70
Candidate Starts for Piatt_63:
(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Pixie_63 Start: 42430, Stop: 42642, Start Num: 72
Candidate Starts for Pixie_63:
(Start: 72 @42430 has 79 MA's), (97, 42520), (126, 42595),

Gene: Pokerus_63 Start: 42937, Stop: 43152, Start Num: 70
Candidate Starts for Pokerus_63:
(45, 42859), (Start: 70 @42937 has 79 MA's), (94, 43024), (97, 43033),

Gene: Pollux_56 Start: 40277, Stop: 40519, Start Num: 68

Candidate Starts for Pollux_56:
(Start: 68 @40277 has 46 MA's), (102, 40403),

Gene: Powerball_51 Start: 36303, Stop: 36545, Start Num: 68
Candidate Starts for Powerball_51:
(18, 35979), (Start: 68 @36303 has 46 MA's), (102, 36429),

Gene: Prithvi_65 Start: 43082, Stop: 43297, Start Num: 70
Candidate Starts for Prithvi_65:
(45, 43004), (Start: 70 @43082 has 79 MA's), (94, 43169), (97, 43178),

Gene: Psycho_57 Start: 39909, Stop: 40121, Start Num: 72
Candidate Starts for Psycho_57:
(Start: 72 @39909 has 79 MA's), (94, 39987), (102, 40011), (103, 40014), (111, 40041), (124, 40068),

Gene: Pupper_157 Start: 111884, Stop: 112147, Start Num: 58
Candidate Starts for Pupper_157:
(42, 111839), (57, 111881), (Start: 58 @111884 has 3 MA's), (102, 112034), (114, 112070), (120, 112082),

Gene: Pytheas_57 Start: 41776, Stop: 42018, Start Num: 68
Candidate Starts for Pytheas_57:
(15, 41395), (Start: 68 @41776 has 46 MA's), (102, 41902),

Gene: Quasar_49 Start: 36624, Stop: 36391, Start Num: 65
Candidate Starts for Quasar_49:
(Start: 65 @36624 has 22 MA's), (90, 36540), (109, 36480),

Gene: QuincyRose_62 Start: 42817, Stop: 43032, Start Num: 70
Candidate Starts for QuincyRose_62:
(Start: 70 @42817 has 79 MA's), (94, 42904), (97, 42913),

Gene: Ramen_64 Start: 42442, Stop: 42657, Start Num: 70
Candidate Starts for Ramen_64:
(Start: 70 @42442 has 79 MA's), (94, 42529), (97, 42538),

Gene: Rando14_59 Start: 39518, Stop: 39730, Start Num: 72
Candidate Starts for Rando14_59:
(51, 39443), (53, 39452), (55, 39464), (Start: 72 @39518 has 79 MA's), (94, 39596), (102, 39620), (103, 39623), (124, 39677), (128, 39704),

Gene: Raphaella_49 Start: 30457, Stop: 30648, Start Num: 78
Candidate Starts for Raphaella_49:
(Start: 78 @30457 has 12 MA's),

Gene: Rapunzel97_65 Start: 42892, Stop: 43107, Start Num: 70
Candidate Starts for Rapunzel97_65:
(45, 42814), (Start: 70 @42892 has 79 MA's), (94, 42979), (97, 42988),

Gene: RedBaron_51 Start: 36246, Stop: 36013, Start Num: 65
Candidate Starts for RedBaron_51:
(Start: 65 @36246 has 22 MA's), (90, 36162),

Gene: RedWattleHog_174 Start: 111466, Stop: 111675, Start Num: 73
Candidate Starts for RedWattleHog_174:
(Start: 72 @111463 has 79 MA's), (Start: 73 @111466 has 6 MA's), (122, 111625), (129, 111655),

Gene: Reptar3000_63 Start: 40538, Stop: 40756, Start Num: 72
Candidate Starts for Reptar3000_63:
(31, 40379), (34, 40388), (Start: 72 @40538 has 79 MA's), (106, 40655), (120, 40691), (125, 40706),
(126, 40712),

Gene: Rosmarinus_63 Start: 42583, Stop: 42798, Start Num: 70
Candidate Starts for Rosmarinus_63:
(Start: 70 @42583 has 79 MA's), (94, 42670), (97, 42679),

Gene: Ruthiejr_67 Start: 41964, Stop: 42182, Start Num: 72
Candidate Starts for Ruthiejr_67:
(31, 41805), (34, 41814), (Start: 72 @41964 has 79 MA's), (106, 42081), (120, 42117), (125, 42132),

Gene: Ruthy_52 Start: 39090, Stop: 39332, Start Num: 68
Candidate Starts for Ruthy_52:
(Start: 68 @39090 has 46 MA's), (69, 39099), (102, 39216),

Gene: SCentae_156 Start: 112038, Stop: 112301, Start Num: 58
Candidate Starts for SCentae_156:
(42, 111993), (57, 112035), (Start: 58 @112038 has 3 MA's), (102, 112188), (114, 112224), (120,
112236),

Gene: Sakai_48 Start: 30191, Stop: 30385, Start Num: 78
Candidate Starts for Sakai_48:
(Start: 78 @30191 has 12 MA's), (94, 30260), (126, 30338),

Gene: SamScheppers_64 Start: 42393, Stop: 42611, Start Num: 72
Candidate Starts for SamScheppers_64:
(31, 42234), (34, 42243), (Start: 72 @42393 has 79 MA's), (106, 42510), (120, 42546), (125, 42561),

Gene: SamuelLPlaqson_64 Start: 43328, Stop: 43543, Start Num: 70
Candidate Starts for SamuelLPlaqson_64:
(Start: 70 @43328 has 79 MA's), (94, 43415), (97, 43424),

Gene: Scarlett_68 Start: 43514, Stop: 43726, Start Num: 72
Candidate Starts for Scarlett_68:
(Start: 72 @43514 has 79 MA's), (82, 43535), (89, 43577), (94, 43595), (97, 43604), (105, 43628),

Gene: Settecandela_126 Start: 92677, Stop: 92982, Start Num: 66
Candidate Starts for Settecandela_126:
(21, 92419), (43, 92605), (54, 92638), (62, 92659), (Start: 66 @92677 has 2 MA's), (102, 92800), (110,
92824), (131, 92944), (132, 92977),

Gene: SgtBeansprout_52 Start: 39754, Stop: 39963, Start Num: 72
Candidate Starts for SgtBeansprout_52:
(Start: 72 @39754 has 79 MA's), (94, 39835), (97, 39844),

Gene: Shadow1_68 Start: 42852, Stop: 43064, Start Num: 72
Candidate Starts for Shadow1_68:

(Start: 72 @42852 has 79 MA's), (94, 42933), (97, 42942),

Gene: Shaobing_66 Start: 43121, Stop: 43330, Start Num: 72

Candidate Starts for Shaobing_66:

(26, 42941), (Start: 72 @43121 has 79 MA's), (94, 43202), (97, 43211),

Gene: ShedlockHolmes_65 Start: 42949, Stop: 43161, Start Num: 72

Candidate Starts for ShedlockHolmes_65:

(Start: 72 @42949 has 79 MA's), (97, 43039), (126, 43114),

Gene: ShiaSurprise_64 Start: 42792, Stop: 43007, Start Num: 70

Candidate Starts for ShiaSurprise_64:

(Start: 70 @42792 has 79 MA's), (94, 42879), (97, 42888),

Gene: Shlim410_53 Start: 40090, Stop: 40332, Start Num: 68

Candidate Starts for Shlim410_53:

(Start: 68 @40090 has 46 MA's), (102, 40216),

Gene: Sidious_53 Start: 38484, Stop: 38726, Start Num: 68

Candidate Starts for Sidious_53:

(Start: 68 @38484 has 46 MA's), (102, 38610),

Gene: SketchMex_50 Start: 36207, Stop: 35971, Start Num: 65

Candidate Starts for SketchMex_50:

(59, 36225), (Start: 65 @36207 has 22 MA's), (109, 36060), (112, 36048), (114, 36045),

Gene: Skog_217 Start: 141536, Stop: 141781, Start Num: 63

Candidate Starts for Skog_217:

(Start: 63 @141536 has 1 MA's), (88, 141623), (93, 141641), (102, 141668), (108, 141683), (114, 141701),

Gene: Slarp_66 Start: 41921, Stop: 42139, Start Num: 72

Candidate Starts for Slarp_66:

(31, 41762), (34, 41771), (Start: 72 @41921 has 79 MA's), (106, 42038), (120, 42074), (125, 42089),

Gene: Slimphazie_64 Start: 42892, Stop: 43107, Start Num: 70

Candidate Starts for Slimphazie_64:

(45, 42814), (Start: 70 @42892 has 79 MA's), (94, 42979), (97, 42988),

Gene: SoSeph_58 Start: 41654, Stop: 41866, Start Num: 72

Candidate Starts for SoSeph_58:

(Start: 72 @41654 has 79 MA's), (94, 41732), (102, 41756), (103, 41759), (116, 41792), (124, 41813), (128, 41840),

Gene: Spock_63 Start: 42596, Stop: 42811, Start Num: 70

Candidate Starts for Spock_63:

(Start: 70 @42596 has 79 MA's), (94, 42683), (97, 42692),

Gene: SteamedHams_49 Start: 35394, Stop: 35161, Start Num: 65

Candidate Starts for SteamedHams_49:

(32, 35529), (35, 35520), (36, 35517), (41, 35469), (46, 35457), (Start: 65 @35394 has 22 MA's), (90, 35310), (109, 35250),

Gene: Stinson_65 Start: 43220, Stop: 43435, Start Num: 70

Candidate Starts for Stinson_65:

(Start: 70 @43220 has 79 MA's), (94, 43307), (97, 43316),

Gene: Stormageddon_175 Start: 112431, Stop: 112640, Start Num: 73

Candidate Starts for Stormageddon_175:

(Start: 72 @112428 has 79 MA's), (Start: 73 @112431 has 6 MA's), (122, 112590), (129, 112620),

Gene: Sulley_63 Start: 42656, Stop: 42871, Start Num: 70

Candidate Starts for Sulley_63:

(Start: 70 @42656 has 79 MA's), (94, 42743), (97, 42752),

Gene: Sunflower1121_69 Start: 42998, Stop: 43210, Start Num: 72

Candidate Starts for Sunflower1121_69:

(Start: 72 @42998 has 79 MA's), (94, 43079), (97, 43088),

Gene: SweatNTears_51 Start: 36160, Stop: 35927, Start Num: 65

Candidate Starts for SweatNTears_51:

(Start: 65 @36160 has 22 MA's), (90, 36076), (109, 36016),

Gene: Syra333_67 Start: 42711, Stop: 42923, Start Num: 72

Candidate Starts for Syra333_67:

(26, 42528), (Start: 72 @42711 has 79 MA's), (94, 42792), (97, 42801),

Gene: TClif_65 Start: 42546, Stop: 42758, Start Num: 72

Candidate Starts for TClif_65:

(Start: 72 @42546 has 79 MA's), (94, 42627), (97, 42636), (126, 42711),

Gene: TPA4_81 Start: 53987, Stop: 54289, Start Num: 48

Candidate Starts for TPA4_81:

(1, 53147), (16, 53672), (25, 53882), (40, 53957), (48, 53987),

Gene: Tachez_63 Start: 42440, Stop: 42655, Start Num: 70

Candidate Starts for Tachez_63:

(Start: 70 @42440 has 79 MA's), (94, 42527), (97, 42536),

Gene: TaiwanKao_66 Start: 43144, Stop: 43359, Start Num: 70

Candidate Starts for TaiwanKao_66:

(45, 43066), (Start: 70 @43144 has 79 MA's), (94, 43231), (97, 43240),

Gene: Taquito_65 Start: 42156, Stop: 42374, Start Num: 72

Candidate Starts for Taquito_65:

(31, 41997), (34, 42006), (Start: 72 @42156 has 79 MA's), (106, 42273), (120, 42309), (125, 42324),

Gene: ThankyouJordi_56 Start: 40759, Stop: 41001, Start Num: 68

Candidate Starts for ThankyouJordi_56:

(30, 40612), (33, 40627), (36, 40636), (49, 40702), (Start: 68 @40759 has 46 MA's), (102, 40885),

Gene: Thimann_54 Start: 37092, Stop: 37307, Start Num: 68

Candidate Starts for Thimann_54:

(Start: 68 @37092 has 46 MA's), (102, 37191),

Gene: Thyatira_60 Start: 43612, Stop: 43824, Start Num: 72

Candidate Starts for Thyatira_60:

(Start: 72 @43612 has 79 MA's), (94, 43690), (102, 43714), (103, 43717), (116, 43750), (124, 43771), (128, 43798),

Gene: Tierra_67 Start: 43212, Stop: 43424, Start Num: 72

Candidate Starts for Tierra_67:

(3, 42546), (4, 42570), (6, 42645), (14, 42798), (26, 43029), (Start: 72 @43212 has 79 MA's), (94, 43293), (97, 43302),

Gene: Tiff81_50 Start: 28970, Stop: 29161, Start Num: 78

Candidate Starts for Tiff81_50:

(Start: 78 @28970 has 12 MA's),

Gene: TimTam_57 Start: 40719, Stop: 40961, Start Num: 68

Candidate Starts for TimTam_57:

(Start: 68 @40719 has 46 MA's), (102, 40845),

Gene: TiniBug_64 Start: 43324, Stop: 43539, Start Num: 70

Candidate Starts for TiniBug_64:

(Start: 70 @43324 has 79 MA's), (94, 43411), (97, 43420),

Gene: Tiri_64 Start: 42728, Stop: 42943, Start Num: 70

Candidate Starts for Tiri_64:

(Start: 70 @42728 has 79 MA's), (94, 42815), (97, 42824),

Gene: Tolls_50 Start: 35802, Stop: 35551, Start Num: 65

Candidate Starts for Tolls_50:

(Start: 65 @35802 has 22 MA's), (Start: 68 @35796 has 46 MA's), (101, 35673), (116, 35628),

Gene: Topper_63 Start: 42595, Stop: 42810, Start Num: 70

Candidate Starts for Topper_63:

(Start: 70 @42595 has 79 MA's), (94, 42682), (97, 42691),

Gene: TreyKay_65 Start: 43082, Stop: 43297, Start Num: 70

Candidate Starts for TreyKay_65:

(45, 43004), (Start: 70 @43082 has 79 MA's), (94, 43169), (97, 43178),

Gene: TribbleTrouble_64 Start: 43429, Stop: 43641, Start Num: 72

Candidate Starts for TribbleTrouble_64:

(13, 43003), (26, 43246), (Start: 72 @43429 has 79 MA's), (97, 43519),

Gene: Trogglehumper_5 Start: 2263, Stop: 2457, Start Num: 77

Candidate Starts for Trogglehumper_5:

(Start: 77 @2263 has 1 MA's), (88, 2314), (93, 2332), (101, 2356),

Gene: Troje_52 Start: 36545, Stop: 36309, Start Num: 65

Candidate Starts for Troje_52:

(59, 36563), (Start: 65 @36545 has 22 MA's), (109, 36398), (112, 36386), (114, 36383),

Gene: TruffulaTree_64 Start: 42888, Stop: 43103, Start Num: 70

Candidate Starts for TruffulaTree_64:

(45, 42810), (Start: 70 @42888 has 79 MA's), (94, 42975), (97, 42984),

Gene: Twinkle_54 Start: 41149, Stop: 41391, Start Num: 68
Candidate Starts for Twinkle_54:
(Start: 68 @41149 has 46 MA's), (102, 41275),

Gene: Twitch_63 Start: 42597, Stop: 42812, Start Num: 70
Candidate Starts for Twitch_63:
(Start: 70 @42597 has 79 MA's), (94, 42684), (97, 42693),

Gene: Typha_89 Start: 58872, Stop: 59093, Start Num: 73
Candidate Starts for Typha_89:
(Start: 73 @58872 has 6 MA's), (85, 58908), (91, 58938),

Gene: Typhonomachy_49 Start: 35740, Stop: 35507, Start Num: 65
Candidate Starts for Typhonomachy_49:
(Start: 65 @35740 has 22 MA's), (90, 35656), (109, 35596),

Gene: Unicorn_65 Start: 42337, Stop: 42549, Start Num: 72
Candidate Starts for Unicorn_65:
(3, 41674), (4, 41698), (6, 41770), (14, 41923), (26, 42154), (Start: 72 @42337 has 79 MA's), (94, 42418), (97, 42427),

Gene: Urkel_64 Start: 43328, Stop: 43543, Start Num: 70
Candidate Starts for Urkel_64:
(Start: 70 @43328 has 79 MA's), (94, 43415), (97, 43424),

Gene: Validus_68 Start: 43466, Stop: 43675, Start Num: 72
Candidate Starts for Validus_68:
(Start: 72 @43466 has 79 MA's), (94, 43547), (97, 43556), (126, 43631),

Gene: VanLee_109 Start: 57771, Stop: 57962, Start Num: 78
Candidate Starts for VanLee_109:
(Start: 78 @57771 has 12 MA's), (128, 57936),

Gene: Veliki_65 Start: 42859, Stop: 43077, Start Num: 70
Candidate Starts for Veliki_65:
(44, 42781), (Start: 70 @42859 has 79 MA's), (94, 42946), (97, 42955),

Gene: Waterfoul_59 Start: 41716, Stop: 41928, Start Num: 72
Candidate Starts for Waterfoul_59:
(Start: 72 @41716 has 79 MA's), (94, 41794), (102, 41818), (103, 41821), (116, 41854), (124, 41875), (128, 41902),

Gene: WelcomeAyanna_56 Start: 40906, Stop: 41148, Start Num: 68
Candidate Starts for WelcomeAyanna_56:
(30, 40759), (33, 40774), (36, 40783), (49, 40849), (Start: 68 @40906 has 46 MA's), (102, 41032),

Gene: WheatThin_71 Start: 47982, Stop: 48182, Start Num: 76
Candidate Starts for WheatThin_71:
(50, 47898), (52, 47904), (Start: 66 @47958 has 2 MA's), (Start: 71 @47970 has 1 MA's), (Start: 76 @47982 has 9 MA's),

Gene: Wintermute_66 Start: 42151, Stop: 42369, Start Num: 72
Candidate Starts for Wintermute_66:

(31, 41992), (34, 42001), (Start: 72 @42151 has 79 MA's), (106, 42268), (120, 42304), (125, 42319),

Gene: Ximenita_69 Start: 43037, Stop: 43249, Start Num: 72

Candidate Starts for Ximenita_69:

(26, 42854), (Start: 72 @43037 has 79 MA's), (94, 43118), (97, 43127),

Gene: Y10_64 Start: 42079, Stop: 42297, Start Num: 72

Candidate Starts for Y10_64:

(31, 41920), (34, 41929), (Start: 72 @42079 has 79 MA's), (106, 42196), (120, 42232), (125, 42247),

Gene: Y2_64 Start: 42079, Stop: 42297, Start Num: 72

Candidate Starts for Y2_64:

(31, 41920), (34, 41929), (Start: 72 @42079 has 79 MA's), (106, 42196), (120, 42232), (125, 42247),

Gene: Yakult_51 Start: 37137, Stop: 36952, Start Num: 84

Candidate Starts for Yakult_51:

(64, 37200), (Start: 81 @37158 has 7 MA's), (Start: 84 @37137 has 1 MA's), (93, 37098), (107, 37056), (115, 37032), (126, 36996),

Gene: Yarn_46 Start: 35565, Stop: 35314, Start Num: 65

Candidate Starts for Yarn_46:

(Start: 65 @35565 has 22 MA's), (Start: 68 @35559 has 46 MA's), (101, 35436), (116, 35391),

Gene: Yeezy_53 Start: 37368, Stop: 37610, Start Num: 68

Candidate Starts for Yeezy_53:

(Start: 68 @37368 has 46 MA's), (102, 37494),

Gene: YoungHarleezy_50 Start: 31023, Stop: 31214, Start Num: 78

Candidate Starts for YoungHarleezy_50:

(Start: 78 @31023 has 12 MA's),

Gene: YoureAdopted_63 Start: 43008, Stop: 43223, Start Num: 70

Candidate Starts for YoureAdopted_63:

(45, 42930), (Start: 70 @43008 has 79 MA's), (94, 43095), (97, 43104),

Gene: Yummy_52 Start: 36254, Stop: 36018, Start Num: 65

Candidate Starts for Yummy_52:

(59, 36272), (Start: 65 @36254 has 22 MA's), (109, 36107), (112, 36095), (114, 36092),

Gene: Yunkel11_68 Start: 42904, Stop: 43122, Start Num: 70

Candidate Starts for Yunkel11_68:

(44, 42826), (Start: 70 @42904 has 79 MA's), (94, 42991), (97, 43000),

Gene: Zabiza_59 Start: 38745, Stop: 38960, Start Num: 70

Candidate Starts for Zabiza_59:

(Start: 70 @38745 has 79 MA's), (94, 38832), (97, 38841),

Gene: Zavala_66 Start: 43164, Stop: 43382, Start Num: 70

Candidate Starts for Zavala_66:

(44, 43086), (Start: 70 @43164 has 79 MA's), (94, 43251), (97, 43260),