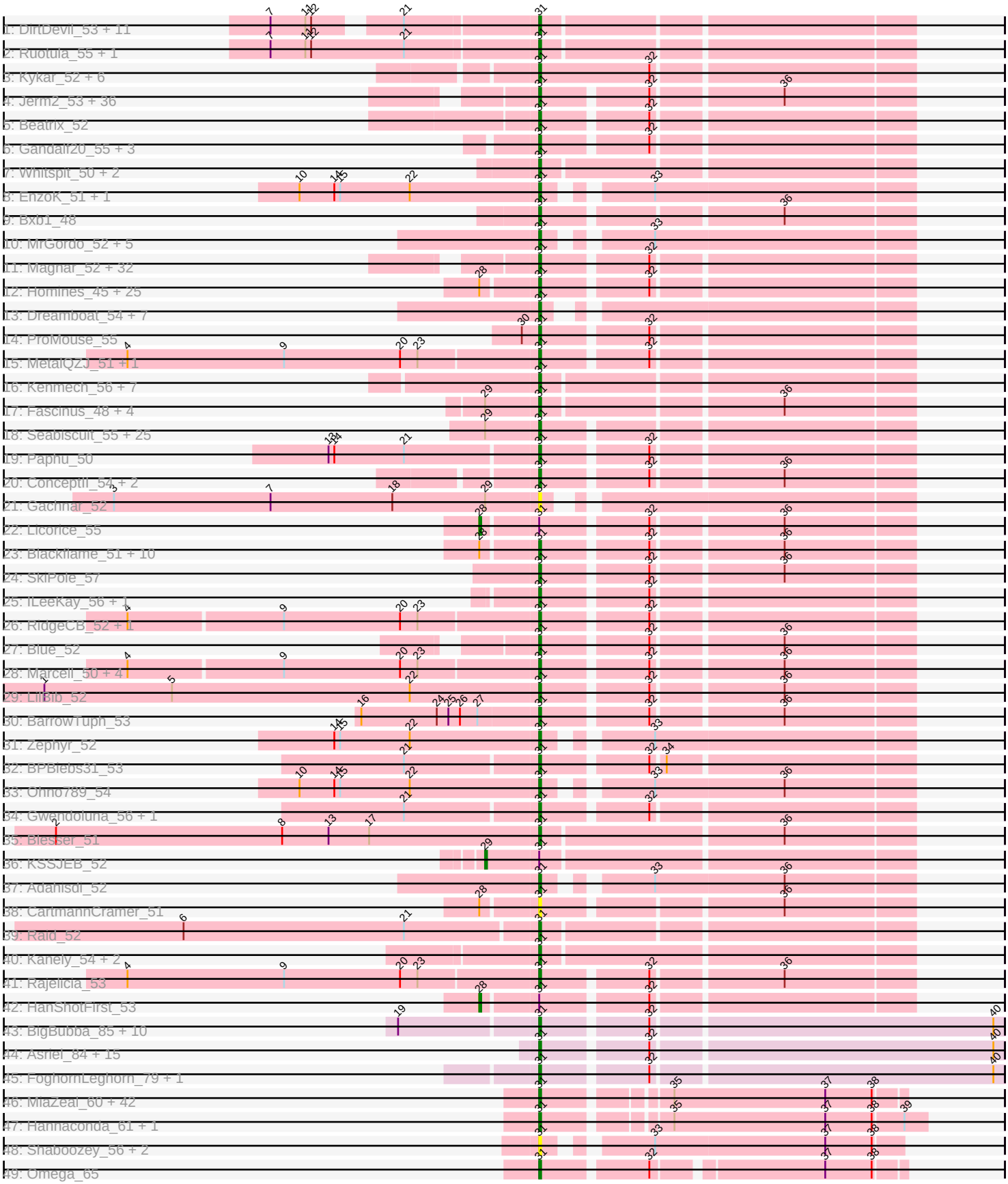
Pham 347169


1: DirtDevil_53 + 11
2: Ruotula_55 + 1
3: Kykar_52 + 6
4: Jerm2_53 + 36
5: Beatrix_52
6: Gandalf20_55 + 3
7: Whitspit_50 + 2
8: EnzoK_51 + 1
9: Bxb1_48
10: MrGordo_52 + 5
11: Magnar_52 + 32
12: Homines_45 + 25
13: Dreamboat_54 + 7
14: ProMouse_55
15: MetalQZJ_51 + 1
16: Kenmech_56 + 7
17: Fascinus_48 + 4
18: Seabiscuit_55 + 25
19: Paphu_50
20: Conceptii_54 + 2
21: Gachnar_52
22: Licorice_55
23: Blackflame_51 + 10
24: SkiPole_57
25: ILeeKay_56 + 1
26: RidgeCB_52 + 1
27: Blue_52
28: Marcell_50 + 4
29: LilBib_52
30: BarrowTuph_53
31: Zephyr_52
32: BPBlebs31_53
33: Ohno789_54
34: Gwendoluna_56 + 1
35: BlesSer_51
36: KSSJEB_52
37: Adanisdi_52
38: CartmannCramer_51
39: Raid_52
40: Kanely_54 + 2
41: Rajelicia_53
42: HanShotFirst_53
43: BigBubba_85 + 10
44: Ashel_84 + 15
45: FoghornLeghorn_79 + 1
46: MiaZeal_60 + 42
47: Hannaconda_61 + 1
48: Shaboozey_56 + 2
49: Omega_65

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 347169 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347169 has 307 members, 25 are drafts.

Phages represented in each track:
• Track 1 : DirtDevil_53, Greg_54, Hermia_53, Buttons_51, Ciao_52, Fajezeel_54, KikiBouba_53, Pippin_54, GroundGoblin_52, Noxious_53, Aldrich_52, CatBus_52
• Track 2 : Ruotula_55, Marge_52
• Track 3 : Kykar_52, Mryolo_50, Dexes_53, NEHalo_50, Peterson_57, KyMonks1A_54, Marsha_52
• Track 4 : Jerm2_53, Fushigi_51, Bob3_50, PSullivan_52, Lesedi_49, Rohr_53, LunarLander_54, Rufus_53, Monet_55, Bones_53, Niza_55, Eyeball_54, SpikeBT_52, Graduation_56, Pita2_55, Arlo_50, Cueylyss_54, Edtherson_52, MPlant7149_51, Payneful_52, Crispicous1_50, Makemake_52, Applejack_47, Marchy_47, Ashballer_54, Treddle_53, Espresso_52, Michley_52, Marco3_55, Zeuska_51, GageAP_53, HermioneGrange_52, BigMau_53, TwoPeat_53, Sibs6_54, JC27_54, AFIS_50
• Track 5 : Beatrix_52
• Track 6 : Gandalf20_55, STLscum_55, Lamina13_53, Tasp14_54
• Track 7 : Whitspit_50, Alsfro_56, Sunshine924_54
• Track 8 : EnzoK_51, Dulcie_53
• Track 9 : Bxb1_48
• Track 10 : MrGordo_52, Alvin_52, DrFeelGood_50, Big3_52, Zeeculate_50, Trouble_55
• Track 11 : Magnar_52, Smairt_54, Carlyle_51, Mkhuseli_51, Rhynn_51, BigPaolini_52, Hami1_46, Manatee_54, BluSpix_51, Inyanga_49, PacerPaul_52, Perseus_52, IgnatiusPatJac_53, Aeneas_54, Petruchio_52, Chanagan_49, Ajay_54, Francis47_51, Bircsak_51, Anglerfish_54, Rutherferd_54, Gompeii16_51, Abrogate_510, ChristmasHams_48, Pelly_52, Froghopper_50, Agaliana_48, Mule_49, Violet_50, Iqorha_49, Wheeler_53, PhrostyMug_51, Euphoria_50
• Track 12 : Homines_45, McSinger_53, Solon_51, Bethlehem_53, Sumter_49, JackSparrow_54, Sandaddy_51, PinkPlastic_53, Pinto_52, Magnito_51, Parliament_52, MilleFeuille_52, Atkinbua_55, Target_53, Watermelon_53, Bigfoot_48, Turj99_51, Sanya_51, U2_52, Rubeus_52, Sorpresa_51, Oogway_51, StewieG_49, Ringer_53, Switzer_54, Ichabod_55
• Track 13 : Dreamboat_54, PherrisBueller_52, Jasper_54, Seanderson_54, Scowl_53, Barriga_53, Bruns_51, Acme_54
• Track 14 : ProMouse_55
• Track 15 : MetalQZJ_51, MaryBeth_52
• Track 16 : Kenmech_56, Dussy_54, Levia_50, Pepe_49, Abbyshoes_55, PhineBark_52, Tripl3t_52, Teodoridan_51
• Track 17 : Fascinus_48, Phlippers_51, Maroc7_50, Wilkins_52, Topgun_52

• Track 18 : Seabiscuit_55, Corvo_53, Swole_53, DD5_52, SwissCheese_54, DreamCatcher_56, Museum_53, JuliaChild_53, Fenn_55, Burton_52, McGuire_54, Squee_53, Tote_48, SarFire_50, Papez_55, BeesKnees_55, Dynamix_54, Killigrew_53, Lockley_51, Forsytheast_52, Moose_52, Smeagol_54, Thor_50, Briton15_56, Naira_55, Pari_54
• Track 19 : Paphu_50
• Track 20 : ConceptII_54, TheloniousMonk_53, Paraselene_50
• Track 21 : Gachnar_52
• Track 22 : Licorice_55
• Track 23 : Blackflame_51, GrecoEtereo_53, BK1_48, Bigchungi_52, Gyzlar_48, PascalRango_53, Norz_53, A6_48, Snazzy_51, ShortQueendom_47, HarryOW_51
• Track 24 : SkiPole_57
• Track 25 : ILeeKay_56, GMonster_49
• Track 26 : RidgeCB_52, Kugel_53
• Track 27 : Blue_52
• Track 28 : Marcell_50, Molly_53, Arcanine_53, Petp2012_53, Slagathor_54
• Track 29 : LilBib_52
• Track 30 : BarrowTuph_53
• Track 31 : Zephyr_52
• Track 32 : BPBiebs31_53
• Track 33 : Ohno789_54
• Track 34 : Gwendoluna_56, Sagefire_55
• Track 35 : Blesser_51
• Track 36 : KSSJEB_52
• Track 37 : Adahisdi_52
• Track 38 : CartmannCramer_51
• Track 39 : Raid_52
• Track 40 : Kanely_54, Altman_55, Traft412_55
• Track 41 : Rajelicia_53
• Track 42 : HanShotFirst_53
• Track 43 : BigBubba_85, Rakim_86, Kimchi_89, Gage_87, Myrale_85, Bask21_85, ChotaBhai_85, DoctorDiddles_84, StolenFromERC_88, Goldilocks_88, Pat3_83
• Track 44 : Asriel_84, Flypotenuse_81, Traaww1_81, Glexan_84, Icee_86, Balomoji_85, Gator_83, Sotrice96_86, Cactus_88, Hoonter_88, Daikon_87, Harella_85, Barbarian_84, Moldemort_88, Wiggin_87, Adnama_89
• Track 45 : FoghornLeghorn_79, Cookies_82
• Track 46 : MiaZeal_60, Wanda_69, Dallas_62, Halley_64, Redno2_60, Hughesyang_62, Ariel_60, Ejimix_63, DmpstrDiver_62, Dove_56, Nekros_61, Bagrid_62, EricMillard_63, Hidrated_60, Squint_60, Kalah2_59, Rearden_58, Klein_64, Phoebus_62, Schatzie_58, Bombitas_60, Beem_63, JuicyJay_62, Minerva_69, Marleymoo_60, Xiaokay_56, HokkenD_56, BAKA_67, Thibault_56, ThreeRngTarjay_61, Bobby_63, Pound_63, Yeet_61, Zelink_61, Lucky2013_61, Odette_61, Courthouse_60, Superphikiman_61, Duke13_66, Constella_51, NihilNomen_63, Optimus_68, Porcelain_59
• Track 47 : Hannaconda_61, KashFlow_58
• Track 48 : Shaboozey_56, BronnyJames_57, Gonephishing_63
• Track 49 : Omega_65

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

The start number called the most often in the published annotations is 31, it was called in 279 of the 282 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• A6_48, AFIS_50, Abbyshoes_55, Abrogate_510, Acme_54, Adahisdi_52, Adnama_89, Aeneas_54, Agaliana_48, Ajay_54, Aldrich_52, Alsfro_56, Altman_55, Alvin_52, Anglerfish_54, Applejack_47, Arcanine_53, Ariel_60, Arlo_50, Ashballer_54, Asriel_84, Atkinbua_55, BAKA_67, BK1_48, BPBiebs31_53, Bagrid_62, Balomoji_85, Barbarian_84, Barriga_53, BarrowTuph_53, Bask21_85, Beatrix_52, Beem_63, BeesKnees_55, Bethlehem_53, Big3_52, BigBubba_85, BigMau_53, BigPaolini_52, Bigchungi_52, Bigfoot_48, Bircsak_51, Blackflame_51, Blesser_51, BluSpix_51, Blue_52, Bob3_50, Bobby_63, Bombitas_60, Bones_53, Briton15_56, BronnyJames_57, Bruns_51, Burton_52, Buttons_51, Bxb1_48, Cactus_88, Carlyle_51, CartmannCramer_51, CatBus_52, Chanagan_49, ChotaBhai_85, ChristmasHams_48, Ciao_52, ConceptII_54, Constella_51, Cookies_82, Corvo_53, Courthouse_60, Crispicous1_50, Cueylyss_54, DD5_52, Daikon_87, Dallas_62, Dexes_53, DirtDevil_53, DmpstrDiver_62, DoctorDiddles_84, Dove_56, DrFeelGood_50, DreamCatcher_56, Dreamboat_54, Duke13_66, Dulcie_53, Dussy_54, Dynamix_54, Edtherson_52, Ejimix_63, EnzoK_51, EricMillard_63, Espresso_52, Euphoria_50, Eyeball_54, Fajezeel_54, Fascinus_48, Fenn_55, Flypotenuse_81, FoghornLeghorn_79, Forsytheast_52, Francis47_51, Froghopper_50, Fushigi_51, GMonster_49, Gachnar_52, GageAP_53, Gage_87, Gandalf20_55, Gator_83, Glexan_84, Goldilocks_88, Gompeii16_51, Gonephishing_63, Graduation_56, GrecoEtereo_53, Greg_54, GroundGoblin_52, Gwendoluna_56, Gyzlar_48, Halley_64, Hami1_46, Hannaconda_61, Harella_85, HarryOW_51, Hermia_53, HermioneGrange_52, Hidrated_60, HokkenD_56, Homines_45, Hoonter_88, Hughesyang_62, ILeeKay_56, Icee_86, Ichabod_55, IgnatiusPatJac_53, Inyanga_49, Iqorha_49, JC27_54, JackSparrow_54, Jasper_54, Jerm2_53, JuicyJay_62, JuliaChild_53, Kalah2_59, Kanely_54, KashFlow_58, Kenmech_56, KikiBouba_53, Killigrew_53, Kimchi_89, Klein_64, Kugel_53, KyMonks1A_54, Kykar_52, Lamina13_53, Lesedi_49, Levia_50, LilBib_52, Lockley_51, Lucky2013_61, LunarLander_54, MPlant7149_51, Magnar_52, Magnito_51, Makemake_52, Manatee_54, Marcell_50, Marchy_47, Marco3_55, Marge_52, Marleymoo_60, Maroc7_50, Marsha_52, MaryBeth_52, McGuire_54, McSinger_53, MetalQZJ_51, MiaZeal_60, Michley_52, MilleFeuille_52, Minerva_69, Mkhuseli_51, Moldemort_88, Molly_53, Monet_55, Moose_52, MrGordo_52, Mryolo_50, Mule_49, Museum_53, Myrale_85, NEHalo_50, Naira_55, Nekros_61, NihilNomen_63, Niza_55, Norz_53, Noxious_53, Odette_61, Ohno789_54, Omega_65, Oogway_51, Optimus_68, PSullivan_52, PacerPaul_52, Papez_55, Paphu_50, Paraselene_50, Pari_54, Parliament_52, PascalRango_53, Pat3_83, Payneful_52, Pelly_52, Pepe_49, Perseus_52, Peterson_57, Petp2012_53, Petruchio_52, PherrisBueller_52, PhineBark_52, Phlippers_51, Phoebus_62, PhrostyMug_51, PinkPlastic_53, Pinto_52, Pippin_54, Pita2_55, Porcelain_59, Pound_63, ProMouse_55, Raid_52, Rajelicia_53, Rakim_86, Rearden_58, Redno2_60, Rhynn_51, RidgeCB_52, Ringer_53, Rohr_53, Rubeus_52, Rufus_53, Ruotula_55, Rutherferd_54, STLscum_55, Sagefire_55, Sandaddy_51, Sanya_51, SarFire_50, Schatzie_58, Scowl_53, Seabiscuit_55, Seanderson_54, Shaboozey_56, ShortQueendom_47, Sibs6_54, SkiPole_57, Slagathor_54, Smairt_54, Smeagol_54, Snazzy_51, Solon_51, Sorpresa_51, Sotrice96_86, SpikeBT_52, Squee_53, Squint_60, StewieG_49, StolenFromERC_88, Sumter_49, Sunshine924_54, Superphikiman_61, SwissCheese_54, Switzer_54, Swole_53, Target_53, Tasp14_54, Teodoridan_51, TheloniousMonk_53, Thibault_56, Thor_50, ThreeRngTarjay_61, Topgun_52, Tote_48, Traaww1_81, Traft412_55, Treddle_53, Tripl3t_52, Trouble_55,

Turj99_51, TwoPeat_53, U2_52, Violet_50, Wanda_69, Watermelon_53, Wheeler_53, Whitspit_50, Wiggin_87, Wilkins_52, Xiaokay_56, Yeet_61, Zeeculate_50, Zelink_61, Zephyr_52, Zeuska_51,

Genes that have the "Most Annotated" start but do not call it:
• HanShotFirst_53, KSSJEB_52, Licorice_55,

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

Summary by start number:

Start 28:
• Found in 40 of 307 (13.0%) of genes in pham
• Manual Annotations of this start: 2 of 282
• Called 5.0% of time when present
• Phage (with cluster) where this start called: HanShotFirst_53 (A1), Licorice_55 (A1),

Start 29:
• Found in 33 of 307 (10.7%) of genes in pham
• Manual Annotations of this start: 1 of 282
• Called 3.0% of time when present
• Phage (with cluster) where this start called: KSSJEB_52 (A1),

Start 31:
• Found in 307 of 307 (100.0%) of genes in pham
• Manual Annotations of this start: 279 of 282
• Called 99.0% of time when present
• Phage (with cluster) where this start called: A6_48 (A1), AFIS_50 (A1), Abbyshoes_55 (A1), Abrogate_510 (A1), Acme_54 (A1), Adahisdi_52 (A1), Adnama_89 (E), Aeneas_54 (A1), Agaliana_48 (A1), Ajay_54 (A1), Aldrich_52 (A1), Alsfro_56 (A1), Altman_55 (A1), Alvin_52 (A1), Anglerfish_54 (A1), Applejack_47 (A1), Arcanine_53 (A1), Ariel_60 (J), Arlo_50 (A1), Ashballer_54 (A1), Asriel_84 (E), Atkinbua_55 (A1), BAKA_67 (J), BK1_48 (A1), BPBiebs31_53 (A1), Bagrid_62 (J), Balomoji_85 (E), Barbarian_84 (E), Barriga_53 (A1), BarrowTuph_53 (A1), Bask21_85 (E), Beatrix_52 (A1), Beem_63 (J), BeesKnees_55 (A1), Bethlehem_53 (A1), Big3_52 (A1), BigBubba_85 (E), BigMau_53 (A1), BigPaolini_52 (A1), Bigchungi_52 (A1), Bigfoot_48 (A1), Bircsak_51 (A1), Blackflame_51 (A1), Blesser_51 (A1), BluSpix_51 (A1), Blue_52 (A1), Bob3_50 (A1), Bobby_63 (J), Bombitas_60 (J), Bones_53 (A1), Briton15_56 (A1), BronnyJames_57 (J), Bruns_51 (A1), Burton_52 (A1), Buttons_51 (A1), Bxb1_48 (A1), Cactus_88 (E), Carlyle_51 (A1), CartmannCramer_51 (A1), CatBus_52 (A1), Chanagan_49 (A1), ChotaBhai_85 (E), ChristmasHams_48 (A1), Ciao_52 (A1), ConceptII_54 (A1), Constella_51 (J), Cookies_82 (E), Corvo_53 (A1), Courthouse_60 (J), Crispicous1_50 (A1), Cueylyss_54 (A1), DD5_52 (A1), Daikon_87 (E), Dallas_62 (J), Dexes_53 (A1), DirtDevil_53 (A1), DmpstrDiver_62 (J), DoctorDiddles_84 (E), Dove_56 (J), DrFeelGood_50 (A1), DreamCatcher_56 (A1), Dreamboat_54 (A1), Duke13_66 (J), Dulcie_53 (A1), Dussy_54 (A1), Dynamix_54 (A1), Edtherson_52 (A1), Ejimix_63 (J), EnzoK_51 (A1), EricMillard_63 (J), Espresso_52 (A1), Euphoria_50 (A1), Eyeball_54 (A1), Fajezeel_54 (A1), Fascinus_48 (A1), Fenn_55 (A1), Flypotenuse_81 (E), FoghornLeghorn_79 (E), Forsytheast_52 (A1), Francis47_51 (A1), Froghopper_50 (A1), Fushigi_51 (A1), GMonster_49 (A1), Gachnar_52 (A1), GageAP_53 (A1), Gage_87 (E), Gandalf20_55 (A1), Gator_83 (E), Glexan_84 (E), Goldilocks_88 (E),

Gompeii16_51 (A1), Gonephishing_63 (J), Graduation_56 (A1), GrecoEtereo_53 (A1), Greg_54 (A1), GroundGoblin_52 (A1), Gwendoluna_56 (A1), Gyzlar_48 (A1), Halley_64 (J), Hami1_46 (A1), Hannaconda_61 (J), Harella_85 (E), HarryOW_51 (A1), Hermia_53 (A1), HermioneGrange_52 (A1), Hidrated_60 (J), HokkenD_56 (J), Homines_45 (A1), Hoonter_88 (E), Hughesyang_62 (J), ILeeKay_56 (A1), Icee_86 (E), Ichabod_55 (A1), IgnatiusPatJac_53 (A1), Inyanga_49 (A1), Iqorha_49 (A1), JC27_54 (A1), JackSparrow_54 (A1), Jasper_54 (A1), Jerm2_53 (A1), JuicyJay_62 (J), JuliaChild_53 (A1), Kalah2_59 (J), Kanely_54 (A1), KashFlow_58 (J), Kenmech_56 (A1), KikiBouba_53 (A1), Killigrew_53 (A1), Kimchi_89 (E), Klein_64 (J), Kugel_53 (A1), KyMonks1A_54 (A1), Kykar_52 (A1), Lamina13_53 (A1), Lesedi_49 (A1), Levia_50 (A1), LilBib_52 (A1), Lockley_51 (A1), Lucky2013_61 (J), LunarLander_54 (A1), MPlant7149_51 (A1), Magnar_52 (A1), Magnito_51 (A1), Makemake_52 (A1), Manatee_54 (A1), Marcell_50 (A1), Marchy_47 (A1), Marco3_55 (A1), Marge_52 (A1), Marleymoo_60 (J), Maroc7_50 (A1), Marsha_52 (A1), MaryBeth_52 (A1), McGuire_54 (A1), McSinger_53 (A1), MetalQZJ_51 (A1), MiaZeal_60 (J), Michley_52 (A1), MilleFeuille_52 (A1), Minerva_69 (J), Mkhuseli_51 (A1), Moldemort_88 (E), Molly_53 (A1), Monet_55 (A1), Moose_52 (A1), MrGordo_52 (A1), Mryolo_50 (A1), Mule_49 (A1), Museum_53 (A1), Myrale_85 (E), NEHalo_50 (A1), Naira_55 (A1), Nekros_61 (J), NihilNomen_63 (J), Niza_55 (A1), Norz_53 (A1), Noxious_53 (A1), Odette_61 (J), Ohno789_54 (A1), Omega_65 (J), Oogway_51 (A1), Optimus_68 (J), PSullivan_52 (A1), PacerPaul_52 (A1), Papez_55 (A1), Paphu_50 (A1), Paraselene_50 (A1), Pari_54 (A1), Parliament_52 (A1), PascalRango_53 (A1), Pat3_83 (E), Payneful_52 (A1), Pelly_52 (A1), Pepe_49 (A1), Perseus_52 (A1), Peterson_57 (A1), Petp2012_53 (A1), Petruchio_52 (A1), PherrisBueller_52 (A1), PhineBark_52 (A1), Phlippers_51 (A1), Phoebus_62 (J), PhrostyMug_51 (A1), PinkPlastic_53 (A1), Pinto_52 (A1), Pippin_54 (A1), Pita2_55 (A1), Porcelain_59 (J), Pound_63 (J), ProMouse_55 (A1), Raid_52 (A1), Rajelicia_53 (A1), Rakim_86 (E), Rearden_58 (J), Redno2_60 (J), Rhynn_51 (A1), RidgeCB_52 (A1), Ringer_53 (A1), Rohr_53 (A1), Rubeus_52 (A1), Rufus_53 (A1), Ruotula_55 (A1), Rutherferd_54 (A1), STLscum_55 (A1), Sagefire_55 (A1), Sandaddy_51 (A1), Sanya_51 (A1), SarFire_50 (A1), Schatzie_58 (J), Scowl_53 (A1), Seabiscuit_55 (A1), Seanderson_54 (A1), Shaboozey_56 (J), ShortQueendom_47 (A1), Sibs6_54 (A1), SkiPole_57 (A1), Slagathor_54 (A1), Smairt_54 (A1), Smeagol_54 (A1), Snazzy_51 (A1), Solon_51 (A1), Sorpresa_51 (A1), Sotrice96_86 (E), SpikeBT_52 (A1), Squee_53 (A1), Squint_60 (J), StewieG_49 (A1), StolenFromERC_88 (E), Sumter_49 (A1), Sunshine924_54 (A1), Superphikiman_61 (J), SwissCheese_54 (A1), Switzer_54 (A1), Swole_53 (A1), Target_53 (A1), Tasp14_54 (A1), Teodoridan_51 (A1), ThelonіousMonk_53 (A1), Thibault_56 (J), Thor_50 (A1), ThreeRngTarjay_61 (J), Topgun_52 (A1), Tote_48 (A1), Traaww1_81 (E), Traft412_55 (A1), Treddle_53 (A1), Tripl3t_52 (A1), Trouble_55 (A1), Turj99_51 (A1), TwoPeat_53 (A1), U2_52 (A1), Violet_50 (A1), Wanda_69 (J), Watermelon_53 (A1), Wheeler_53 (A1), Whitspit_50 (A1), Wiggin_87 (E), Wilkins_52 (A1), Xiaokay_56 (J), Yeet_61 (J), Zeeculate_50 (A1), Zelink_61 (J), Zephyr_52 (A1), Zeuska_51 (A1),

Summary by clusters:

There are 3 clusters represented in this pham: A1, J, E,

Info for manual annotations of cluster A1:
•Start number 28 was manually annotated 2 times for cluster A1.
•Start number 29 was manually annotated 1 time for cluster A1.
•Start number 31 was manually annotated 212 times for cluster A1.

Info for manual annotations of cluster E:
•Start number 31 was manually annotated 27 times for cluster E.

Info for manual annotations of cluster J:
•Start number 31 was manually annotated 40 times for cluster J.

Gene Information:

Gene: A6_48 Start: 36382, Stop: 36203, Start Num: 31
Candidate Starts for A6_48:
(Start: 28 @36409 has 2 MA's), (Start: 31 @36382 has 279 MA's), (32, 36331), (36, 36268),

Gene: AFIS_50 Start: 37186, Stop: 37007, Start Num: 31
Candidate Starts for AFIS_50:
(Start: 31 @37186 has 279 MA's), (32, 37135), (36, 37072),

Gene: Abbyshoes_55 Start: 38782, Stop: 38600, Start Num: 31
Candidate Starts for Abbyshoes_55:
(Start: 31 @38782 has 279 MA's),

Gene: Abrogate_510 Start: 38794, Stop: 38615, Start Num: 31
Candidate Starts for Abrogate_510:
(Start: 31 @38794 has 279 MA's), (32, 38743),

Gene: Acme_54 Start: 37720, Stop: 37550, Start Num: 31
Candidate Starts for Acme_54:
(Start: 31 @37720 has 279 MA's),

Gene: Adahisdi_52 Start: 38524, Stop: 38351, Start Num: 31
Candidate Starts for Adahisdi_52:
(Start: 31 @38524 has 279 MA's), (33, 38482), (36, 38416),

Gene: Adnama_89 Start: 52394, Stop: 52621, Start Num: 31
Candidate Starts for Adnama_89:
(Start: 31 @52394 has 279 MA's), (32, 52445), (40, 52616),

Gene: Aeneas_54 Start: 38741, Stop: 38562, Start Num: 31
Candidate Starts for Aeneas_54:
(Start: 31 @38741 has 279 MA's), (32, 38690),

Gene: Agaliana_48 Start: 35388, Stop: 35209, Start Num: 31
Candidate Starts for Agaliana_48:
(Start: 31 @35388 has 279 MA's), (32, 35337),

Gene: Ajay_54 Start: 38848, Stop: 38669, Start Num: 31
Candidate Starts for Ajay_54:
(Start: 31 @38848 has 279 MA's), (32, 38797),

Gene: Aldrich_52 Start: 38199, Stop: 38017, Start Num: 31
Candidate Starts for Aldrich_52:
(7, 38322), (11, 38304), (12, 38301), (21, 38265), (Start: 31 @38199 has 279 MA's),

Gene: Alsfro_56 Start: 37894, Stop: 37724, Start Num: 31
Candidate Starts for Alsfro_56:
(Start: 31 @37894 has 279 MA's),

Gene: Altman_55 Start: 38501, Stop: 38316, Start Num: 31
Candidate Starts for Altman_55:
(Start: 31 @38501 has 279 MA's),

Gene: Alvin_52 Start: 38173, Stop: 38000, Start Num: 31
Candidate Starts for Alvin_52:
(Start: 31 @38173 has 279 MA's), (33, 38131),

Gene: Anglerfish_54 Start: 39002, Stop: 38823, Start Num: 31
Candidate Starts for Anglerfish_54:
(Start: 31 @39002 has 279 MA's), (32, 38951),

Gene: Applejack_47 Start: 35010, Stop: 34831, Start Num: 31
Candidate Starts for Applejack_47:
(Start: 31 @35010 has 279 MA's), (32, 34959), (36, 34896),

Gene: Arcanine_53 Start: 38326, Stop: 38147, Start Num: 31
Candidate Starts for Arcanine_53:
(4, 38533), (9, 38455), (20, 38395), (23, 38386), (Start: 31 @38326 has 279 MA's), (32, 38275), (36, 38212),

Gene: Ariel_60 Start: 43241, Stop: 43068, Start Num: 31
Candidate Starts for Ariel_60:
(Start: 31 @43241 has 279 MA's), (35, 43184), (37, 43106), (38, 43082),

Gene: Arlo_50 Start: 37032, Stop: 36853, Start Num: 31
Candidate Starts for Arlo_50:
(Start: 31 @37032 has 279 MA's), (32, 36981), (36, 36918),

Gene: Ashballer_54 Start: 38523, Stop: 38344, Start Num: 31
Candidate Starts for Ashballer_54:
(Start: 31 @38523 has 279 MA's), (32, 38472), (36, 38409),

Gene: Asriel_84 Start: 50731, Stop: 50958, Start Num: 31
Candidate Starts for Asriel_84:
(Start: 31 @50731 has 279 MA's), (32, 50782), (40, 50953),

Gene: Atkinbua_55 Start: 38155, Stop: 37976, Start Num: 31
Candidate Starts for Atkinbua_55:
(Start: 28 @38182 has 2 MA's), (Start: 31 @38155 has 279 MA's), (32, 38104),

Gene: BAKA_67 Start: 48144, Stop: 47971, Start Num: 31
Candidate Starts for BAKA_67:
(Start: 31 @48144 has 279 MA's), (35, 48087), (37, 48009), (38, 47985),

Gene: BK1_48 Start: 36382, Stop: 36203, Start Num: 31
Candidate Starts for BK1_48:
(Start: 28 @36409 has 2 MA's), (Start: 31 @36382 has 279 MA's), (32, 36331), (36, 36268),

Gene: BPBiebs31_53 Start: 38698, Stop: 38519, Start Num: 31
Candidate Starts for BPBiebs31_53:
(21, 38764), (Start: 31 @38698 has 279 MA's), (32, 38647), (34, 38641),

Gene: Bagrid_62 Start: 47476, Stop: 47303, Start Num: 31
Candidate Starts for Bagrid_62:
(Start: 31 @47476 has 279 MA's), (35, 47419), (37, 47341), (38, 47317),

Gene: Balomoji_85 Start: 52501, Stop: 52728, Start Num: 31
Candidate Starts for Balomoji_85:
(Start: 31 @52501 has 279 MA's), (32, 52552), (40, 52723),

Gene: Barbarian_84 Start: 50731, Stop: 50958, Start Num: 31
Candidate Starts for Barbarian_84:
(Start: 31 @50731 has 279 MA's), (32, 50782), (40, 50953),

Gene: Barriga_53 Start: 37279, Stop: 37109, Start Num: 31
Candidate Starts for Barriga_53:
(Start: 31 @37279 has 279 MA's),

Gene: BarrowTuph_53 Start: 38018, Stop: 37839, Start Num: 31
Candidate Starts for BarrowTuph_53:
(16, 38108), (24, 38069), (25, 38063), (26, 38057), (27, 38048), (Start: 31 @38018 has 279 MA's), (32, 37967), (36, 37904),

Gene: Bask21_85 Start: 51354, Stop: 51581, Start Num: 31
Candidate Starts for Bask21_85:
(19, 51285), (Start: 31 @51354 has 279 MA's), (32, 51405), (40, 51576),

Gene: Beatrix_52 Start: 39003, Stop: 38824, Start Num: 31
Candidate Starts for Beatrix_52:
(Start: 31 @39003 has 279 MA's), (32, 38952),

Gene: Beem_63 Start: 48042, Stop: 47869, Start Num: 31
Candidate Starts for Beem_63:
(Start: 31 @48042 has 279 MA's), (35, 47985), (37, 47907), (38, 47883),

Gene: BeesKnees_55 Start: 38051, Stop: 37881, Start Num: 31
Candidate Starts for BeesKnees_55:
(Start: 29 @38078 has 1 MA's), (Start: 31 @38051 has 279 MA's),

Gene: Bethlehem_53 Start: 39471, Stop: 39292, Start Num: 31
Candidate Starts for Bethlehem_53:
(Start: 28 @39498 has 2 MA's), (Start: 31 @39471 has 279 MA's), (32, 39420),

Gene: Big3_52 Start: 38865, Stop: 38692, Start Num: 31
Candidate Starts for Big3_52:
(Start: 31 @38865 has 279 MA's), (33, 38823),

Gene: BigBubba_85 Start: 51747, Stop: 51974, Start Num: 31
Candidate Starts for BigBubba_85:
(19, 51678), (Start: 31 @51747 has 279 MA's), (32, 51798), (40, 51969),

Gene: BigMau_53 Start: 37286, Stop: 37107, Start Num: 31
Candidate Starts for BigMau_53:
(Start: 31 @37286 has 279 MA's), (32, 37235), (36, 37172),

Gene: BigPaolini_52 Start: 36445, Stop: 36266, Start Num: 31
Candidate Starts for BigPaolini_52:
(Start: 31 @36445 has 279 MA's), (32, 36394),

Gene: Bigchungi_52 Start: 37116, Stop: 36937, Start Num: 31
Candidate Starts for Bigchungi_52:
(Start: 28 @37143 has 2 MA's), (Start: 31 @37116 has 279 MA's), (32, 37065), (36, 37002),

Gene: Bigfoot_48 Start: 36666, Stop: 36487, Start Num: 31
Candidate Starts for Bigfoot_48:
(Start: 28 @36693 has 2 MA's), (Start: 31 @36666 has 279 MA's), (32, 36615),

Gene: Bircsak_51 Start: 38964, Stop: 38785, Start Num: 31
Candidate Starts for Bircsak_51:
(Start: 31 @38964 has 279 MA's), (32, 38913),

Gene: Blackflame_51 Start: 37677, Stop: 37498, Start Num: 31
Candidate Starts for Blackflame_51:
(Start: 28 @37704 has 2 MA's), (Start: 31 @37677 has 279 MA's), (32, 37626), (36, 37563),

Gene: Blesser_51 Start: 37633, Stop: 37448, Start Num: 31
Candidate Starts for Blesser_51:
(2, 37882), (8, 37765), (13, 37741), (17, 37720), (Start: 31 @37633 has 279 MA's), (36, 37513),

Gene: BluSpix_51 Start: 34226, Stop: 34047, Start Num: 31
Candidate Starts for BluSpix_51:
(Start: 31 @34226 has 279 MA's), (32, 34175),

Gene: Blue_52 Start: 38883, Stop: 38704, Start Num: 31
Candidate Starts for Blue_52:
(Start: 31 @38883 has 279 MA's), (32, 38832), (36, 38769),

Gene: Bob3_50 Start: 36636, Stop: 36457, Start Num: 31
Candidate Starts for Bob3_50:
(Start: 31 @36636 has 279 MA's), (32, 36585), (36, 36522),

Gene: Bobby_63 Start: 47403, Stop: 47230, Start Num: 31
Candidate Starts for Bobby_63:
(Start: 31 @47403 has 279 MA's), (35, 47346), (37, 47268), (38, 47244),

Gene: Bombitas_60 Start: 47638, Stop: 47465, Start Num: 31
Candidate Starts for Bombitas_60:
(Start: 31 @47638 has 279 MA's), (35, 47581), (37, 47503), (38, 47479),

Gene: Bones_53 Start: 38327, Stop: 38148, Start Num: 31
Candidate Starts for Bones_53:
(Start: 31 @38327 has 279 MA's), (32, 38276), (36, 38213),

Gene: Briton15_56 Start: 38292, Stop: 38107, Start Num: 31
Candidate Starts for Briton15_56:
(Start: 29 @38319 has 1 MA's), (Start: 31 @38292 has 279 MA's),

Gene: BronnyJames_57 Start: 41950, Stop: 41783, Start Num: 31
Candidate Starts for BronnyJames_57:
(Start: 31 @41950 has 279 MA's), (33, 41908), (37, 41821), (38, 41797),

Gene: Bruns_51 Start: 37204, Stop: 37034, Start Num: 31
Candidate Starts for Bruns_51:
(Start: 31 @37204 has 279 MA's),

Gene: Burton_52 Start: 38141, Stop: 37956, Start Num: 31
Candidate Starts for Burton_52:
(Start: 29 @38168 has 1 MA's), (Start: 31 @38141 has 279 MA's),

Gene: Buttons_51 Start: 36152, Stop: 35970, Start Num: 31
Candidate Starts for Buttons_51:
(7, 36275), (11, 36257), (12, 36254), (21, 36218), (Start: 31 @36152 has 279 MA's),

Gene: Bxb1_48 Start: 36963, Stop: 36784, Start Num: 31
Candidate Starts for Bxb1_48:
(Start: 31 @36963 has 279 MA's), (36, 36849),

Gene: Cactus_88 Start: 51395, Stop: 51622, Start Num: 31
Candidate Starts for Cactus_88:
(Start: 31 @51395 has 279 MA's), (32, 51446), (40, 51617),

Gene: Carlyle_51 Start: 35658, Stop: 35479, Start Num: 31
Candidate Starts for Carlyle_51:
(Start: 31 @35658 has 279 MA's), (32, 35607),

Gene: CartmannCramer_51 Start: 39512, Stop: 39333, Start Num: 31
Candidate Starts for CartmannCramer_51:
(Start: 28 @39539 has 2 MA's), (Start: 31 @39512 has 279 MA's), (36, 39398),

Gene: CatBus_52 Start: 38391, Stop: 38209, Start Num: 31
Candidate Starts for CatBus_52:
(7, 38514), (11, 38496), (12, 38493), (21, 38457), (Start: 31 @38391 has 279 MA's),

Gene: Chanagan_49 Start: 36456, Stop: 36277, Start Num: 31
Candidate Starts for Chanagan_49:
(Start: 31 @36456 has 279 MA's), (32, 36405),

Gene: ChotaBhai_85 Start: 51719, Stop: 51946, Start Num: 31
Candidate Starts for ChotaBhai_85:
(19, 51650), (Start: 31 @51719 has 279 MA's), (32, 51770), (40, 51941),

Gene: ChristmasHams_48 Start: 35862, Stop: 35683, Start Num: 31
Candidate Starts for ChristmasHams_48:
(Start: 31 @35862 has 279 MA's), (32, 35811),

Gene: Ciao_52 Start: 37610, Stop: 37428, Start Num: 31

Candidate Starts for Ciao_52:
(7, 37733), (11, 37715), (12, 37712), (21, 37676), (Start: 31 @37610 has 279 MA's),

Gene: ConceptII_54 Start: 39279, Stop: 39100, Start Num: 31
Candidate Starts for ConceptII_54:
(Start: 31 @39279 has 279 MA's), (32, 39228), (36, 39165),

Gene: Constella_51 Start: 42980, Stop: 42807, Start Num: 31
Candidate Starts for Constella_51:
(Start: 31 @42980 has 279 MA's), (35, 42923), (37, 42845), (38, 42821),

Gene: Cookies_82 Start: 51576, Stop: 51803, Start Num: 31
Candidate Starts for Cookies_82:
(Start: 31 @51576 has 279 MA's), (32, 51627), (40, 51798),

Gene: Corvo_53 Start: 39106, Stop: 38936, Start Num: 31
Candidate Starts for Corvo_53:
(Start: 29 @39133 has 1 MA's), (Start: 31 @39106 has 279 MA's),

Gene: Courthouse_60 Start: 43645, Stop: 43472, Start Num: 31
Candidate Starts for Courthouse_60:
(Start: 31 @43645 has 279 MA's), (35, 43588), (37, 43510), (38, 43486),

Gene: Crispicous1_50 Start: 36781, Stop: 36602, Start Num: 31
Candidate Starts for Crispicous1_50:
(Start: 31 @36781 has 279 MA's), (32, 36730), (36, 36667),

Gene: Cueylyss_54 Start: 39460, Stop: 39281, Start Num: 31
Candidate Starts for Cueylyss_54:
(Start: 31 @39460 has 279 MA's), (32, 39409), (36, 39346),

Gene: DD5_52 Start: 38373, Stop: 38188, Start Num: 31
Candidate Starts for DD5_52:
(Start: 29 @38400 has 1 MA's), (Start: 31 @38373 has 279 MA's),

Gene: Daikon_87 Start: 52522, Stop: 52749, Start Num: 31
Candidate Starts for Daikon_87:
(Start: 31 @52522 has 279 MA's), (32, 52573), (40, 52744),

Gene: Dallas_62 Start: 46963, Stop: 46790, Start Num: 31
Candidate Starts for Dallas_62:
(Start: 31 @46963 has 279 MA's), (35, 46906), (37, 46828), (38, 46804),

Gene: Dexes_53 Start: 38517, Stop: 38338, Start Num: 31
Candidate Starts for Dexes_53:
(Start: 31 @38517 has 279 MA's), (32, 38466),

Gene: DirtDevil_53 Start: 38199, Stop: 38017, Start Num: 31
Candidate Starts for DirtDevil_53:
(7, 38322), (11, 38304), (12, 38301), (21, 38265), (Start: 31 @38199 has 279 MA's),

Gene: DmpstrDiver_62 Start: 47390, Stop: 47217, Start Num: 31
Candidate Starts for DmpstrDiver_62:

(Start: 31 @47390 has 279 MA's), (35, 47333), (37, 47255), (38, 47231),

Gene: DoctorDiddles_84 Start: 51763, Stop: 51990, Start Num: 31
Candidate Starts for DoctorDiddles_84:
(19, 51694), (Start: 31 @51763 has 279 MA's), (32, 51814), (40, 51985),

Gene: Dove_56 Start: 45904, Stop: 45731, Start Num: 31
Candidate Starts for Dove_56:
(Start: 31 @45904 has 279 MA's), (35, 45847), (37, 45769), (38, 45745),

Gene: DrFeelGood_50 Start: 37621, Stop: 37448, Start Num: 31
Candidate Starts for DrFeelGood_50:
(Start: 31 @37621 has 279 MA's), (33, 37579),

Gene: DreamCatcher_56 Start: 39029, Stop: 38859, Start Num: 31
Candidate Starts for DreamCatcher_56:
(Start: 29 @39056 has 1 MA's), (Start: 31 @39029 has 279 MA's),

Gene: Dreamboat_54 Start: 37374, Stop: 37204, Start Num: 31
Candidate Starts for Dreamboat_54:
(Start: 31 @37374 has 279 MA's),

Gene: Duke13_66 Start: 47910, Stop: 47737, Start Num: 31
Candidate Starts for Duke13_66:
(Start: 31 @47910 has 279 MA's), (35, 47853), (37, 47775), (38, 47751),

Gene: Dulcie_53 Start: 37830, Stop: 37657, Start Num: 31
Candidate Starts for Dulcie_53:
(10, 37953), (14, 37935), (15, 37932), (22, 37896), (Start: 31 @37830 has 279 MA's), (33, 37788),

Gene: Dussy_54 Start: 38802, Stop: 38620, Start Num: 31
Candidate Starts for Dussy_54:
(Start: 31 @38802 has 279 MA's),

Gene: Dynamix_54 Start: 37849, Stop: 37679, Start Num: 31
Candidate Starts for Dynamix_54:
(Start: 29 @37876 has 1 MA's), (Start: 31 @37849 has 279 MA's),

Gene: Edtherson_52 Start: 38112, Stop: 37933, Start Num: 31
Candidate Starts for Edtherson_52:
(Start: 31 @38112 has 279 MA's), (32, 38061), (36, 37998),

Gene: Ejimix_63 Start: 48828, Stop: 48655, Start Num: 31
Candidate Starts for Ejimix_63:
(Start: 31 @48828 has 279 MA's), (35, 48771), (37, 48693), (38, 48669),

Gene: EnzoK_51 Start: 35427, Stop: 35254, Start Num: 31
Candidate Starts for EnzoK_51:
(10, 35550), (14, 35532), (15, 35529), (22, 35493), (Start: 31 @35427 has 279 MA's), (33, 35385),

Gene: EricMillard_63 Start: 48329, Stop: 48156, Start Num: 31
Candidate Starts for EricMillard_63:
(Start: 31 @48329 has 279 MA's), (35, 48272), (37, 48194), (38, 48170),

Gene: Espresso_52 Start: 38668, Stop: 38489, Start Num: 31
Candidate Starts for Espresso_52:
(Start: 31 @38668 has 279 MA's), (32, 38617), (36, 38554),

Gene: Euphoria_50 Start: 37919, Stop: 37740, Start Num: 31
Candidate Starts for Euphoria_50:
(Start: 31 @37919 has 279 MA's), (32, 37868),

Gene: Eyeball_54 Start: 38207, Stop: 38028, Start Num: 31
Candidate Starts for Eyeball_54:
(Start: 31 @38207 has 279 MA's), (32, 38156), (36, 38093),

Gene: Fajezeel_54 Start: 37959, Stop: 37777, Start Num: 31
Candidate Starts for Fajezeel_54:
(7, 38082), (11, 38064), (12, 38061), (21, 38025), (Start: 31 @37959 has 279 MA's),

Gene: Fascinus_48 Start: 36890, Stop: 36708, Start Num: 31
Candidate Starts for Fascinus_48:
(Start: 29 @36917 has 1 MA's), (Start: 31 @36890 has 279 MA's), (36, 36773),

Gene: Fenn_55 Start: 39795, Stop: 39610, Start Num: 31
Candidate Starts for Fenn_55:
(Start: 29 @39822 has 1 MA's), (Start: 31 @39795 has 279 MA's),

Gene: Flypotenuse_81 Start: 51385, Stop: 51612, Start Num: 31
Candidate Starts for Flypotenuse_81:
(Start: 31 @51385 has 279 MA's), (32, 51436), (40, 51607),

Gene: FoghornLeghorn_79 Start: 50398, Stop: 50625, Start Num: 31
Candidate Starts for FoghornLeghorn_79:
(Start: 31 @50398 has 279 MA's), (32, 50449), (40, 50620),

Gene: Forsytheast_52 Start: 37422, Stop: 37252, Start Num: 31
Candidate Starts for Forsytheast_52:
(Start: 29 @37449 has 1 MA's), (Start: 31 @37422 has 279 MA's),

Gene: Francis47_51 Start: 39232, Stop: 39053, Start Num: 31
Candidate Starts for Francis47_51:
(Start: 31 @39232 has 279 MA's), (32, 39181),

Gene: Froghopper_50 Start: 36957, Stop: 36778, Start Num: 31
Candidate Starts for Froghopper_50:
(Start: 31 @36957 has 279 MA's), (32, 36906),

Gene: Fushigi_51 Start: 35918, Stop: 35739, Start Num: 31
Candidate Starts for Fushigi_51:
(Start: 31 @35918 has 279 MA's), (32, 35867), (36, 35804),

Gene: GMonster_49 Start: 36275, Stop: 36096, Start Num: 31
Candidate Starts for GMonster_49:
(Start: 31 @36275 has 279 MA's), (32, 36224),

Gene: Gachnar_52 Start: 37034, Stop: 36864, Start Num: 31
Candidate Starts for Gachnar_52:
(3, 37253), (7, 37172), (18, 37109), (Start: 29 @37061 has 1 MA's), (Start: 31 @37034 has 279 MA's),

Gene: Gage_87 Start: 52178, Stop: 52405, Start Num: 31
Candidate Starts for Gage_87:
(19, 52109), (Start: 31 @52178 has 279 MA's), (32, 52229), (40, 52400),

Gene: GageAP_53 Start: 38708, Stop: 38529, Start Num: 31
Candidate Starts for GageAP_53:
(Start: 31 @38708 has 279 MA's), (32, 38657), (36, 38594),

Gene: Gandalf20_55 Start: 39761, Stop: 39582, Start Num: 31
Candidate Starts for Gandalf20_55:
(Start: 31 @39761 has 279 MA's), (32, 39710),

Gene: Gator_83 Start: 52228, Stop: 52455, Start Num: 31
Candidate Starts for Gator_83:
(Start: 31 @52228 has 279 MA's), (32, 52279), (40, 52450),

Gene: Glexan_84 Start: 52515, Stop: 52742, Start Num: 31
Candidate Starts for Glexan_84:
(Start: 31 @52515 has 279 MA's), (32, 52566), (40, 52737),

Gene: Goldilocks_88 Start: 51673, Stop: 51900, Start Num: 31
Candidate Starts for Goldilocks_88:
(19, 51604), (Start: 31 @51673 has 279 MA's), (32, 51724), (40, 51895),

Gene: Gompeii16_51 Start: 38965, Stop: 38786, Start Num: 31
Candidate Starts for Gompeii16_51:
(Start: 31 @38965 has 279 MA's), (32, 38914),

Gene: Gonephishing_63 Start: 44987, Stop: 44820, Start Num: 31
Candidate Starts for Gonephishing_63:
(Start: 31 @44987 has 279 MA's), (33, 44945), (37, 44858), (38, 44834),

Gene: Graduation_56 Start: 39532, Stop: 39353, Start Num: 31
Candidate Starts for Graduation_56:
(Start: 31 @39532 has 279 MA's), (32, 39481), (36, 39418),

Gene: GrecoEtereo_53 Start: 37769, Stop: 37590, Start Num: 31
Candidate Starts for GrecoEtereo_53:
(Start: 28 @37796 has 2 MA's), (Start: 31 @37769 has 279 MA's), (32, 37718), (36, 37655),

Gene: Greg_54 Start: 37959, Stop: 37777, Start Num: 31
Candidate Starts for Greg_54:
(7, 38082), (11, 38064), (12, 38061), (21, 38025), (Start: 31 @37959 has 279 MA's),

Gene: GroundGoblin_52 Start: 38341, Stop: 38159, Start Num: 31
Candidate Starts for GroundGoblin_52:
(7, 38464), (11, 38446), (12, 38443), (21, 38407), (Start: 31 @38341 has 279 MA's),

Gene: Gwendoluna_56 Start: 39968, Stop: 39789, Start Num: 31

Candidate Starts for Gwendoluna_56:
(21, 40034), (Start: 31 @39968 has 279 MA's), (32, 39917),

Gene: Gyzlar_48 Start: 35683, Stop: 35504, Start Num: 31
Candidate Starts for Gyzlar_48:
(Start: 28 @35710 has 2 MA's), (Start: 31 @35683 has 279 MA's), (32, 35632), (36, 35569),

Gene: Halley_64 Start: 48042, Stop: 47869, Start Num: 31
Candidate Starts for Halley_64:
(Start: 31 @48042 has 279 MA's), (35, 47985), (37, 47907), (38, 47883),

Gene: Hami1_46 Start: 33015, Stop: 32836, Start Num: 31
Candidate Starts for Hami1_46:
(Start: 31 @33015 has 279 MA's), (32, 32964),

Gene: HanShotFirst_53 Start: 38336, Stop: 38130, Start Num: 28
Candidate Starts for HanShotFirst_53:
(Start: 28 @38336 has 2 MA's), (Start: 31 @38309 has 279 MA's), (32, 38258),

Gene: Hannaconda_61 Start: 43234, Stop: 43049, Start Num: 31
Candidate Starts for Hannaconda_61:
(Start: 31 @43234 has 279 MA's), (35, 43177), (37, 43099), (38, 43075), (39, 43060),

Gene: Harella_85 Start: 53031, Stop: 53258, Start Num: 31
Candidate Starts for Harella_85:
(Start: 31 @53031 has 279 MA's), (32, 53082), (40, 53253),

Gene: HarryOW_51 Start: 36941, Stop: 36762, Start Num: 31
Candidate Starts for HarryOW_51:
(Start: 28 @36968 has 2 MA's), (Start: 31 @36941 has 279 MA's), (32, 36890), (36, 36827),

Gene: Hermia_53 Start: 38391, Stop: 38209, Start Num: 31
Candidate Starts for Hermia_53:
(7, 38514), (11, 38496), (12, 38493), (21, 38457), (Start: 31 @38391 has 279 MA's),

Gene: HermioneGrange_52 Start: 37780, Stop: 37601, Start Num: 31
Candidate Starts for HermioneGrange_52:
(Start: 31 @37780 has 279 MA's), (32, 37729), (36, 37666),

Gene: Hidrated_60 Start: 47727, Stop: 47554, Start Num: 31
Candidate Starts for Hidrated_60:
(Start: 31 @47727 has 279 MA's), (35, 47670), (37, 47592), (38, 47568),

Gene: HokkenD_56 Start: 46311, Stop: 46138, Start Num: 31
Candidate Starts for HokkenD_56:
(Start: 31 @46311 has 279 MA's), (35, 46254), (37, 46176), (38, 46152),

Gene: Homines_45 Start: 33954, Stop: 33775, Start Num: 31
Candidate Starts for Homines_45:
(Start: 28 @33981 has 2 MA's), (Start: 31 @33954 has 279 MA's), (32, 33903),

Gene: Hoonter_88 Start: 52175, Stop: 52402, Start Num: 31
Candidate Starts for Hoonter_88:

(Start: 31 @52175 has 279 MA's), (32, 52226), (40, 52397),

Gene: Hughesyang_62 Start: 47971, Stop: 47798, Start Num: 31
Candidate Starts for Hughesyang_62:
(Start: 31 @47971 has 279 MA's), (35, 47914), (37, 47836), (38, 47812),

Gene: ILeeKay_56 Start: 38550, Stop: 38371, Start Num: 31
Candidate Starts for ILeeKay_56:
(Start: 31 @38550 has 279 MA's), (32, 38499),

Gene: Icee_86 Start: 51842, Stop: 52069, Start Num: 31
Candidate Starts for Icee_86:
(Start: 31 @51842 has 279 MA's), (32, 51893), (40, 52064),

Gene: Ichabod_55 Start: 39130, Stop: 38951, Start Num: 31
Candidate Starts for Ichabod_55:
(Start: 28 @39157 has 2 MA's), (Start: 31 @39130 has 279 MA's), (32, 39079),

Gene: IgnatiusPatJac_53 Start: 38171, Stop: 37992, Start Num: 31
Candidate Starts for IgnatiusPatJac_53:
(Start: 31 @38171 has 279 MA's), (32, 38120),

Gene: Inyanga_49 Start: 36405, Stop: 36226, Start Num: 31
Candidate Starts for Inyanga_49:
(Start: 31 @36405 has 279 MA's), (32, 36354),

Gene: Iqorha_49 Start: 36404, Stop: 36225, Start Num: 31
Candidate Starts for Iqorha_49:
(Start: 31 @36404 has 279 MA's), (32, 36353),

Gene: JC27_54 Start: 38212, Stop: 38033, Start Num: 31
Candidate Starts for JC27_54:
(Start: 31 @38212 has 279 MA's), (32, 38161), (36, 38098),

Gene: JackSparrow_54 Start: 38189, Stop: 38010, Start Num: 31
Candidate Starts for JackSparrow_54:
(Start: 28 @38216 has 2 MA's), (Start: 31 @38189 has 279 MA's), (32, 38138),

Gene: Jasper_54 Start: 37260, Stop: 37090, Start Num: 31
Candidate Starts for Jasper_54:
(Start: 31 @37260 has 279 MA's),

Gene: Jerm2_53 Start: 38035, Stop: 37856, Start Num: 31
Candidate Starts for Jerm2_53:
(Start: 31 @38035 has 279 MA's), (32, 37984), (36, 37921),

Gene: JuicyJay_62 Start: 49176, Stop: 49003, Start Num: 31
Candidate Starts for JuicyJay_62:
(Start: 31 @49176 has 279 MA's), (35, 49119), (37, 49041), (38, 49017),

Gene: JuliaChild_53 Start: 37630, Stop: 37451, Start Num: 31
Candidate Starts for JuliaChild_53:
(Start: 29 @37657 has 1 MA's), (Start: 31 @37630 has 279 MA's),

Gene: KSSJEB_52 Start: 37656, Stop: 37444, Start Num: 29
Candidate Starts for KSSJEB_52:
(Start: 29 @37656 has 1 MA's), (Start: 31 @37629 has 279 MA's),

Gene: Kalah2_59 Start: 47585, Stop: 47412, Start Num: 31
Candidate Starts for Kalah2_59:
(Start: 31 @47585 has 279 MA's), (35, 47528), (37, 47450), (38, 47426),

Gene: Kanely_54 Start: 38278, Stop: 38093, Start Num: 31
Candidate Starts for Kanely_54:
(Start: 31 @38278 has 279 MA's),

Gene: KashFlow_58 Start: 42855, Stop: 42670, Start Num: 31
Candidate Starts for KashFlow_58:
(Start: 31 @42855 has 279 MA's), (35, 42798), (37, 42720), (38, 42696), (39, 42681),

Gene: Kenmech_56 Start: 39928, Stop: 39746, Start Num: 31
Candidate Starts for Kenmech_56:
(Start: 31 @39928 has 279 MA's),

Gene: KikiBouba_53 Start: 38200, Stop: 38018, Start Num: 31
Candidate Starts for KikiBouba_53:
(7, 38323), (11, 38305), (12, 38302), (21, 38266), (Start: 31 @38200 has 279 MA's),

Gene: Killigrew_53 Start: 38829, Stop: 38659, Start Num: 31
Candidate Starts for Killigrew_53:
(Start: 29 @38856 has 1 MA's), (Start: 31 @38829 has 279 MA's),

Gene: Kimchi_89 Start: 52181, Stop: 52408, Start Num: 31
Candidate Starts for Kimchi_89:
(19, 52112), (Start: 31 @52181 has 279 MA's), (32, 52232), (40, 52403),

Gene: Klein_64 Start: 47608, Stop: 47435, Start Num: 31
Candidate Starts for Klein_64:
(Start: 31 @47608 has 279 MA's), (35, 47551), (37, 47473), (38, 47449),

Gene: Kugel_53 Start: 38906, Stop: 38727, Start Num: 31
Candidate Starts for Kugel_53:
(4, 39113), (9, 39035), (20, 38975), (23, 38966), (Start: 31 @38906 has 279 MA's), (32, 38855),

Gene: KyMonks1A_54 Start: 37836, Stop: 37651, Start Num: 31
Candidate Starts for KyMonks1A_54:
(Start: 31 @37836 has 279 MA's), (32, 37779),

Gene: Kykar_52 Start: 37608, Stop: 37423, Start Num: 31
Candidate Starts for Kykar_52:
(Start: 31 @37608 has 279 MA's), (32, 37551),

Gene: Lamina13_53 Start: 37579, Stop: 37400, Start Num: 31
Candidate Starts for Lamina13_53:
(Start: 31 @37579 has 279 MA's), (32, 37528),

Gene: Lesedi_49 Start: 36802, Stop: 36623, Start Num: 31
Candidate Starts for Lesedi_49:
(Start: 31 @36802 has 279 MA's), (32, 36751), (36, 36688),

Gene: Levia_50 Start: 37628, Stop: 37443, Start Num: 31
Candidate Starts for Levia_50:
(Start: 31 @37628 has 279 MA's),

Gene: Licorice_55 Start: 40025, Stop: 39819, Start Num: 28
Candidate Starts for Licorice_55:
(Start: 28 @40025 has 2 MA's), (Start: 31 @39998 has 279 MA's), (32, 39947), (36, 39884),

Gene: LilBib_52 Start: 39056, Stop: 38877, Start Num: 31
Candidate Starts for LilBib_52:
(1, 39311), (5, 39245), (22, 39122), (Start: 31 @39056 has 279 MA's), (32, 39005), (36, 38942),

Gene: Lockley_51 Start: 37535, Stop: 37350, Start Num: 31
Candidate Starts for Lockley_51:
(Start: 29 @37562 has 1 MA's), (Start: 31 @37535 has 279 MA's),

Gene: Lucky2013_61 Start: 43781, Stop: 43608, Start Num: 31
Candidate Starts for Lucky2013_61:
(Start: 31 @43781 has 279 MA's), (35, 43724), (37, 43646), (38, 43622),

Gene: LunarLander_54 Start: 38099, Stop: 37920, Start Num: 31
Candidate Starts for LunarLander_54:
(Start: 31 @38099 has 279 MA's), (32, 38048), (36, 37985),

Gene: MPlant7149_51 Start: 36898, Stop: 36719, Start Num: 31
Candidate Starts for MPlant7149_51:
(Start: 31 @36898 has 279 MA's), (32, 36847), (36, 36784),

Gene: Magnar_52 Start: 38343, Stop: 38164, Start Num: 31
Candidate Starts for Magnar_52:
(Start: 31 @38343 has 279 MA's), (32, 38292),

Gene: Magnito_51 Start: 37903, Stop: 37724, Start Num: 31
Candidate Starts for Magnito_51:
(Start: 28 @37930 has 2 MA's), (Start: 31 @37903 has 279 MA's), (32, 37852),

Gene: Makemake_52 Start: 38402, Stop: 38223, Start Num: 31
Candidate Starts for Makemake_52:
(Start: 31 @38402 has 279 MA's), (32, 38351), (36, 38288),

Gene: Manatee_54 Start: 38429, Stop: 38250, Start Num: 31
Candidate Starts for Manatee_54:
(Start: 31 @38429 has 279 MA's), (32, 38378),

Gene: Marcell_50 Start: 37268, Stop: 37089, Start Num: 31
Candidate Starts for Marcell_50:
(4, 37475), (9, 37397), (20, 37337), (23, 37328), (Start: 31 @37268 has 279 MA's), (32, 37217), (36, 37154),

Gene: Marchy_47 Start: 35333, Stop: 35154, Start Num: 31
Candidate Starts for Marchy_47:
(Start: 31 @35333 has 279 MA's), (32, 35282), (36, 35219),

Gene: Marco3_55 Start: 39688, Stop: 39509, Start Num: 31
Candidate Starts for Marco3_55:
(Start: 31 @39688 has 279 MA's), (32, 39637), (36, 39574),

Gene: Marge_52 Start: 38082, Stop: 37900, Start Num: 31
Candidate Starts for Marge_52:
(7, 38217), (11, 38199), (12, 38196), (21, 38148), (Start: 31 @38082 has 279 MA's),

Gene: Marleymoo_60 Start: 46525, Stop: 46352, Start Num: 31
Candidate Starts for Marleymoo_60:
(Start: 31 @46525 has 279 MA's), (35, 46468), (37, 46390), (38, 46366),

Gene: Maroc7_50 Start: 37199, Stop: 37017, Start Num: 31
Candidate Starts for Maroc7_50:
(Start: 29 @37226 has 1 MA's), (Start: 31 @37199 has 279 MA's), (36, 37082),

Gene: Marsha_52 Start: 38641, Stop: 38456, Start Num: 31
Candidate Starts for Marsha_52:
(Start: 31 @38641 has 279 MA's), (32, 38584),

Gene: MaryBeth_52 Start: 38492, Stop: 38313, Start Num: 31
Candidate Starts for MaryBeth_52:
(4, 38702), (9, 38621), (20, 38561), (23, 38552), (Start: 31 @38492 has 279 MA's), (32, 38441),

Gene: McGuire_54 Start: 37727, Stop: 37548, Start Num: 31
Candidate Starts for McGuire_54:
(Start: 29 @37754 has 1 MA's), (Start: 31 @37727 has 279 MA's),

Gene: McSinger_53 Start: 37873, Stop: 37694, Start Num: 31
Candidate Starts for McSinger_53:
(Start: 28 @37900 has 2 MA's), (Start: 31 @37873 has 279 MA's), (32, 37822),

Gene: MetalQZJ_51 Start: 38492, Stop: 38313, Start Num: 31
Candidate Starts for MetalQZJ_51:
(4, 38702), (9, 38621), (20, 38561), (23, 38552), (Start: 31 @38492 has 279 MA's), (32, 38441),

Gene: MiaZeal_60 Start: 43456, Stop: 43283, Start Num: 31
Candidate Starts for MiaZeal_60:
(Start: 31 @43456 has 279 MA's), (35, 43399), (37, 43321), (38, 43297),

Gene: Michley_52 Start: 37372, Stop: 37193, Start Num: 31
Candidate Starts for Michley_52:
(Start: 31 @37372 has 279 MA's), (32, 37321), (36, 37258),

Gene: MilleFeuille_52 Start: 37642, Stop: 37463, Start Num: 31
Candidate Starts for MilleFeuille_52:
(Start: 28 @37669 has 2 MA's), (Start: 31 @37642 has 279 MA's), (32, 37591),

Gene: Minerva_69 Start: 49458, Stop: 49285, Start Num: 31

Candidate Starts for Minerva_69:
(Start: 31 @49458 has 279 MA's), (35, 49401), (37, 49323), (38, 49299),

Gene: Mkhuseli_51 Start: 36939, Stop: 36760, Start Num: 31
Candidate Starts for Mkhuseli_51:
(Start: 31 @36939 has 279 MA's), (32, 36888),

Gene: Moldemort_88 Start: 51994, Stop: 52221, Start Num: 31
Candidate Starts for Moldemort_88:
(Start: 31 @51994 has 279 MA's), (32, 52045), (40, 52216),

Gene: Molly_53 Start: 36942, Stop: 36763, Start Num: 31
Candidate Starts for Molly_53:
(4, 37149), (9, 37071), (20, 37011), (23, 37002), (Start: 31 @36942 has 279 MA's), (32, 36891), (36, 36828),

Gene: Monet_55 Start: 39071, Stop: 38892, Start Num: 31
Candidate Starts for Monet_55:
(Start: 31 @39071 has 279 MA's), (32, 39020), (36, 38957),

Gene: Moose_52 Start: 37422, Stop: 37252, Start Num: 31
Candidate Starts for Moose_52:
(Start: 29 @37449 has 1 MA's), (Start: 31 @37422 has 279 MA's),

Gene: MrGordo_52 Start: 38105, Stop: 37932, Start Num: 31
Candidate Starts for MrGordo_52:
(Start: 31 @38105 has 279 MA's), (33, 38063),

Gene: Mryolo_50 Start: 37901, Stop: 37716, Start Num: 31
Candidate Starts for Mryolo_50:
(Start: 31 @37901 has 279 MA's), (32, 37844),

Gene: Mule_49 Start: 36036, Stop: 35857, Start Num: 31
Candidate Starts for Mule_49:
(Start: 31 @36036 has 279 MA's), (32, 35985),

Gene: Museum_53 Start: 38080, Stop: 37895, Start Num: 31
Candidate Starts for Museum_53:
(Start: 29 @38107 has 1 MA's), (Start: 31 @38080 has 279 MA's),

Gene: Myrale_85 Start: 52538, Stop: 52765, Start Num: 31
Candidate Starts for Myrale_85:
(19, 52469), (Start: 31 @52538 has 279 MA's), (32, 52589), (40, 52760),

Gene: NEHalo_50 Start: 37817, Stop: 37632, Start Num: 31
Candidate Starts for NEHalo_50:
(Start: 31 @37817 has 279 MA's), (32, 37760),

Gene: Naira_55 Start: 39842, Stop: 39657, Start Num: 31
Candidate Starts for Naira_55:
(Start: 29 @39869 has 1 MA's), (Start: 31 @39842 has 279 MA's),

Gene: Nekros_61 Start: 46282, Stop: 46109, Start Num: 31

Candidate Starts for Nekros_61:
(Start: 31 @46282 has 279 MA's), (35, 46225), (37, 46147), (38, 46123),

Gene: NihilNomen_63 Start: 48129, Stop: 47956, Start Num: 31
Candidate Starts for NihilNomen_63:
(Start: 31 @48129 has 279 MA's), (35, 48072), (37, 47994), (38, 47970),

Gene: Niza_55 Start: 39894, Stop: 39715, Start Num: 31
Candidate Starts for Niza_55:
(Start: 31 @39894 has 279 MA's), (32, 39843), (36, 39780),

Gene: Norz_53 Start: 39069, Stop: 38890, Start Num: 31
Candidate Starts for Norz_53:
(Start: 28 @39096 has 2 MA's), (Start: 31 @39069 has 279 MA's), (32, 39018), (36, 38955),

Gene: Noxious_53 Start: 38391, Stop: 38209, Start Num: 31
Candidate Starts for Noxious_53:
(7, 38514), (11, 38496), (12, 38493), (21, 38457), (Start: 31 @38391 has 279 MA's),

Gene: Odette_61 Start: 47172, Stop: 46999, Start Num: 31
Candidate Starts for Odette_61:
(Start: 31 @47172 has 279 MA's), (35, 47115), (37, 47037), (38, 47013),

Gene: Ohno789_54 Start: 38616, Stop: 38443, Start Num: 31
Candidate Starts for Ohno789_54:
(10, 38739), (14, 38721), (15, 38718), (22, 38682), (Start: 31 @38616 has 279 MA's), (33, 38574), (36, 38508),

Gene: Omega_65 Start: 47992, Stop: 47822, Start Num: 31
Candidate Starts for Omega_65:
(Start: 31 @47992 has 279 MA's), (32, 47941), (37, 47860), (38, 47836),

Gene: Oogway_51 Start: 37739, Stop: 37560, Start Num: 31
Candidate Starts for Oogway_51:
(Start: 28 @37766 has 2 MA's), (Start: 31 @37739 has 279 MA's), (32, 37688),

Gene: Optimus_68 Start: 49044, Stop: 48871, Start Num: 31
Candidate Starts for Optimus_68:
(Start: 31 @49044 has 279 MA's), (35, 48987), (37, 48909), (38, 48885),

Gene: PSullivan_52 Start: 36904, Stop: 36725, Start Num: 31
Candidate Starts for PSullivan_52:
(Start: 31 @36904 has 279 MA's), (32, 36853), (36, 36790),

Gene: PacerPaul_52 Start: 38599, Stop: 38420, Start Num: 31
Candidate Starts for PacerPaul_52:
(Start: 31 @38599 has 279 MA's), (32, 38548),

Gene: Papez_55 Start: 40025, Stop: 39855, Start Num: 31
Candidate Starts for Papez_55:
(Start: 29 @40052 has 1 MA's), (Start: 31 @40025 has 279 MA's),

Gene: Paphu_50 Start: 37163, Stop: 36984, Start Num: 31

Candidate Starts for Paphu_50:
(13, 37268), (14, 37265), (21, 37229), (Start: 31 @37163 has 279 MA's), (32, 37112),

Gene: Paraselene_50 Start: 38489, Stop: 38304, Start Num: 31
Candidate Starts for Paraselene_50:
(Start: 31 @38489 has 279 MA's), (32, 38432), (36, 38369),

Gene: Pari_54 Start: 37560, Stop: 37390, Start Num: 31
Candidate Starts for Pari_54:
(Start: 29 @37587 has 1 MA's), (Start: 31 @37560 has 279 MA's),

Gene: Parliament_52 Start: 38082, Stop: 37903, Start Num: 31
Candidate Starts for Parliament_52:
(Start: 28 @38109 has 2 MA's), (Start: 31 @38082 has 279 MA's), (32, 38031),

Gene: PascalRango_53 Start: 38378, Stop: 38199, Start Num: 31
Candidate Starts for PascalRango_53:
(Start: 28 @38405 has 2 MA's), (Start: 31 @38378 has 279 MA's), (32, 38327), (36, 38264),

Gene: Pat3_83 Start: 50648, Stop: 50875, Start Num: 31
Candidate Starts for Pat3_83:
(19, 50579), (Start: 31 @50648 has 279 MA's), (32, 50699), (40, 50870),

Gene: Payneful_52 Start: 38050, Stop: 37871, Start Num: 31
Candidate Starts for Payneful_52:
(Start: 31 @38050 has 279 MA's), (32, 37999), (36, 37936),

Gene: Pelly_52 Start: 38001, Stop: 37822, Start Num: 31
Candidate Starts for Pelly_52:
(Start: 31 @38001 has 279 MA's), (32, 37950),

Gene: Pepe_49 Start: 36807, Stop: 36625, Start Num: 31
Candidate Starts for Pepe_49:
(Start: 31 @36807 has 279 MA's),

Gene: Perseus_52 Start: 38922, Stop: 38743, Start Num: 31
Candidate Starts for Perseus_52:
(Start: 31 @38922 has 279 MA's), (32, 38871),

Gene: Peterson_57 Start: 40276, Stop: 40091, Start Num: 31
Candidate Starts for Peterson_57:
(Start: 31 @40276 has 279 MA's), (32, 40219),

Gene: Petp2012_53 Start: 37901, Stop: 37722, Start Num: 31
Candidate Starts for Petp2012_53:
(4, 38108), (9, 38030), (20, 37970), (23, 37961), (Start: 31 @37901 has 279 MA's), (32, 37850), (36, 37787),

Gene: Petruchio_52 Start: 37638, Stop: 37459, Start Num: 31
Candidate Starts for Petruchio_52:
(Start: 31 @37638 has 279 MA's), (32, 37587),

Gene: PherrisBueller_52 Start: 36893, Stop: 36723, Start Num: 31

Candidate Starts for PherrisBueller_52:
(Start: 31 @36893 has 279 MA's),

Gene: PhineBark_52 Start: 38646, Stop: 38461, Start Num: 31
Candidate Starts for PhineBark_52:
(Start: 31 @38646 has 279 MA's),

Gene: Phlippers_51 Start: 38555, Stop: 38373, Start Num: 31
Candidate Starts for Phlippers_51:
(Start: 29 @38582 has 1 MA's), (Start: 31 @38555 has 279 MA's), (36, 38438),

Gene: Phoebus_62 Start: 48330, Stop: 48157, Start Num: 31
Candidate Starts for Phoebus_62:
(Start: 31 @48330 has 279 MA's), (35, 48273), (37, 48195), (38, 48171),

Gene: PhrostyMug_51 Start: 38201, Stop: 38022, Start Num: 31
Candidate Starts for PhrostyMug_51:
(Start: 31 @38201 has 279 MA's), (32, 38150),

Gene: PinkPlastic_53 Start: 37678, Stop: 37499, Start Num: 31
Candidate Starts for PinkPlastic_53:
(Start: 28 @37705 has 2 MA's), (Start: 31 @37678 has 279 MA's), (32, 37627),

Gene: Pinto_52 Start: 38070, Stop: 37891, Start Num: 31
Candidate Starts for Pinto_52:
(Start: 28 @38097 has 2 MA's), (Start: 31 @38070 has 279 MA's), (32, 38019),

Gene: Pippin_54 Start: 38003, Stop: 37821, Start Num: 31
Candidate Starts for Pippin_54:
(7, 38126), (11, 38108), (12, 38105), (21, 38069), (Start: 31 @38003 has 279 MA's),

Gene: Pita2_55 Start: 38401, Stop: 38222, Start Num: 31
Candidate Starts for Pita2_55:
(Start: 31 @38401 has 279 MA's), (32, 38350), (36, 38287),

Gene: Porcelain_59 Start: 43456, Stop: 43283, Start Num: 31
Candidate Starts for Porcelain_59:
(Start: 31 @43456 has 279 MA's), (35, 43399), (37, 43321), (38, 43297),

Gene: Pound_63 Start: 49463, Stop: 49290, Start Num: 31
Candidate Starts for Pound_63:
(Start: 31 @49463 has 279 MA's), (35, 49406), (37, 49328), (38, 49304),

Gene: ProMouse_55 Start: 38315, Stop: 38136, Start Num: 31
Candidate Starts for ProMouse_55:
(30, 38324), (Start: 31 @38315 has 279 MA's), (32, 38264),

Gene: Raid_52 Start: 37698, Stop: 37516, Start Num: 31
Candidate Starts for Raid_52:
(6, 37878), (21, 37764), (Start: 31 @37698 has 279 MA's),

Gene: Rajelicia_53 Start: 39012, Stop: 38833, Start Num: 31
Candidate Starts for Rajelicia_53:

(4, 39222), (9, 39141), (20, 39081), (23, 39072), (Start: 31 @39012 has 279 MA's), (32, 38961), (36, 38898),

Gene: Rakim_86 Start: 51990, Stop: 52217, Start Num: 31
Candidate Starts for Rakim_86:
(19, 51921), (Start: 31 @51990 has 279 MA's), (32, 52041), (40, 52212),

Gene: Rearden_58 Start: 43787, Stop: 43614, Start Num: 31
Candidate Starts for Rearden_58:
(Start: 31 @43787 has 279 MA's), (35, 43730), (37, 43652), (38, 43628),

Gene: Redno2_60 Start: 44925, Stop: 44752, Start Num: 31
Candidate Starts for Redno2_60:
(Start: 31 @44925 has 279 MA's), (35, 44868), (37, 44790), (38, 44766),

Gene: Rhynn_51 Start: 37338, Stop: 37159, Start Num: 31
Candidate Starts for Rhynn_51:
(Start: 31 @37338 has 279 MA's), (32, 37287),

Gene: RidgeCB_52 Start: 38198, Stop: 38019, Start Num: 31
Candidate Starts for RidgeCB_52:
(4, 38405), (9, 38327), (20, 38267), (23, 38258), (Start: 31 @38198 has 279 MA's), (32, 38147),

Gene: Ringer_53 Start: 39320, Stop: 39141, Start Num: 31
Candidate Starts for Ringer_53:
(Start: 28 @39347 has 2 MA's), (Start: 31 @39320 has 279 MA's), (32, 39269),

Gene: Rohr_53 Start: 38081, Stop: 37902, Start Num: 31
Candidate Starts for Rohr_53:
(Start: 31 @38081 has 279 MA's), (32, 38030), (36, 37967),

Gene: Rubeus_52 Start: 35938, Stop: 35759, Start Num: 31
Candidate Starts for Rubeus_52:
(Start: 28 @35965 has 2 MA's), (Start: 31 @35938 has 279 MA's), (32, 35887),

Gene: Rufus_53 Start: 37708, Stop: 37529, Start Num: 31
Candidate Starts for Rufus_53:
(Start: 31 @37708 has 279 MA's), (32, 37657), (36, 37594),

Gene: Ruotula_55 Start: 39177, Stop: 38995, Start Num: 31
Candidate Starts for Ruotula_55:
(7, 39312), (11, 39294), (12, 39291), (21, 39243), (Start: 31 @39177 has 279 MA's),

Gene: Rutherferd_54 Start: 38554, Stop: 38375, Start Num: 31
Candidate Starts for Rutherferd_54:
(Start: 31 @38554 has 279 MA's), (32, 38503),

Gene: STLscum_55 Start: 38950, Stop: 38771, Start Num: 31
Candidate Starts for STLscum_55:
(Start: 31 @38950 has 279 MA's), (32, 38899),

Gene: Sagefire_55 Start: 38918, Stop: 38739, Start Num: 31
Candidate Starts for Sagefire_55:

(21, 38984), (Start: 31 @38918 has 279 MA's), (32, 38867),

Gene: Sandaddy_51 Start: 37719, Stop: 37540, Start Num: 31
Candidate Starts for Sandaddy_51:
(Start: 28 @37746 has 2 MA's), (Start: 31 @37719 has 279 MA's), (32, 37668),

Gene: Sanya_51 Start: 38012, Stop: 37833, Start Num: 31
Candidate Starts for Sanya_51:
(Start: 28 @38039 has 2 MA's), (Start: 31 @38012 has 279 MA's), (32, 37961),

Gene: SarFire_50 Start: 37281, Stop: 37096, Start Num: 31
Candidate Starts for SarFire_50:
(Start: 29 @37308 has 1 MA's), (Start: 31 @37281 has 279 MA's),

Gene: Schatzie_58 Start: 46919, Stop: 46746, Start Num: 31
Candidate Starts for Schatzie_58:
(Start: 31 @46919 has 279 MA's), (35, 46862), (37, 46784), (38, 46760),

Gene: Scowl_53 Start: 38197, Stop: 38027, Start Num: 31
Candidate Starts for Scowl_53:
(Start: 31 @38197 has 279 MA's),

Gene: Seabiscuit_55 Start: 37814, Stop: 37635, Start Num: 31
Candidate Starts for Seabiscuit_55:
(Start: 29 @37841 has 1 MA's), (Start: 31 @37814 has 279 MA's),

Gene: Seanderson_54 Start: 39574, Stop: 39404, Start Num: 31
Candidate Starts for Seanderson_54:
(Start: 31 @39574 has 279 MA's),

Gene: Shaboozey_56 Start: 41971, Stop: 41804, Start Num: 31
Candidate Starts for Shaboozey_56:
(Start: 31 @41971 has 279 MA's), (33, 41929), (37, 41842), (38, 41818),

Gene: ShortQueendom_47 Start: 34739, Stop: 34560, Start Num: 31
Candidate Starts for ShortQueendom_47:
(Start: 28 @34766 has 2 MA's), (Start: 31 @34739 has 279 MA's), (32, 34688), (36, 34625),

Gene: Sibs6_54 Start: 36742, Stop: 36563, Start Num: 31
Candidate Starts for Sibs6_54:
(Start: 31 @36742 has 279 MA's), (32, 36691), (36, 36628),

Gene: SkiPole_57 Start: 38671, Stop: 38492, Start Num: 31
Candidate Starts for SkiPole_57:
(Start: 31 @38671 has 279 MA's), (32, 38620), (36, 38557),

Gene: Slagathor_54 Start: 38913, Stop: 38734, Start Num: 31
Candidate Starts for Slagathor_54:
(4, 39120), (9, 39042), (20, 38982), (23, 38973), (Start: 31 @38913 has 279 MA's), (32, 38862), (36, 38799),

Gene: Smairt_54 Start: 39194, Stop: 39015, Start Num: 31
Candidate Starts for Smairt_54:

(Start: 31 @39194 has 279 MA's), (32, 39143),

Gene: Smeagol_54 Start: 39158, Stop: 38988, Start Num: 31
Candidate Starts for Smeagol_54:
(Start: 29 @39185 has 1 MA's), (Start: 31 @39158 has 279 MA's),

Gene: Snazzy_51 Start: 37348, Stop: 37169, Start Num: 31
Candidate Starts for Snazzy_51:
(Start: 28 @37375 has 2 MA's), (Start: 31 @37348 has 279 MA's), (32, 37297), (36, 37234),

Gene: Solon_51 Start: 37606, Stop: 37427, Start Num: 31
Candidate Starts for Solon_51:
(Start: 28 @37633 has 2 MA's), (Start: 31 @37606 has 279 MA's), (32, 37555),

Gene: Sorpresa_51 Start: 37721, Stop: 37542, Start Num: 31
Candidate Starts for Sorpresa_51:
(Start: 28 @37748 has 2 MA's), (Start: 31 @37721 has 279 MA's), (32, 37670),

Gene: Sotrice96_86 Start: 52138, Stop: 52365, Start Num: 31
Candidate Starts for Sotrice96_86:
(Start: 31 @52138 has 279 MA's), (32, 52189), (40, 52360),

Gene: SpikeBT_52 Start: 37966, Stop: 37787, Start Num: 31
Candidate Starts for SpikeBT_52:
(Start: 31 @37966 has 279 MA's), (32, 37915), (36, 37852),

Gene: Squee_53 Start: 38309, Stop: 38124, Start Num: 31
Candidate Starts for Squee_53:
(Start: 29 @38336 has 1 MA's), (Start: 31 @38309 has 279 MA's),

Gene: Squint_60 Start: 43575, Stop: 43402, Start Num: 31
Candidate Starts for Squint_60:
(Start: 31 @43575 has 279 MA's), (35, 43518), (37, 43440), (38, 43416),

Gene: StewieG_49 Start: 35126, Stop: 34947, Start Num: 31
Candidate Starts for StewieG_49:
(Start: 28 @35153 has 2 MA's), (Start: 31 @35126 has 279 MA's), (32, 35075),

Gene: StolenFromERC_88 Start: 52178, Stop: 52405, Start Num: 31
Candidate Starts for StolenFromERC_88:
(19, 52109), (Start: 31 @52178 has 279 MA's), (32, 52229), (40, 52400),

Gene: Sumter_49 Start: 38262, Stop: 38083, Start Num: 31
Candidate Starts for Sumter_49:
(Start: 28 @38289 has 2 MA's), (Start: 31 @38262 has 279 MA's), (32, 38211),

Gene: Sunshine924_54 Start: 37412, Stop: 37242, Start Num: 31
Candidate Starts for Sunshine924_54:
(Start: 31 @37412 has 279 MA's),

Gene: Superphikiman_61 Start: 43647, Stop: 43474, Start Num: 31
Candidate Starts for Superphikiman_61:
(Start: 31 @43647 has 279 MA's), (35, 43590), (37, 43512), (38, 43488),

Gene: SwissCheese_54 Start: 37922, Stop: 37752, Start Num: 31
Candidate Starts for SwissCheese_54:
(Start: 29 @37949 has 1 MA's), (Start: 31 @37922 has 279 MA's),

Gene: Switzer_54 Start: 38834, Stop: 38655, Start Num: 31
Candidate Starts for Switzer_54:
(Start: 28 @38861 has 2 MA's), (Start: 31 @38834 has 279 MA's), (32, 38783),

Gene: Swole_53 Start: 37105, Stop: 36926, Start Num: 31
Candidate Starts for Swole_53:
(Start: 29 @37132 has 1 MA's), (Start: 31 @37105 has 279 MA's),

Gene: Target_53 Start: 36510, Stop: 36331, Start Num: 31
Candidate Starts for Target_53:
(Start: 28 @36537 has 2 MA's), (Start: 31 @36510 has 279 MA's), (32, 36459),

Gene: Tasp14_54 Start: 38203, Stop: 38024, Start Num: 31
Candidate Starts for Tasp14_54:
(Start: 31 @38203 has 279 MA's), (32, 38152),

Gene: Teodoridan_51 Start: 37403, Stop: 37218, Start Num: 31
Candidate Starts for Teodoridan_51:
(Start: 31 @37403 has 279 MA's),

Gene: TheloniousMonk_53 Start: 39927, Stop: 39742, Start Num: 31
Candidate Starts for TheloniousMonk_53:
(Start: 31 @39927 has 279 MA's), (32, 39870), (36, 39807),

Gene: Thibault_56 Start: 44634, Stop: 44461, Start Num: 31
Candidate Starts for Thibault_56:
(Start: 31 @44634 has 279 MA's), (35, 44577), (37, 44499), (38, 44475),

Gene: Thor_50 Start: 36639, Stop: 36454, Start Num: 31
Candidate Starts for Thor_50:
(Start: 29 @36666 has 1 MA's), (Start: 31 @36639 has 279 MA's),

Gene: ThreeRngTarjay_61 Start: 48205, Stop: 48032, Start Num: 31
Candidate Starts for ThreeRngTarjay_61:
(Start: 31 @48205 has 279 MA's), (35, 48148), (37, 48070), (38, 48046),

Gene: Topgun_52 Start: 37492, Stop: 37310, Start Num: 31
Candidate Starts for Topgun_52:
(Start: 29 @37519 has 1 MA's), (Start: 31 @37492 has 279 MA's), (36, 37375),

Gene: Tote_48 Start: 34372, Stop: 34193, Start Num: 31
Candidate Starts for Tote_48:
(Start: 29 @34399 has 1 MA's), (Start: 31 @34372 has 279 MA's),

Gene: Traaww1_81 Start: 51560, Stop: 51787, Start Num: 31
Candidate Starts for Traaww1_81:
(Start: 31 @51560 has 279 MA's), (32, 51611), (40, 51782),

Gene: Traft412_55 Start: 38835, Stop: 38650, Start Num: 31
Candidate Starts for Traft412_55:
(Start: 31 @38835 has 279 MA's),

Gene: Treddle_53 Start: 38583, Stop: 38404, Start Num: 31
Candidate Starts for Treddle_53:
(Start: 31 @38583 has 279 MA's), (32, 38532), (36, 38469),

Gene: Tripl3t_52 Start: 39208, Stop: 39026, Start Num: 31
Candidate Starts for Tripl3t_52:
(Start: 31 @39208 has 279 MA's),

Gene: Trouble_55 Start: 39314, Stop: 39141, Start Num: 31
Candidate Starts for Trouble_55:
(Start: 31 @39314 has 279 MA's), (33, 39272),

Gene: Turj99_51 Start: 38173, Stop: 37994, Start Num: 31
Candidate Starts for Turj99_51:
(Start: 28 @38200 has 2 MA's), (Start: 31 @38173 has 279 MA's), (32, 38122),

Gene: TwoPeat_53 Start: 37696, Stop: 37517, Start Num: 31
Candidate Starts for TwoPeat_53:
(Start: 31 @37696 has 279 MA's), (32, 37645), (36, 37582),

Gene: U2_52 Start: 38814, Stop: 38635, Start Num: 31
Candidate Starts for U2_52:
(Start: 28 @38841 has 2 MA's), (Start: 31 @38814 has 279 MA's), (32, 38763),

Gene: Violet_50 Start: 38591, Stop: 38412, Start Num: 31
Candidate Starts for Violet_50:
(Start: 31 @38591 has 279 MA's), (32, 38540),

Gene: Wanda_69 Start: 47917, Stop: 47744, Start Num: 31
Candidate Starts for Wanda_69:
(Start: 31 @47917 has 279 MA's), (35, 47860), (37, 47782), (38, 47758),

Gene: Watermelon_53 Start: 38032, Stop: 37853, Start Num: 31
Candidate Starts for Watermelon_53:
(Start: 28 @38059 has 2 MA's), (Start: 31 @38032 has 279 MA's), (32, 37981),

Gene: Wheeler_53 Start: 38076, Stop: 37897, Start Num: 31
Candidate Starts for Wheeler_53:
(Start: 31 @38076 has 279 MA's), (32, 38025),

Gene: Whitspit_50 Start: 35409, Stop: 35227, Start Num: 31
Candidate Starts for Whitspit_50:
(Start: 31 @35409 has 279 MA's),

Gene: Wiggin_87 Start: 51961, Stop: 52188, Start Num: 31
Candidate Starts for Wiggin_87:
(Start: 31 @51961 has 279 MA's), (32, 52012), (40, 52183),

Gene: Wilkins_52 Start: 37422, Stop: 37240, Start Num: 31

Candidate Starts for Wilkins_52:
(Start: 29 @37449 has 1 MA's), (Start: 31 @37422 has 279 MA's), (36, 37305),

Gene: Xiaokay_56 Start: 44841, Stop: 44668, Start Num: 31
Candidate Starts for Xiaokay_56:
(Start: 31 @44841 has 279 MA's), (35, 44784), (37, 44706), (38, 44682),

Gene: Yeet_61 Start: 47030, Stop: 46857, Start Num: 31
Candidate Starts for Yeet_61:
(Start: 31 @47030 has 279 MA's), (35, 46973), (37, 46895), (38, 46871),

Gene: Zeeculate_50 Start: 38630, Stop: 38457, Start Num: 31
Candidate Starts for Zeeculate_50:
(Start: 31 @38630 has 279 MA's), (33, 38588),

Gene: Zelink_61 Start: 48518, Stop: 48345, Start Num: 31
Candidate Starts for Zelink_61:
(Start: 31 @48518 has 279 MA's), (35, 48461), (37, 48383), (38, 48359),

Gene: Zephyr_52 Start: 37519, Stop: 37346, Start Num: 31
Candidate Starts for Zephyr_52:
(14, 37624), (15, 37621), (22, 37585), (Start: 31 @37519 has 279 MA's), (33, 37477),

Gene: Zeuska_51 Start: 38567, Stop: 38388, Start Num: 31
Candidate Starts for Zeuska_51:
(Start: 31 @38567 has 279 MA's), (32, 38516), (36, 38453),