Pham 283459

Pham 283459

51: Sweetums_49 + 3
52: DismalFunk_52 + 7
53: ZoeJ_51
54: Doughnut_52 + 1
55: Aminay_54
56: Gudmit_42

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 283459 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283459 has 240 members, 38 are drafts.

Phages represented in each track:
• Track 1 : Flutur_54, Tutumahutu_56, Crewmate_61, JohnDoe_55, Kaylissa_56
• Track 2 : ThursdayNight_58
• Track 3 : Eraser_56, Niobe_56, Asa16_56, Skelbel_57, London_56
• Track 4 : JuneStar_58, Schaffner_55
• Track 5 : Warda_56
• Track 6 : Amploria_54, AEgle_52, Turab_53, Adumb2043_53
• Track 7 : Cyan_55
• Track 8 : Tian_56, Community_58, Amyev_57, Pumpkins_54
• Track 9 : Reedo_54
• Track 10 : Tbone_55, Mudpuppy_52
• Track 11 : Elezi_55, Jstan_57, Subaru_56
• Track 12 : ObiToo_61
• Track 13 : Lizalica_54
• Track 14 : Yang_57
• Track 15 : DrSierra_54
• Track 16 : Ascela_58, Iter_58, Tuck_58
• Track 17 : Janeemi_57
• Track 18 : Tallboi_56
• Track 19 : Phives_59
• Track 20 : Adolin_58, DrManhattan_58
• Track 21 : Cassia_55
• Track 22 : Lego_54
• Track 23 : TforTroy_57
• Track 24 : AGrandiflora_57, Joemato_55, Simpson_57
• Track 25 : Powerpuff_57, YesChef_55
• Track 26 : Pixelle_57
• Track 27 : IttyBittyPiggy_57
• Track 28 : KeAlii_54
• Track 29 : VResidence_55
• Track 30 : Wildwest_53
• Track 31 : Berrie_56
• Track 32 : Nitro_58
• Track 33 : MissSwiss_57
• Track 34 : IUFootball_58, Liebe_58, Maureen_58
• Track 35 : MaGuCo_53
• Track 36 : Snek_57, Tweety19_58
• Track 37 : VroomVroom_56

- Track 38 : JohnThicc_59, LadyAstra_59, Origami_58
- Track 39 : FiveHead_60
- Track 40 : ShakeItOph_60, MiniMommy_59, JasmineDragon_60
- Track 41 : Emotion_61
- Track 42 : Exile_50, Soondubu_51
- Track 43 : AinMach_54
- Track 44 : Sekhmet_52
- Track 45 : Sidious_47
- Track 46 : Malibo_48
- Track 47 : Marshmallow_72, Barbarian_73, MollyToe_69, Traaww1_70, Mindy_73, PaddyBaddy_74, Myrale_74, Dumbo_74, Flypotenuse_70, Hoonter_77, TBrady12_77, Manda_75, Daikon_76, Lilac_76, Goldilocks_77, Filch_75, Easy2Say_75, FoghornLeghorn_68, Bogg_74, Rimmer_75, Contagion_70, OrionPax_73, Teaspoon_75, ShamWow_74, Phaux_76, Buck_75, Tomaszewski_69, Porky_73, ShereKhan_73, Kostya_74, Amao_74, Highbury_73, SophKB_71, Ukulele_69, Cactus_77, NelitzaMV_72, NoSleep_75, Glexan_73, Eureka_72, Nala_76, xkcd_77, Adnama_78, Sassay_69, CrystalP_73, SirDuracell_73, AmericanBeauty_78, TeardropMSU_70, RiverMonster_74, Pat3_72, BigBubba_74, GoldenSpark_78, Lilizi_75, Thresher_76, IHOP_72, Hopey_74, Cookies_71, GooberAzure_77, Youngblood_77, Elph10_74, MPhalcon_75, Harella_74, Icee_75, Terminus_77, ChotaBhai_74, Czyszczon1_75, Murphy_74, Bench_77, Balomoji_74, Gator_72, Kanye_71, Command613_76, Greep_78, Saints25_73, Gemini_79, Stark_75, 244_75, PhatBacter_78, Phrux_71, StormChicken_76, BugsBunny_74, Brewer_69, FairyPath_74, Elite2014_73, Maxxinista_76, Mosby_70, Cjw1_74, DrDrey_74, JeTaime_74, Nimrod_75, Inca_71, ChosenOne_74, HufflyPuff_77, Pharsalus_71, Emmina_74, Misfit_75, Gage_76, TeamEdward_76, Goku_72, Simpliphy_73, Kimchi_78, BadStone_71, Asriel_73, Henry_72, BaboJay_71, MadamMonkfish_74, ABCat_71, DoctorDiddles_73, Argent26_78, Phaja_72, Bask21_74, Petra64142_78, Palpatine_76, Tarkin_73, Bruin_71, Wiggin_76, FireRed_78, MISSy_75, Xandras_73, Ptowny_71, Pumpkin_77, Policronamos_77, HanKaySha_74, Becksu_73, Sotrice96_75, Tuco_75, StolenFromERC_77, Rakim_75, Holt_79, Paperbeatsrock_73, Quallification_75, Miniwave_69, NonchalantPear_72, Moldemort_77, Toto_72, Lilpickle_73, Thimble_75, Murica_77, StellaBean_72, Willez_69, BilboSwaggins_72, Stank_77, YassJohnny_71
- Track 48 : Budgie_82
- Track 49 : Dusk_71
- Track 50 : WaterT_74
- Track 51 : Sweetums_49, DelaGarza_49, Gingerbug_48, Teng_53
- Track 52 : DismalFunk_52, Findley_52, DismalStressor_52, Marcoliusprime_52, Milly_52, Strobilo_52, TM4_47, BoostSeason_52
- Track 53 : ZoeJ_51
- Track 54 : Doughnut_52, Mufasa_52
- Track 55 : Aminay_54
- Track 56 : Gudmit_42

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

The start number called the most often in the published annotations is 28, it was called in 127 of the 202 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 244_75, ABCat_71, Adnama_78, Amao_74, AmericanBeauty_78, Argent26_78, Asriel_73, BaboJay_71, BadStone_71, Balomoji_74, Barbarian_73, Bask21_74, Becksu_73, Bench_77, BigBubba_74, BilboSwaggins_72, Bogg_74, Brewer_69, Bruin_71, Buck_75, Budgie_82, BugsBunny_74, Cactus_77, ChosenOne_74, ChotaBhai_74, Cjw1_74, Command613_76, Contagion_70, Cookies_71, CrystalP_73, Czyszczon1_75, Daikon_76, DoctorDiddles_73, DrDrey_74, Dumbo_74, Dusk_71, Easy2Say_75, Elite2014_73, Elph10_74, Emmina_74, Eureka_72, FairyPath_74, Filch_75, FireRed_78, Flypotenuse_70, FoghornLeghorn_68, Gage_76, Gator_72, Gemini_79, Glexan_73, Goku_72, GoldenSpark_78, Goldilocks_77, GooberAzure_77, Greep_78, HanKaySha_74, Harella_74, Henry_72, Highbury_73, Holt_79, Hoonter_77, Hopey_74, HufflyPuff_77, IHOP_72, Icee_75, Inca_71, JeTaime_74, Kanye_71, Kimchi_78, Kostya_74, Lilac_76, Lilizi_75, Lilpickle_73, MISSy_75, MPhalcon_75, MadamMonkfish_74, Manda_75, Marshmallow_72, Maxxinista_76, Mindy_73, Miniwave_69, Misfit_75, Moldemort_77, MollyToe_69, Mosby_70, Murica_77, Murphy_74, Myrale_74, Nala_76, NelitzaMV_72, Nimrod_75, NoSleep_75, NonchalantPear_72, OrionPax_73, PaddyBaddy_74, Palpatine_76, Paperbeatsrock_73, Pat3_72, Petra64142_78, Phaja_72, Pharsalus_71, PhatBacter_78, Phaux_76, Phrux_71, Policronamos_77, Porky_73, Ptowny_71, Pumpkin_77, Quallification_75, Rakim_75, Rimmer_75, RiverMonster_74, Saints25_73, Sassay_69, ShamWow_74, ShereKhan_73, Simpliphy_73, SirDuracell_73, SophKB_71, Sotrice96_75, Stank_77, Stark_75, StellaBean_72, StolenFromERC_77, StormChicken_76, TBrady12_77, Tarkin_73, TeamEdward_76, TeardropMSU_70, Teaspoon_75, Terminus_77, Thimble_75, Thresher_76, Tomaszewski_69, Toto_72, Traaww1_70, Tuco_75, Ukulele_69, Wiggin_76, Willez_69, Xandras_73, YassJohnny_71, Youngblood_77, xkcd_77,

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

Genes that do not have the "Most Annotated" start:
• AEgle_52, AGrandiflora_57, Adolin_58, Adumb2043_53, AinMach_54, Aminay_54, Amploria_54, Amyev_57, Asa16_56, Ascela_58, Berrie_56, BoostSeason_52, Cassia_55, Community_58, Crewmate_61, Cyan_55, DelaGarza_49, DismalFunk_52, DismalStressor_52, Doughnut_52, DrManhattan_58, DrSierra_54, Elezi_55, Emotion_61, Eraser_56, Exile_50, Findley_52, FiveHead_60, Flutur_54, Gingerbug_48, Gudmit_42, IUFootball_58, Iter_58, IttyBittyPiggy_57, Janeemi_57, JasmineDragon_60, Joemato_55, JohnDoe_55, JohnThicc_59, Jstan_57, JuneStar_58, Kaylissa_56, KeAlii_54, LadyAstra_59, Lego_54, Liebe_58, Lizalica_54, London_56, MaGuCo_53, Malibo_48, Marcoliusprime_52, Maureen_58, Milly_52, MiniMommy_59, MissSwiss_57, Mudpuppy_52, Mufasa_52, Niobe_56, Nitro_58, ObiToo_61, Origami_58, Phives_59, Pixelle_57, Powerpuff_57, Pumpkins_54, Reedo_54, Schaffner_55, Sekhmet_52, ShakeItOph_60, Sidious_47, Simpson_57, Skelbel_57, Snek_57, Soondubu_51, Strobilo_52, Subaru_56, Sweetums_49, TM4_47, Tallboi_56, Tbone_55, Teng_53, TforTroy_57, ThursdayNight_58, Tian_56, Tuck_58, Turab_53, Tutumahutu_56, Tweety19_58, VResidence_55, VroomVroom_56, Warda_56, WaterT_74, Wildwest_53, Yang_57, YesChef_55, ZoeJ_51,

Summary by start number:

Start 17:
• Found in 1 of 240 (0.4%) of genes in pham

- Manual Annotations of this start: 1 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wildwest_53 (AZ1),

Start 18:
- Found in 4 of 240 (1.7%) of genes in pham
- Manual Annotations of this start: 3 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IUFootball_58 (AZ2), Liebe_58 (AZ2), MaGuCo_53 (AZ2), Maureen_58 (AZ2),

Start 21:
- Found in 1 of 240 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii_54 (AZ1),

Start 22:
- Found in 5 of 240 (2.1%) of genes in pham
- Manual Annotations of this start: 3 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DelaGarza_49 (GF), Gingerbug_48 (GF), Gudmit_42 (singleton), Sweetums_49 (GF), Teng_53 (GF),

Start 23:
- Found in 13 of 240 (5.4%) of genes in pham
- Manual Annotations of this start: 7 of 202
- Called 69.2% of time when present
- Phage (with cluster) where this start called: AGrandiflora_57 (AZ1), Cyan_55 (AZ1), Emotion_61 (AZ4), Joemato_55 (AZ1), Lego_54 (AZ1), Powerpuff_57 (AZ1), Simpson_57 (AZ1), VroomVroom_56 (AZ4), YesChef_55 (AZ1),

Start 24:
- Found in 5 of 240 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_52 (AZ1), Adumb2043_53 (AZ1), Amploria_54 (AZ1), Tallboi_56 (AZ1), Turab_53 (AZ1),

Start 25:
- Found in 33 of 240 (13.8%) of genes in pham
- Manual Annotations of this start: 27 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev_57 (AZ1), Ascela_58 (AZ1), Berrie_56 (AZ1), Cassia_55 (AZ1), Community_58 (AZ1), Crewmate_61 (AZ1), DrSierra_54 (AZ1), Elezi_55 (AZ1), Flutur_54 (AZ), Iter_58 (AZ1), IttyBittyPiggy_57 (AZ1), Janeemi_57 (AZ1), JohnDoe_55 (AZ1), Jstan_57 (AZ1), JuneStar_58 (AZ1), Kaylissa_56 (AZ1), Lizalica_54 (AZ1), Mudpuppy_52 (AZ1), ObiToo_61 (AZ1), Phives_59 (AZ1), Pixelle_57 (AZ1), Pumpkins_54 (AZ1), Schaffner_55 (AZ1), Subaru_56 (AZ1), Tbone_55 (AZ1), TforTroy_57 (AZ1), ThursdayNight_58 (AZ), Tian_56 (AZ1), Tuck_58 (AZ1), Tutumahutu_56 (AZ1), VResidence_55 (AZ1), Warda_56 (AZ1), Yang_57 (AZ1),

Start 26:
• Found in 6 of 240 (2.5%) of genes in pham
• Manual Annotations of this start: 5 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Asa16_56 (AZ1), Eraser_56 (AZ1), London_56 (AZ1), Niobe_56 (AZ1), Nitro_58 (AZ1), Skelbel_57 (AZ1),

Start 27:
• Found in 11 of 240 (4.6%) of genes in pham
• Manual Annotations of this start: 11 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BoostSeason_52 (K2), DismalFunk_52 (K2), DismalStressor_52 (K2), Doughnut_52 (K2), Findley_52 (K2), Marcoliusprime_52 (K2), Milly_52 (K2), Mufasa_52 (K2), Strobilo_52 (K2), TM4_47 (K2), ZoeJ_51 (K2),

Start 28:
• Found in 144 of 240 (60.0%) of genes in pham
• Manual Annotations of this start: 127 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 244_75 (E), ABCat_71 (E), Adnama_78 (E), Amao_74 (E), AmericanBeauty_78 (E), Argent26_78 (E), Asriel_73 (E), BaboJay_71 (E), BadStone_71 (E), Balomoji_74 (E), Barbarian_73 (E), Bask21_74 (E), Becksu_73 (E), Bench_77 (E), BigBubba_74 (E), BilboSwaggins_72 (E), Bogg_74 (E), Brewer_69 (E), Bruin_71 (E), Buck_75 (E), Budgie_82 (E), BugsBunny_74 (E), Cactus_77 (E), ChosenOne_74 (E), ChotaBhai_74 (E), Cjw1_74 (E), Command613_76 (E), Contagion_70 (E), Cookies_71 (E), CrystalP_73 (E), Czyszczon1_75 (E), Daikon_76 (E), DoctorDiddles_73 (E), DrDrey_74 (E), Dumbo_74 (E), Dusk_71 (E), Easy2Say_75 (E), Elite2014_73 (E), Elph10_74 (E), Emmina_74 (E), Eureka_72 (E), FairyPath_74 (E), Filch_75 (E), FireRed_78 (E), Flypotenuse_70 (E), FoghornLeghorn_68 (E), Gage_76 (E), Gator_72 (E), Gemini_79 (E), Glexan_73 (E), Goku_72 (E), GoldenSpark_78 (E), Goldilocks_77 (E), GooberAzure_77 (E), Greep_78 (E), HanKaySha_74 (E), Harella_74 (E), Henry_72 (E), Highbury_73 (E), Holt_79 (E), Hoonter_77 (E), Hopey_74 (E), HufflyPuff_77 (E), IHOP_72 (E), Icee_75 (E), Inca_71 (E), JeTaime_74 (E), Kanye_71 (E), Kimchi_78 (E), Kostya_74 (E), Lilac_76 (E), Lilizi_75 (E), Lilpickle_73 (E), MISSy_75 (E), MPhalcon_75 (E), MadamMonkfish_74 (E), Manda_75 (E), Marshmallow_72 (E), Maxxinista_76 (E), Mindy_73 (E), Miniwave_69 (E), Misfit_75 (E), Moldemort_77 (E), MollyToe_69 (E), Mosby_70 (E), Murica_77 (E), Murphy_74 (E), Myrale_74 (E), Nala_76 (E), NelitzaMV_72 (E), Nimrod_75 (E), NoSleep_75 (E), NonchalantPear_72 (E), OrionPax_73 (E), PaddyBaddy_74 (E), Palpatine_76 (E), Paperbeatsrock_73 (E), Pat3_72 (E), Petra64142_78 (E), Phaja_72 (E), Pharsalus_71 (E), PhatBacter_78 (E), Phaux_76 (E), Phrux_71 (E), Policronamos_77 (E), Porky_73 (E), Ptowny_71 (E), Pumpkin_77 (E), Quallification_75 (E), Rakim_75 (E), Rimmer_75 (E), RiverMonster_74 (E), Saints25_73 (E), Sassay_69 (E), ShamWow_74 (E), ShereKhan_73 (E), Simpliphy_73 (E), SirDuracell_73 (E), SophKB_71 (E), Sotrice96_75 (E), Stank_77 (E), Stark_75 (E), StellaBean_72 (E), StolenFromERC_77 (E), StormChicken_76 (E), TBrady12_77 (E), Tarkin_73 (E), TeamEdward_76 (E), TeardropMSU_70 (E), Teaspoon_75 (E), Terminus_77 (E), Thimble_75 (E), Thresher_76 (E), Tomaszewski_69 (E), Toto_72 (E), Traaww1_70 (E), Tuco_75 (E), Ukulele_69 (E), Wiggin_76 (E), Willez_69 (E), Xandras_73 (E), YassJohnny_71 (E), Youngblood_77 (E), xkcd_77 (E),

Start 29:
• Found in 13 of 240 (5.4%) of genes in pham
• Manual Annotations of this start: 2 of 202
• Called 15.4% of time when present
• Phage (with cluster) where this start called: Malibo_48 (DW), Sidious_47 (CZ7),

Start 30:
• Found in 1 of 240 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aminay_54 (K7),

Start 31:
• Found in 1 of 240 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: WaterT_74 (GB),

Start 33:
• Found in 10 of 240 (4.2%) of genes in pham
• Manual Annotations of this start: 3 of 202
• Called 80.0% of time when present
• Phage (with cluster) where this start called: AinMach_54 (AZ7), FiveHead_60 (AZ4), JasmineDragon_60 (AZ4), JohnThicc_59 (AZ4), LadyAstra_59 (AZ4), MiniMommy_59 (AZ4), Origami_58 (AZ4), ShakeItOph_60 (AZ4),

Start 34:
• Found in 6 of 240 (2.5%) of genes in pham
• Manual Annotations of this start: 6 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adolin_58 (AZ1), DrManhattan_58 (AZ1), MissSwiss_57 (AZ1), Reedo_54 (AZ1), Snek_57 (AZ3), Tweety19_58 (AZ3),

Start 36:
• Found in 2 of 240 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 202
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Exile_50 (AZ6), Soondubu_51 (AZ6),

Start 37:
• Found in 5 of 240 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 202
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Sekhmet_52 (CZ4),

Summary by clusters:

There are 16 clusters represented in this pham: singleton, AZ3, E, GF, CZ7, CZ4, K2, K7, GB, DW, AZ1, AZ2, AZ, AZ4, AZ6, AZ7,

Info for manual annotations of cluster AZ1:
•Start number 17 was manually annotated 1 time for cluster AZ1.

•Start number 21 was manually annotated 1 time for cluster AZ1.
•Start number 23 was manually annotated 5 times for cluster AZ1.
•Start number 24 was manually annotated 2 times for cluster AZ1.
•Start number 25 was manually annotated 27 times for cluster AZ1.
•Start number 26 was manually annotated 5 times for cluster AZ1.
•Start number 34 was manually annotated 4 times for cluster AZ1.

Info for manual annotations of cluster AZ2:
•Start number 18 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:
•Start number 34 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:
•Start number 23 was manually annotated 2 times for cluster AZ4.
•Start number 33 was manually annotated 3 times for cluster AZ4.

Info for manual annotations of cluster AZ6:
•Start number 36 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster CZ4:
•Start number 37 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ7:
•Start number 29 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DW:
•Start number 29 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster E:
•Start number 28 was manually annotated 127 times for cluster E.

Info for manual annotations of cluster GB:
•Start number 31 was manually annotated 1 time for cluster GB.

Info for manual annotations of cluster GF:
•Start number 22 was manually annotated 2 times for cluster GF.

Info for manual annotations of cluster K2:
•Start number 27 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K7:
•Start number 30 was manually annotated 1 time for cluster K7.

Gene Information:
Gene: 244_75 Start: 47793, Stop: 47966, Start Num: 28
Candidate Starts for 244_75:
(Start: 28 @47793 has 127 MA's), (41, 47844),

Gene: ABCat_71 Start: 48146, Stop: 48319, Start Num: 28
Candidate Starts for ABCat_71:
(Start: 28 @48146 has 127 MA's), (41, 48197),

Gene: AEgle_52 Start: 37591, Stop: 37782, Start Num: 24
Candidate Starts for AEgle_52:
(7, 37285), (Start: 24 @37591 has 2 MA's),

Gene: AGrandiflora_57 Start: 38760, Stop: 38960, Start Num: 23
Candidate Starts for AGrandiflora_57:
(2, 38211), (Start: 23 @38760 has 7 MA's), (53, 38892),

Gene: Adnama_78 Start: 48172, Stop: 48345, Start Num: 28
Candidate Starts for Adnama_78:
(Start: 28 @48172 has 127 MA's), (41, 48223),

Gene: Adolin_58 Start: 37478, Stop: 37633, Start Num: 34
Candidate Starts for Adolin_58:
(Start: 34 @37478 has 6 MA's), (50, 37556),

Gene: Adumb2043_53 Start: 37614, Stop: 37805, Start Num: 24
Candidate Starts for Adumb2043_53:
(7, 37308), (Start: 24 @37614 has 2 MA's),

Gene: AinMach_54 Start: 37308, Stop: 37466, Start Num: 33
Candidate Starts for AinMach_54:
(Start: 33 @37308 has 3 MA's), (44, 37350), (45, 37356),

Gene: Amao_74 Start: 47566, Stop: 47739, Start Num: 28
Candidate Starts for Amao_74:
(Start: 28 @47566 has 127 MA's), (41, 47617),

Gene: AmericanBeauty_78 Start: 48315, Stop: 48488, Start Num: 28
Candidate Starts for AmericanBeauty_78:
(Start: 28 @48315 has 127 MA's), (41, 48366),

Gene: Aminay_54 Start: 38354, Stop: 38521, Start Num: 30
Candidate Starts for Aminay_54:
(Start: 30 @38354 has 1 MA's),

Gene: Amploria_54 Start: 37795, Stop: 37986, Start Num: 24
Candidate Starts for Amploria_54:
(7, 37489), (Start: 24 @37795 has 2 MA's),

Gene: Amyev_57 Start: 40846, Stop: 41031, Start Num: 25
Candidate Starts for Amyev_57:
(Start: 25 @40846 has 27 MA's),

Gene: Argent26_78 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for Argent26_78:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: Asa16_56 Start: 39543, Stop: 39728, Start Num: 26

Candidate Starts for Asa16_56:
(Start: 26 @39543 has 5 MA's),

Gene: Ascela_58 Start: 39002, Stop: 39196, Start Num: 25
Candidate Starts for Ascela_58:
(Start: 25 @39002 has 27 MA's),

Gene: Asriel_73 Start: 46509, Stop: 46682, Start Num: 28
Candidate Starts for Asriel_73:
(Start: 28 @46509 has 127 MA's), (41, 46560),

Gene: BaboJay_71 Start: 47346, Stop: 47519, Start Num: 28
Candidate Starts for BaboJay_71:
(Start: 28 @47346 has 127 MA's), (41, 47397),

Gene: BadStone_71 Start: 47715, Stop: 47888, Start Num: 28
Candidate Starts for BadStone_71:
(Start: 28 @47715 has 127 MA's), (41, 47766),

Gene: Balomoji_74 Start: 48276, Stop: 48449, Start Num: 28
Candidate Starts for Balomoji_74:
(Start: 28 @48276 has 127 MA's), (41, 48327),

Gene: Barbarian_73 Start: 46509, Stop: 46682, Start Num: 28
Candidate Starts for Barbarian_73:
(Start: 28 @46509 has 127 MA's), (41, 46560),

Gene: Bask21_74 Start: 47129, Stop: 47302, Start Num: 28
Candidate Starts for Bask21_74:
(Start: 28 @47129 has 127 MA's), (41, 47180),

Gene: Becksu_73 Start: 48345, Stop: 48524, Start Num: 28
Candidate Starts for Becksu_73:
(Start: 28 @48345 has 127 MA's), (41, 48396),

Gene: Bench_77 Start: 47813, Stop: 47992, Start Num: 28
Candidate Starts for Bench_77:
(Start: 28 @47813 has 127 MA's), (41, 47864),

Gene: Berrie_56 Start: 38817, Stop: 38999, Start Num: 25
Candidate Starts for Berrie_56:
(Start: 25 @38817 has 27 MA's),

Gene: BigBubba_74 Start: 47525, Stop: 47704, Start Num: 28
Candidate Starts for BigBubba_74:
(Start: 28 @47525 has 127 MA's), (41, 47576),

Gene: BilboSwaggins_72 Start: 48154, Stop: 48327, Start Num: 28
Candidate Starts for BilboSwaggins_72:
(Start: 28 @48154 has 127 MA's), (41, 48205),

Gene: Bogg_74 Start: 47092, Stop: 47265, Start Num: 28
Candidate Starts for Bogg_74:

(Start: 28 @47092 has 127 MA's), (41, 47143),

Gene: BoostSeason_52 Start: 38177, Stop: 38386, Start Num: 27
Candidate Starts for BoostSeason_52:
(Start: 27 @38177 has 11 MA's), (Start: 29 @38189 has 2 MA's), (39, 38240), (43, 38261), (47, 38273), (48, 38288), (50, 38303), (52, 38315),

Gene: Brewer_69 Start: 46615, Stop: 46788, Start Num: 28
Candidate Starts for Brewer_69:
(Start: 28 @46615 has 127 MA's), (41, 46666),

Gene: Bruin_71 Start: 46689, Stop: 46868, Start Num: 28
Candidate Starts for Bruin_71:
(Start: 28 @46689 has 127 MA's), (41, 46740),

Gene: Buck_75 Start: 48394, Stop: 48567, Start Num: 28
Candidate Starts for Buck_75:
(Start: 28 @48394 has 127 MA's), (41, 48445),

Gene: Budgie_82 Start: 48184, Stop: 48363, Start Num: 28
Candidate Starts for Budgie_82:
(Start: 28 @48184 has 127 MA's), (41, 48235), (58, 48355),

Gene: BugsBunny_74 Start: 48221, Stop: 48400, Start Num: 28
Candidate Starts for BugsBunny_74:
(Start: 28 @48221 has 127 MA's), (41, 48272),

Gene: Cactus_77 Start: 47170, Stop: 47343, Start Num: 28
Candidate Starts for Cactus_77:
(Start: 28 @47170 has 127 MA's), (41, 47221),

Gene: Cassia_55 Start: 38504, Stop: 38698, Start Num: 25
Candidate Starts for Cassia_55:
(Start: 25 @38504 has 27 MA's),

Gene: ChosenOne_74 Start: 47170, Stop: 47343, Start Num: 28
Candidate Starts for ChosenOne_74:
(Start: 28 @47170 has 127 MA's), (41, 47221),

Gene: ChotaBhai_74 Start: 47494, Stop: 47667, Start Num: 28
Candidate Starts for ChotaBhai_74:
(Start: 28 @47494 has 127 MA's), (41, 47545),

Gene: Cjw1_74 Start: 48867, Stop: 49040, Start Num: 28
Candidate Starts for Cjw1_74:
(Start: 28 @48867 has 127 MA's), (41, 48918),

Gene: Command613_76 Start: 48209, Stop: 48382, Start Num: 28
Candidate Starts for Command613_76:
(Start: 28 @48209 has 127 MA's), (41, 48260),

Gene: Community_58 Start: 40395, Stop: 40577, Start Num: 25
Candidate Starts for Community_58:

(Start: 25 @40395 has 27 MA's),

Gene: Contagion_70 Start: 46970, Stop: 47149, Start Num: 28
Candidate Starts for Contagion_70:
(Start: 28 @46970 has 127 MA's), (41, 47021),

Gene: Cookies_71 Start: 47351, Stop: 47524, Start Num: 28
Candidate Starts for Cookies_71:
(Start: 28 @47351 has 127 MA's), (41, 47402),

Gene: Crewmate_61 Start: 40124, Stop: 40318, Start Num: 25
Candidate Starts for Crewmate_61:
(Start: 25 @40124 has 27 MA's), (53, 40250),

Gene: CrystalP_73 Start: 48154, Stop: 48327, Start Num: 28
Candidate Starts for CrystalP_73:
(Start: 28 @48154 has 127 MA's), (41, 48205),

Gene: Cyan_55 Start: 38301, Stop: 38501, Start Num: 23
Candidate Starts for Cyan_55:
(Start: 23 @38301 has 7 MA's), (53, 38433),

Gene: Czyszczon1_75 Start: 47676, Stop: 47855, Start Num: 28
Candidate Starts for Czyszczon1_75:
(Start: 28 @47676 has 127 MA's), (41, 47727),

Gene: Daikon_76 Start: 48297, Stop: 48470, Start Num: 28
Candidate Starts for Daikon_76:
(Start: 28 @48297 has 127 MA's), (41, 48348),

Gene: DelaGarza_49 Start: 28678, Stop: 28896, Start Num: 22
Candidate Starts for DelaGarza_49:
(Start: 22 @28678 has 3 MA's), (32, 28726), (Start: 37 @28741 has 1 MA's),

Gene: DismalFunk_52 Start: 38608, Stop: 38817, Start Num: 27
Candidate Starts for DismalFunk_52:
(Start: 27 @38608 has 11 MA's), (Start: 29 @38620 has 2 MA's), (39, 38671), (43, 38692), (47, 38704), (48, 38719), (50, 38734), (52, 38746),

Gene: DismalStressor_52 Start: 38608, Stop: 38817, Start Num: 27
Candidate Starts for DismalStressor_52:
(Start: 27 @38608 has 11 MA's), (Start: 29 @38620 has 2 MA's), (39, 38671), (43, 38692), (47, 38704), (48, 38719), (50, 38734), (52, 38746),

Gene: DoctorDiddles_73 Start: 47538, Stop: 47711, Start Num: 28
Candidate Starts for DoctorDiddles_73:
(Start: 28 @47538 has 127 MA's), (41, 47589),

Gene: Doughnut_52 Start: 38218, Stop: 38427, Start Num: 27
Candidate Starts for Doughnut_52:
(Start: 27 @38218 has 11 MA's), (Start: 29 @38230 has 2 MA's), (39, 38281), (43, 38302), (47, 38314), (48, 38329), (50, 38344), (52, 38356),

Gene: DrDrey_74 Start: 48595, Stop: 48774, Start Num: 28
Candidate Starts for DrDrey_74:
(Start: 28 @48595 has 127 MA's), (41, 48646),

Gene: DrManhattan_58 Start: 37046, Stop: 37201, Start Num: 34
Candidate Starts for DrManhattan_58:
(Start: 34 @37046 has 6 MA's), (50, 37124),

Gene: DrSierra_54 Start: 37220, Stop: 37399, Start Num: 25
Candidate Starts for DrSierra_54:
(Start: 25 @37220 has 27 MA's),

Gene: Dumbo_74 Start: 47075, Stop: 47248, Start Num: 28
Candidate Starts for Dumbo_74:
(Start: 28 @47075 has 127 MA's), (41, 47126),

Gene: Dusk_71 Start: 47375, Stop: 47548, Start Num: 28
Candidate Starts for Dusk_71:
(Start: 28 @47375 has 127 MA's),

Gene: Easy2Say_75 Start: 48619, Stop: 48792, Start Num: 28
Candidate Starts for Easy2Say_75:
(Start: 28 @48619 has 127 MA's), (41, 48670),

Gene: Elezi_55 Start: 39303, Stop: 39485, Start Num: 25
Candidate Starts for Elezi_55:
(10, 39096), (Start: 25 @39303 has 27 MA's),

Gene: Elite2014_73 Start: 47169, Stop: 47342, Start Num: 28
Candidate Starts for Elite2014_73:
(Start: 28 @47169 has 127 MA's), (41, 47220),

Gene: Elph10_74 Start: 47174, Stop: 47353, Start Num: 28
Candidate Starts for Elph10_74:
(Start: 28 @47174 has 127 MA's), (41, 47225),

Gene: Emmina_74 Start: 47076, Stop: 47249, Start Num: 28
Candidate Starts for Emmina_74:
(Start: 28 @47076 has 127 MA's), (41, 47127),

Gene: Emotion_61 Start: 40785, Stop: 40988, Start Num: 23
Candidate Starts for Emotion_61:
(15, 40701), (Start: 23 @40785 has 7 MA's), (Start: 33 @40836 has 3 MA's),

Gene: Eraser_56 Start: 39550, Stop: 39735, Start Num: 26
Candidate Starts for Eraser_56:
(Start: 26 @39550 has 5 MA's),

Gene: Eureka_72 Start: 47640, Stop: 47813, Start Num: 28
Candidate Starts for Eureka_72:
(Start: 28 @47640 has 127 MA's), (41, 47691),

Gene: Exile_50 Start: 40505, Stop: 40657, Start Num: 36

Candidate Starts for Exile_50:
(Start: 36 @40505 has 1 MA's), (46, 40547), (56, 40637),

Gene: FairyPath_74 Start: 48288, Stop: 48461, Start Num: 28
Candidate Starts for FairyPath_74:
(Start: 28 @48288 has 127 MA's), (41, 48339),

Gene: Filch_75 Start: 47101, Stop: 47280, Start Num: 28
Candidate Starts for Filch_75:
(Start: 28 @47101 has 127 MA's), (41, 47152),

Gene: Findley_52 Start: 38601, Stop: 38810, Start Num: 27
Candidate Starts for Findley_52:
(Start: 27 @38601 has 11 MA's), (Start: 29 @38613 has 2 MA's), (39, 38664), (43, 38685), (47, 38697), (48, 38712), (50, 38727), (52, 38739),

Gene: FireRed_78 Start: 48663, Stop: 48836, Start Num: 28
Candidate Starts for FireRed_78:
(Start: 28 @48663 has 127 MA's), (41, 48714),

Gene: FiveHead_60 Start: 39271, Stop: 39417, Start Num: 33
Candidate Starts for FiveHead_60:
(Start: 23 @39229 has 7 MA's), (Start: 33 @39271 has 3 MA's), (50, 39349),

Gene: Flutur_54 Start: 38613, Stop: 38807, Start Num: 25
Candidate Starts for Flutur_54:
(Start: 25 @38613 has 27 MA's), (53, 38739),

Gene: Flypotenuse_70 Start: 47160, Stop: 47333, Start Num: 28
Candidate Starts for Flypotenuse_70:
(Start: 28 @47160 has 127 MA's), (41, 47211),

Gene: FoghornLeghorn_68 Start: 46173, Stop: 46346, Start Num: 28
Candidate Starts for FoghornLeghorn_68:
(Start: 28 @46173 has 127 MA's), (41, 46224),

Gene: Gage_76 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for Gage_76:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: Gator_72 Start: 48006, Stop: 48185, Start Num: 28
Candidate Starts for Gator_72:
(Start: 28 @48006 has 127 MA's), (41, 48057),

Gene: Gemini_79 Start: 48470, Stop: 48643, Start Num: 28
Candidate Starts for Gemini_79:
(Start: 28 @48470 has 127 MA's), (41, 48521),

Gene: Gingerbug_48 Start: 29164, Stop: 29382, Start Num: 22
Candidate Starts for Gingerbug_48:
(Start: 22 @29164 has 3 MA's), (32, 29212), (Start: 37 @29227 has 1 MA's),

Gene: Glexan_73 Start: 48290, Stop: 48463, Start Num: 28

Candidate Starts for Glexan_73:
(Start: 28 @48290 has 127 MA's), (41, 48341),

Gene: Goku_72 Start: 47369, Stop: 47542, Start Num: 28
Candidate Starts for Goku_72:
(Start: 28 @47369 has 127 MA's), (41, 47420),

Gene: GoldenSpark_78 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for GoldenSpark_78:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: Goldilocks_77 Start: 47451, Stop: 47624, Start Num: 28
Candidate Starts for Goldilocks_77:
(Start: 28 @47451 has 127 MA's), (41, 47502),

Gene: GooberAzure_77 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for GooberAzure_77:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: Greep_78 Start: 48952, Stop: 49131, Start Num: 28
Candidate Starts for Greep_78:
(Start: 28 @48952 has 127 MA's), (41, 49003),

Gene: Gudmit_42 Start: 28762, Stop: 28971, Start Num: 22
Candidate Starts for Gudmit_42:
(12, 28654), (13, 28663), (Start: 22 @28762 has 3 MA's), (52, 28894),

Gene: HanKaySha_74 Start: 47254, Stop: 47433, Start Num: 28
Candidate Starts for HanKaySha_74:
(Start: 28 @47254 has 127 MA's), (41, 47305),

Gene: Harella_74 Start: 48806, Stop: 48979, Start Num: 28
Candidate Starts for Harella_74:
(Start: 28 @48806 has 127 MA's), (41, 48857),

Gene: Henry_72 Start: 47594, Stop: 47767, Start Num: 28
Candidate Starts for Henry_72:
(Start: 28 @47594 has 127 MA's), (41, 47645),

Gene: Highbury_73 Start: 47242, Stop: 47415, Start Num: 28
Candidate Starts for Highbury_73:
(Start: 28 @47242 has 127 MA's), (41, 47293),

Gene: Holt_79 Start: 48367, Stop: 48540, Start Num: 28
Candidate Starts for Holt_79:
(Start: 28 @48367 has 127 MA's), (41, 48418),

Gene: Hoonter_77 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for Hoonter_77:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: Hopey_74 Start: 47786, Stop: 47965, Start Num: 28
Candidate Starts for Hopey_74:

(Start: 28 @47786 has 127 MA's), (41, 47837),

Gene: HufflyPuff_77 Start: 48619, Stop: 48792, Start Num: 28
Candidate Starts for HufflyPuff_77:
(Start: 28 @48619 has 127 MA's), (41, 48670),

Gene: IHOP_72 Start: 47718, Stop: 47891, Start Num: 28
Candidate Starts for IHOP_72:
(Start: 28 @47718 has 127 MA's), (41, 47769),

Gene: IUFootball_58 Start: 41412, Stop: 41675, Start Num: 18
Candidate Starts for IUFootball_58:
(Start: 18 @41412 has 3 MA's), (20, 41445), (35, 41514), (44, 41544), (45, 41550), (53, 41595), (56, 41643), (59, 41667),

Gene: Icee_75 Start: 47617, Stop: 47790, Start Num: 28
Candidate Starts for Icee_75:
(Start: 28 @47617 has 127 MA's), (41, 47668),

Gene: Inca_71 Start: 46243, Stop: 46416, Start Num: 28
Candidate Starts for Inca_71:
(Start: 28 @46243 has 127 MA's), (41, 46294),

Gene: Iter_58 Start: 38994, Stop: 39182, Start Num: 25
Candidate Starts for Iter_58:
(Start: 25 @38994 has 27 MA's),

Gene: IttyBittyPiggy_57 Start: 38132, Stop: 38326, Start Num: 25
Candidate Starts for IttyBittyPiggy_57:
(Start: 25 @38132 has 27 MA's), (56, 38306),

Gene: Janeemi_57 Start: 39872, Stop: 40054, Start Num: 25
Candidate Starts for Janeemi_57:
(Start: 25 @39872 has 27 MA's), (51, 39989),

Gene: JasmineDragon_60 Start: 40141, Stop: 40287, Start Num: 33
Candidate Starts for JasmineDragon_60:
(Start: 33 @40141 has 3 MA's), (50, 40219),

Gene: JeTaime_74 Start: 48435, Stop: 48608, Start Num: 28
Candidate Starts for JeTaime_74:
(Start: 28 @48435 has 127 MA's), (41, 48486),

Gene: Joemato_55 Start: 38382, Stop: 38582, Start Num: 23
Candidate Starts for Joemato_55:
(2, 37833), (Start: 23 @38382 has 7 MA's), (53, 38514),

Gene: JohnDoe_55 Start: 38368, Stop: 38562, Start Num: 25
Candidate Starts for JohnDoe_55:
(Start: 25 @38368 has 27 MA's), (53, 38494),

Gene: JohnThicc_59 Start: 39271, Stop: 39417, Start Num: 33
Candidate Starts for JohnThicc_59:

(Start: 23 @39229 has 7 MA's), (Start: 33 @39271 has 3 MA's), (50, 39349),

Gene: Jstan_57 Start: 39307, Stop: 39489, Start Num: 25
Candidate Starts for Jstan_57:
(10, 39100), (Start: 25 @39307 has 27 MA's),

Gene: JuneStar_58 Start: 41416, Stop: 41610, Start Num: 25
Candidate Starts for JuneStar_58:
(11, 41221), (Start: 25 @41416 has 27 MA's),

Gene: Kanye_71 Start: 47299, Stop: 47472, Start Num: 28
Candidate Starts for Kanye_71:
(Start: 28 @47299 has 127 MA's), (41, 47350),

Gene: Kaylissa_56 Start: 38763, Stop: 38960, Start Num: 25
Candidate Starts for Kaylissa_56:
(Start: 25 @38763 has 27 MA's), (53, 38892),

Gene: KeAlii_54 Start: 38009, Stop: 38218, Start Num: 21
Candidate Starts for KeAlii_54:
(Start: 21 @38009 has 1 MA's),

Gene: Kimchi_78 Start: 47956, Stop: 48129, Start Num: 28
Candidate Starts for Kimchi_78:
(Start: 28 @47956 has 127 MA's), (41, 48007),

Gene: Kostya_74 Start: 47817, Stop: 47990, Start Num: 28
Candidate Starts for Kostya_74:
(Start: 28 @47817 has 127 MA's), (41, 47868),

Gene: LadyAstra_59 Start: 39371, Stop: 39517, Start Num: 33
Candidate Starts for LadyAstra_59:
(Start: 23 @39329 has 7 MA's), (Start: 33 @39371 has 3 MA's), (50, 39449),

Gene: Lego_54 Start: 38079, Stop: 38279, Start Num: 23
Candidate Starts for Lego_54:
(1, 37506), (3, 37554), (8, 37797), (Start: 23 @38079 has 7 MA's), (53, 38211),

Gene: Liebe_58 Start: 41412, Stop: 41675, Start Num: 18
Candidate Starts for Liebe_58:
(Start: 18 @41412 has 3 MA's), (20, 41445), (35, 41514), (44, 41544), (45, 41550), (53, 41595), (56, 41643), (59, 41667),

Gene: Lilac_76 Start: 47571, Stop: 47750, Start Num: 28
Candidate Starts for Lilac_76:
(Start: 28 @47571 has 127 MA's), (41, 47622),

Gene: Lilizi_75 Start: 47284, Stop: 47463, Start Num: 28
Candidate Starts for Lilizi_75:
(Start: 28 @47284 has 127 MA's), (41, 47335),

Gene: Lilpickle_73 Start: 47169, Stop: 47342, Start Num: 28
Candidate Starts for Lilpickle_73:

(Start: 28 @47169 has 127 MA's), (41, 47220),

Gene: Lizalica_54 Start: 37826, Stop: 38008, Start Num: 25
Candidate Starts for Lizalica_54:
(Start: 25 @37826 has 27 MA's),

Gene: London_56 Start: 39541, Stop: 39726, Start Num: 26
Candidate Starts for London_56:
(Start: 26 @39541 has 5 MA's),

Gene: MISSy_75 Start: 47675, Stop: 47854, Start Num: 28
Candidate Starts for MISSy_75:
(Start: 28 @47675 has 127 MA's), (41, 47726),

Gene: MPhalcon_75 Start: 47668, Stop: 47847, Start Num: 28
Candidate Starts for MPhalcon_75:
(Start: 28 @47668 has 127 MA's), (41, 47719),

Gene: MaGuCo_53 Start: 39882, Stop: 40133, Start Num: 18
Candidate Starts for MaGuCo_53:
(Start: 18 @39882 has 3 MA's), (20, 39915), (35, 39984), (42, 40005), (45, 40020), (51, 40059), (53, 40065), (56, 40113),

Gene: MadamMonkfish_74 Start: 46893, Stop: 47066, Start Num: 28
Candidate Starts for MadamMonkfish_74:
(Start: 28 @46893 has 127 MA's), (41, 46944),

Gene: Malibo_48 Start: 36272, Stop: 36448, Start Num: 29
Candidate Starts for Malibo_48:
(14, 36155), (Start: 29 @36272 has 2 MA's),

Gene: Manda_75 Start: 48755, Stop: 48928, Start Num: 28
Candidate Starts for Manda_75:
(Start: 28 @48755 has 127 MA's), (41, 48806),

Gene: Marcoliusprime_52 Start: 38608, Stop: 38817, Start Num: 27
Candidate Starts for Marcoliusprime_52:
(Start: 27 @38608 has 11 MA's), (Start: 29 @38620 has 2 MA's), (39, 38671), (43, 38692), (47, 38704), (48, 38719), (50, 38734), (52, 38746),

Gene: Marshmallow_72 Start: 48448, Stop: 48621, Start Num: 28
Candidate Starts for Marshmallow_72:
(Start: 28 @48448 has 127 MA's), (41, 48499),

Gene: Maureen_58 Start: 41411, Stop: 41674, Start Num: 18
Candidate Starts for Maureen_58:
(Start: 18 @41411 has 3 MA's), (20, 41444), (35, 41513), (44, 41543), (45, 41549), (53, 41594), (56, 41642), (59, 41666),

Gene: Maxxinista_76 Start: 47544, Stop: 47723, Start Num: 28
Candidate Starts for Maxxinista_76:
(Start: 28 @47544 has 127 MA's), (41, 47595),

Gene: Milly_52 Start: 38581, Stop: 38790, Start Num: 27
Candidate Starts for Milly_52:
(Start: 27 @38581 has 11 MA's), (Start: 29 @38593 has 2 MA's), (39, 38644), (43, 38665), (47, 38677), (48, 38692), (50, 38707), (52, 38719),

Gene: Mindy_73 Start: 46760, Stop: 46933, Start Num: 28
Candidate Starts for Mindy_73:
(Start: 28 @46760 has 127 MA's), (41, 46811),

Gene: MiniMommy_59 Start: 40144, Stop: 40290, Start Num: 33
Candidate Starts for MiniMommy_59:
(Start: 33 @40144 has 3 MA's), (50, 40222),

Gene: Miniwave_69 Start: 47213, Stop: 47386, Start Num: 28
Candidate Starts for Miniwave_69:
(Start: 28 @47213 has 127 MA's), (41, 47264),

Gene: Misfit_75 Start: 48687, Stop: 48866, Start Num: 28
Candidate Starts for Misfit_75:
(Start: 28 @48687 has 127 MA's), (41, 48738),

Gene: MissSwiss_57 Start: 37199, Stop: 37351, Start Num: 34
Candidate Starts for MissSwiss_57:
(Start: 34 @37199 has 6 MA's),

Gene: Moldemort_77 Start: 47772, Stop: 47945, Start Num: 28
Candidate Starts for Moldemort_77:
(Start: 28 @47772 has 127 MA's), (41, 47823),

Gene: MollyToe_69 Start: 46514, Stop: 46687, Start Num: 28
Candidate Starts for MollyToe_69:
(Start: 28 @46514 has 127 MA's), (41, 46565),

Gene: Mosby_70 Start: 46970, Stop: 47149, Start Num: 28
Candidate Starts for Mosby_70:
(Start: 28 @46970 has 127 MA's), (41, 47021),

Gene: Mudpuppy_52 Start: 38242, Stop: 38436, Start Num: 25
Candidate Starts for Mudpuppy_52:
(Start: 25 @38242 has 27 MA's), (53, 38368),

Gene: Mufasa_52 Start: 38162, Stop: 38371, Start Num: 27
Candidate Starts for Mufasa_52:
(Start: 27 @38162 has 11 MA's), (Start: 29 @38174 has 2 MA's), (39, 38225), (43, 38246), (47, 38258), (48, 38273), (50, 38288), (52, 38300),

Gene: Murica_77 Start: 48619, Stop: 48792, Start Num: 28
Candidate Starts for Murica_77:
(Start: 28 @48619 has 127 MA's), (41, 48670),

Gene: Murphy_74 Start: 48056, Stop: 48235, Start Num: 28
Candidate Starts for Murphy_74:
(Start: 28 @48056 has 127 MA's), (41, 48107),

Gene: Myrale_74 Start: 48313, Stop: 48486, Start Num: 28
Candidate Starts for Myrale_74:
(Start: 28 @48313 has 127 MA's), (41, 48364),

Gene: Nala_76 Start: 48177, Stop: 48350, Start Num: 28
Candidate Starts for Nala_76:
(Start: 28 @48177 has 127 MA's), (41, 48228),

Gene: NelitzaMV_72 Start: 47259, Stop: 47432, Start Num: 28
Candidate Starts for NelitzaMV_72:
(Start: 28 @47259 has 127 MA's), (41, 47310),

Gene: Nimrod_75 Start: 48880, Stop: 49053, Start Num: 28
Candidate Starts for Nimrod_75:
(Start: 28 @48880 has 127 MA's), (41, 48931),

Gene: Niobe_56 Start: 39544, Stop: 39729, Start Num: 26
Candidate Starts for Niobe_56:
(Start: 26 @39544 has 5 MA's),

Gene: Nitro_58 Start: 40465, Stop: 40653, Start Num: 26
Candidate Starts for Nitro_58:
(Start: 26 @40465 has 5 MA's),

Gene: NoSleep_75 Start: 47514, Stop: 47687, Start Num: 28
Candidate Starts for NoSleep_75:
(Start: 28 @47514 has 127 MA's), (41, 47565),

Gene: NonchalantPear_72 Start: 47367, Stop: 47540, Start Num: 28
Candidate Starts for NonchalantPear_72:
(Start: 28 @47367 has 127 MA's), (41, 47418),

Gene: ObiToo_61 Start: 39721, Stop: 39915, Start Num: 25
Candidate Starts for ObiToo_61:
(Start: 25 @39721 has 27 MA's), (53, 39847), (55, 39874),

Gene: Origami_58 Start: 39163, Stop: 39309, Start Num: 33
Candidate Starts for Origami_58:
(Start: 23 @39121 has 7 MA's), (Start: 33 @39163 has 3 MA's), (50, 39241),

Gene: OrionPax_73 Start: 47265, Stop: 47438, Start Num: 28
Candidate Starts for OrionPax_73:
(Start: 28 @47265 has 127 MA's), (41, 47316),

Gene: PaddyBaddy_74 Start: 47268, Stop: 47447, Start Num: 28
Candidate Starts for PaddyBaddy_74:
(Start: 28 @47268 has 127 MA's), (41, 47319),

Gene: Palpatine_76 Start: 48646, Stop: 48825, Start Num: 28
Candidate Starts for Palpatine_76:
(Start: 28 @48646 has 127 MA's), (41, 48697),

Gene: Paperbeatsrock_73 Start: 47891, Stop: 48064, Start Num: 28
Candidate Starts for Paperbeatsrock_73:
(Start: 28 @47891 has 127 MA's), (41, 47942),

Gene: Pat3_72 Start: 46423, Stop: 46596, Start Num: 28
Candidate Starts for Pat3_72:
(Start: 28 @46423 has 127 MA's), (41, 46474),

Gene: Petra64142_78 Start: 49110, Stop: 49283, Start Num: 28
Candidate Starts for Petra64142_78:
(Start: 28 @49110 has 127 MA's), (41, 49161),

Gene: Phaja_72 Start: 47717, Stop: 47890, Start Num: 28
Candidate Starts for Phaja_72:
(Start: 28 @47717 has 127 MA's), (41, 47768),

Gene: Pharsalus_71 Start: 47691, Stop: 47864, Start Num: 28
Candidate Starts for Pharsalus_71:
(Start: 28 @47691 has 127 MA's), (41, 47742),

Gene: PhatBacter_78 Start: 48663, Stop: 48842, Start Num: 28
Candidate Starts for PhatBacter_78:
(Start: 28 @48663 has 127 MA's), (41, 48714),

Gene: Phaux_76 Start: 48658, Stop: 48837, Start Num: 28
Candidate Starts for Phaux_76:
(Start: 28 @48658 has 127 MA's), (41, 48709),

Gene: Phives_59 Start: 40511, Stop: 40693, Start Num: 25
Candidate Starts for Phives_59:
(5, 40142), (Start: 25 @40511 has 27 MA's),

Gene: Phrux_71 Start: 47254, Stop: 47433, Start Num: 28
Candidate Starts for Phrux_71:
(Start: 28 @47254 has 127 MA's), (41, 47305),

Gene: Pixelle_57 Start: 40947, Stop: 41132, Start Num: 25
Candidate Starts for Pixelle_57:
(6, 40599), (Start: 25 @40947 has 27 MA's),

Gene: Policronamos_77 Start: 48658, Stop: 48837, Start Num: 28
Candidate Starts for Policronamos_77:
(Start: 28 @48658 has 127 MA's), (41, 48709),

Gene: Porky_73 Start: 47084, Stop: 47257, Start Num: 28
Candidate Starts for Porky_73:
(Start: 28 @47084 has 127 MA's), (41, 47135),

Gene: Powerpuff_57 Start: 39483, Stop: 39683, Start Num: 23
Candidate Starts for Powerpuff_57:
(Start: 23 @39483 has 7 MA's), (53, 39615),

Gene: Ptowny_71 Start: 46553, Stop: 46726, Start Num: 28

Candidate Starts for Ptowny_71:
(Start: 28 @46553 has 127 MA's), (41, 46604),

Gene: Pumpkin_77 Start: 48312, Stop: 48491, Start Num: 28
Candidate Starts for Pumpkin_77:
(Start: 28 @48312 has 127 MA's), (41, 48363),

Gene: Pumpkins_54 Start: 39127, Stop: 39321, Start Num: 25
Candidate Starts for Pumpkins_54:
(Start: 25 @39127 has 27 MA's),

Gene: Quallification_75 Start: 48299, Stop: 48472, Start Num: 28
Candidate Starts for Quallification_75:
(Start: 28 @48299 has 127 MA's), (41, 48350),

Gene: Rakim_75 Start: 47768, Stop: 47947, Start Num: 28
Candidate Starts for Rakim_75:
(Start: 28 @47768 has 127 MA's), (41, 47819),

Gene: Reedo_54 Start: 36267, Stop: 36416, Start Num: 34
Candidate Starts for Reedo_54:
(Start: 34 @36267 has 6 MA's), (50, 36342),

Gene: Rimmer_75 Start: 48004, Stop: 48177, Start Num: 28
Candidate Starts for Rimmer_75:
(Start: 28 @48004 has 127 MA's), (41, 48055),

Gene: RiverMonster_74 Start: 47832, Stop: 48011, Start Num: 28
Candidate Starts for RiverMonster_74:
(Start: 28 @47832 has 127 MA's), (41, 47883),

Gene: Saints25_73 Start: 47242, Stop: 47415, Start Num: 28
Candidate Starts for Saints25_73:
(Start: 28 @47242 has 127 MA's), (41, 47293),

Gene: Sassay_69 Start: 45932, Stop: 46111, Start Num: 28
Candidate Starts for Sassay_69:
(Start: 28 @45932 has 127 MA's), (41, 45983),

Gene: Schaffner_55 Start: 38968, Stop: 39162, Start Num: 25
Candidate Starts for Schaffner_55:
(11, 38773), (Start: 25 @38968 has 27 MA's),

Gene: Sekhmet_52 Start: 36421, Stop: 36564, Start Num: 37
Candidate Starts for Sekhmet_52:
(Start: 37 @36421 has 1 MA's),

Gene: ShakeItOph_60 Start: 40141, Stop: 40287, Start Num: 33
Candidate Starts for ShakeItOph_60:
(Start: 33 @40141 has 3 MA's), (50, 40219),

Gene: ShamWow_74 Start: 48154, Stop: 48327, Start Num: 28
Candidate Starts for ShamWow_74:

(Start: 28 @48154 has 127 MA's), (41, 48205),

Gene: ShereKhan_73 Start: 48223, Stop: 48396, Start Num: 28
Candidate Starts for ShereKhan_73:
(Start: 28 @48223 has 127 MA's), (41, 48274),

Gene: Sidious_47 Start: 36440, Stop: 36616, Start Num: 29
Candidate Starts for Sidious_47:
(Start: 29 @36440 has 2 MA's), (49, 36527),

Gene: Simpliphy_73 Start: 47232, Stop: 47405, Start Num: 28
Candidate Starts for Simpliphy_73:
(Start: 28 @47232 has 127 MA's), (41, 47283),

Gene: Simpson_57 Start: 38386, Stop: 38586, Start Num: 23
Candidate Starts for Simpson_57:
(2, 37837), (Start: 23 @38386 has 7 MA's), (53, 38518),

Gene: SirDuracell_73 Start: 46518, Stop: 46691, Start Num: 28
Candidate Starts for SirDuracell_73:
(Start: 28 @46518 has 127 MA's), (41, 46569),

Gene: Skelbel_57 Start: 39544, Stop: 39729, Start Num: 26
Candidate Starts for Skelbel_57:
(Start: 26 @39544 has 5 MA's),

Gene: Snek_57 Start: 37403, Stop: 37558, Start Num: 34
Candidate Starts for Snek_57:
(Start: 34 @37403 has 6 MA's), (57, 37541),

Gene: Soondubu_51 Start: 41018, Stop: 41170, Start Num: 36
Candidate Starts for Soondubu_51:
(Start: 36 @41018 has 1 MA's), (46, 41060), (56, 41150),

Gene: SophKB_71 Start: 46910, Stop: 47083, Start Num: 28
Candidate Starts for SophKB_71:
(Start: 28 @46910 has 127 MA's), (41, 46961),

Gene: Sotrice96_75 Start: 47913, Stop: 48086, Start Num: 28
Candidate Starts for Sotrice96_75:
(Start: 28 @47913 has 127 MA's), (41, 47964),

Gene: Stank_77 Start: 48171, Stop: 48344, Start Num: 28
Candidate Starts for Stank_77:
(Start: 28 @48171 has 127 MA's), (41, 48222),

Gene: Stark_75 Start: 47715, Stop: 47894, Start Num: 28
Candidate Starts for Stark_75:
(Start: 28 @47715 has 127 MA's), (41, 47766),

Gene: StellaBean_72 Start: 47478, Stop: 47651, Start Num: 28
Candidate Starts for StellaBean_72:
(Start: 28 @47478 has 127 MA's), (41, 47529),

Gene: StolenFromERC_77 Start: 47953, Stop: 48126, Start Num: 28
Candidate Starts for StolenFromERC_77:
(Start: 28 @47953 has 127 MA's), (41, 48004),

Gene: StormChicken_76 Start: 48611, Stop: 48784, Start Num: 28
Candidate Starts for StormChicken_76:
(Start: 28 @48611 has 127 MA's), (41, 48662),

Gene: Strobilo_52 Start: 38583, Stop: 38792, Start Num: 27
Candidate Starts for Strobilo_52:
(Start: 27 @38583 has 11 MA's), (Start: 29 @38595 has 2 MA's), (39, 38646), (43, 38667), (47, 38679), (48, 38694), (50, 38709), (52, 38721),

Gene: Subaru_56 Start: 39303, Stop: 39485, Start Num: 25
Candidate Starts for Subaru_56:
(10, 39096), (Start: 25 @39303 has 27 MA's),

Gene: Sweetums_49 Start: 28762, Stop: 28980, Start Num: 22
Candidate Starts for Sweetums_49:
(Start: 22 @28762 has 3 MA's), (32, 28810), (Start: 37 @28825 has 1 MA's),

Gene: TBrady12_77 Start: 47652, Stop: 47825, Start Num: 28
Candidate Starts for TBrady12_77:
(Start: 28 @47652 has 127 MA's), (41, 47703),

Gene: TM4_47 Start: 32969, Stop: 33172, Start Num: 27
Candidate Starts for TM4_47:
(Start: 27 @32969 has 11 MA's), (Start: 29 @32981 has 2 MA's), (39, 33026), (43, 33047), (47, 33059), (48, 33074), (50, 33089), (52, 33101),

Gene: Tallboi_56 Start: 39686, Stop: 39874, Start Num: 24
Candidate Starts for Tallboi_56:
(Start: 24 @39686 has 2 MA's),

Gene: Tarkin_73 Start: 47900, Stop: 48073, Start Num: 28
Candidate Starts for Tarkin_73:
(Start: 28 @47900 has 127 MA's), (41, 47951),

Gene: Tbone_55 Start: 38934, Stop: 39128, Start Num: 25
Candidate Starts for Tbone_55:
(Start: 25 @38934 has 27 MA's), (53, 39060),

Gene: TeamEdward_76 Start: 48605, Stop: 48778, Start Num: 28
Candidate Starts for TeamEdward_76:
(Start: 28 @48605 has 127 MA's), (41, 48656),

Gene: TeardropMSU_70 Start: 46900, Stop: 47073, Start Num: 28
Candidate Starts for TeardropMSU_70:
(Start: 28 @46900 has 127 MA's), (41, 46951),

Gene: Teaspoon_75 Start: 47794, Stop: 47967, Start Num: 28
Candidate Starts for Teaspoon_75:

(Start: 28 @47794 has 127 MA's), (41, 47845),

Gene: Teng_53 Start: 28666, Stop: 28884, Start Num: 22
Candidate Starts for Teng_53:
(Start: 22 @28666 has 3 MA's), (32, 28714), (Start: 37 @28729 has 1 MA's),

Gene: Terminus_77 Start: 48687, Stop: 48866, Start Num: 28
Candidate Starts for Terminus_77:
(Start: 28 @48687 has 127 MA's), (41, 48738),

Gene: TforTroy_57 Start: 39052, Stop: 39246, Start Num: 25
Candidate Starts for TforTroy_57:
(11, 38854), (Start: 25 @39052 has 27 MA's), (53, 39178),

Gene: Thimble_75 Start: 47135, Stop: 47314, Start Num: 28
Candidate Starts for Thimble_75:
(Start: 28 @47135 has 127 MA's), (41, 47186),

Gene: Thresher_76 Start: 48774, Stop: 48953, Start Num: 28
Candidate Starts for Thresher_76:
(Start: 28 @48774 has 127 MA's), (41, 48825),

Gene: ThursdayNight_58 Start: 39681, Stop: 39881, Start Num: 25
Candidate Starts for ThursdayNight_58:
(Start: 25 @39681 has 27 MA's), (56, 39864),

Gene: Tian_56 Start: 40845, Stop: 41030, Start Num: 25
Candidate Starts for Tian_56:
(Start: 25 @40845 has 27 MA's),

Gene: Tomaszewski_69 Start: 47063, Stop: 47236, Start Num: 28
Candidate Starts for Tomaszewski_69:
(Start: 28 @47063 has 127 MA's), (41, 47114),

Gene: Toto_72 Start: 48154, Stop: 48327, Start Num: 28
Candidate Starts for Toto_72:
(Start: 28 @48154 has 127 MA's), (41, 48205),

Gene: Traaww1_70 Start: 47338, Stop: 47511, Start Num: 28
Candidate Starts for Traaww1_70:
(Start: 28 @47338 has 127 MA's), (41, 47389),

Gene: Tuck_58 Start: 40300, Stop: 40482, Start Num: 25
Candidate Starts for Tuck_58:
(Start: 25 @40300 has 27 MA's),

Gene: Tuco_75 Start: 48662, Stop: 48835, Start Num: 28
Candidate Starts for Tuco_75:
(Start: 28 @48662 has 127 MA's), (41, 48713),

Gene: Turab_53 Start: 37635, Stop: 37826, Start Num: 24
Candidate Starts for Turab_53:
(7, 37329), (Start: 24 @37635 has 2 MA's),

Gene: Tutumahutu_56 Start: 38356, Stop: 38553, Start Num: 25
Candidate Starts for Tutumahutu_56:
(Start: 25 @38356 has 27 MA's), (53, 38485),

Gene: Tweety19_58 Start: 37403, Stop: 37558, Start Num: 34
Candidate Starts for Tweety19_58:
(Start: 34 @37403 has 6 MA's), (57, 37541),

Gene: Ukulele_69 Start: 47045, Stop: 47218, Start Num: 28
Candidate Starts for Ukulele_69:
(Start: 28 @47045 has 127 MA's), (41, 47096),

Gene: VResidence_55 Start: 37492, Stop: 37677, Start Num: 25
Candidate Starts for VResidence_55:
(Start: 25 @37492 has 27 MA's),

Gene: VroomVroom_56 Start: 39271, Stop: 39462, Start Num: 23
Candidate Starts for VroomVroom_56:
(4, 38755), (9, 39007), (16, 39190), (Start: 23 @39271 has 7 MA's), (Start: 33 @39316 has 3 MA's),
(50, 39394), (54, 39427),

Gene: Warda_56 Start: 38671, Stop: 38853, Start Num: 25
Candidate Starts for Warda_56:
(Start: 25 @38671 has 27 MA's),

Gene: WaterT_74 Start: 43421, Stop: 43254, Start Num: 31
Candidate Starts for WaterT_74:
(19, 43508), (Start: 31 @43421 has 1 MA's), (38, 43391), (40, 43382), (52, 43319), (55, 43289), (56,
43268),

Gene: Wiggin_76 Start: 47739, Stop: 47912, Start Num: 28
Candidate Starts for Wiggin_76:
(Start: 28 @47739 has 127 MA's), (41, 47790),

Gene: Wildwest_53 Start: 38260, Stop: 38493, Start Num: 17
Candidate Starts for Wildwest_53:
(Start: 17 @38260 has 1 MA's),

Gene: Willez_69 Start: 45932, Stop: 46111, Start Num: 28
Candidate Starts for Willez_69:
(Start: 28 @45932 has 127 MA's), (41, 45983),

Gene: Xandras_73 Start: 47147, Stop: 47326, Start Num: 28
Candidate Starts for Xandras_73:
(Start: 28 @47147 has 127 MA's), (41, 47198),

Gene: Yang_57 Start: 39052, Stop: 39246, Start Num: 25
Candidate Starts for Yang_57:
(Start: 25 @39052 has 27 MA's), (56, 39226),

Gene: YassJohnny_71 Start: 47102, Stop: 47275, Start Num: 28
Candidate Starts for YassJohnny_71:

(Start: 28 @47102 has 127 MA's), (41, 47153),

Gene: YesChef_55 Start: 38342, Stop: 38542, Start Num: 23
Candidate Starts for YesChef_55:
(Start: 23 @38342 has 7 MA's), (53, 38474),

Gene: Youngblood_77 Start: 48614, Stop: 48793, Start Num: 28
Candidate Starts for Youngblood_77:
(Start: 28 @48614 has 127 MA's), (41, 48665),

Gene: ZoeJ_51 Start: 38060, Stop: 38263, Start Num: 27
Candidate Starts for ZoeJ_51:
(Start: 27 @38060 has 11 MA's), (Start: 29 @38072 has 2 MA's), (39, 38117), (43, 38138), (47, 38150), (48, 38165), (50, 38180),

Gene: xkcd_77 Start: 48804, Stop: 48977, Start Num: 28
Candidate Starts for xkcd_77:
(Start: 28 @48804 has 127 MA's), (41, 48855),