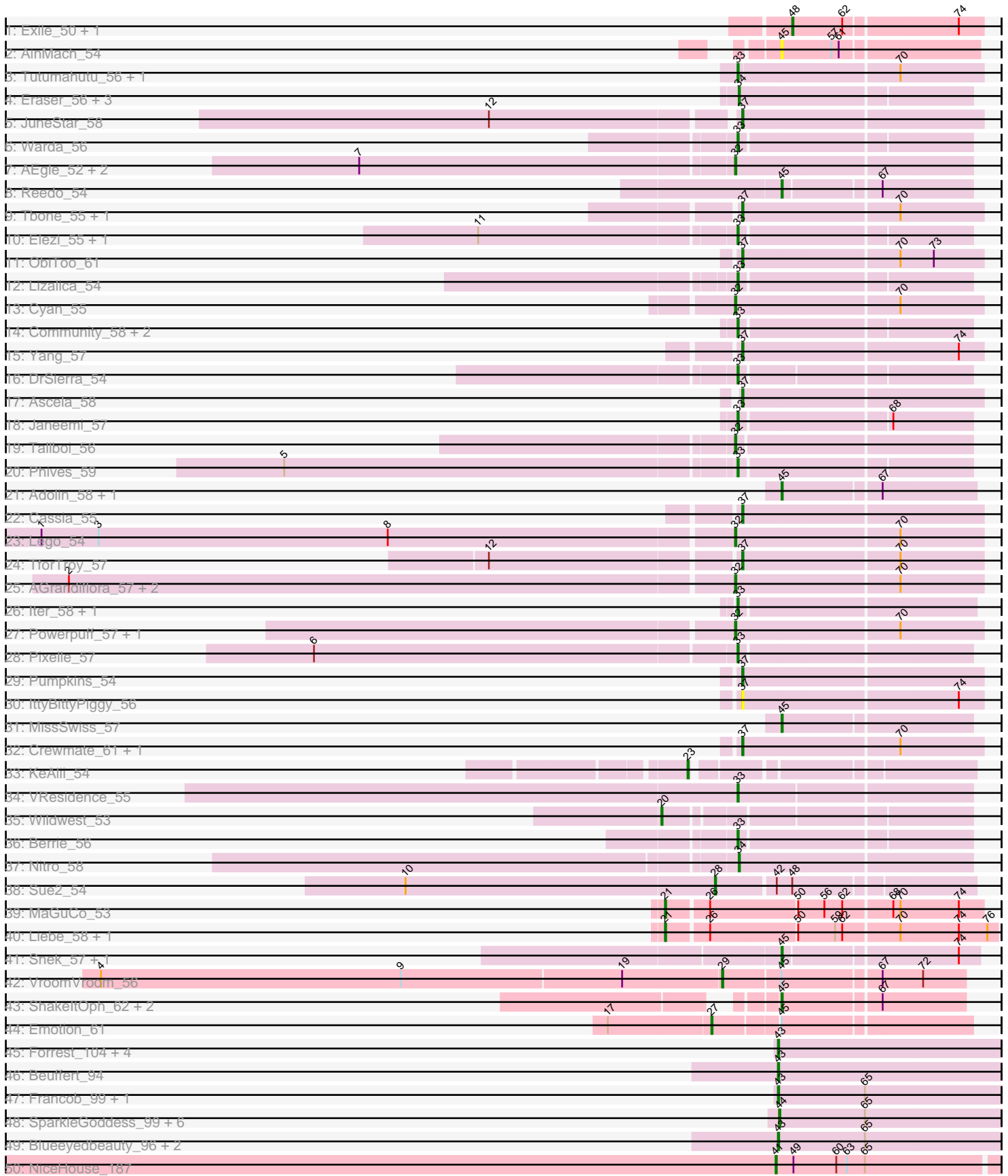
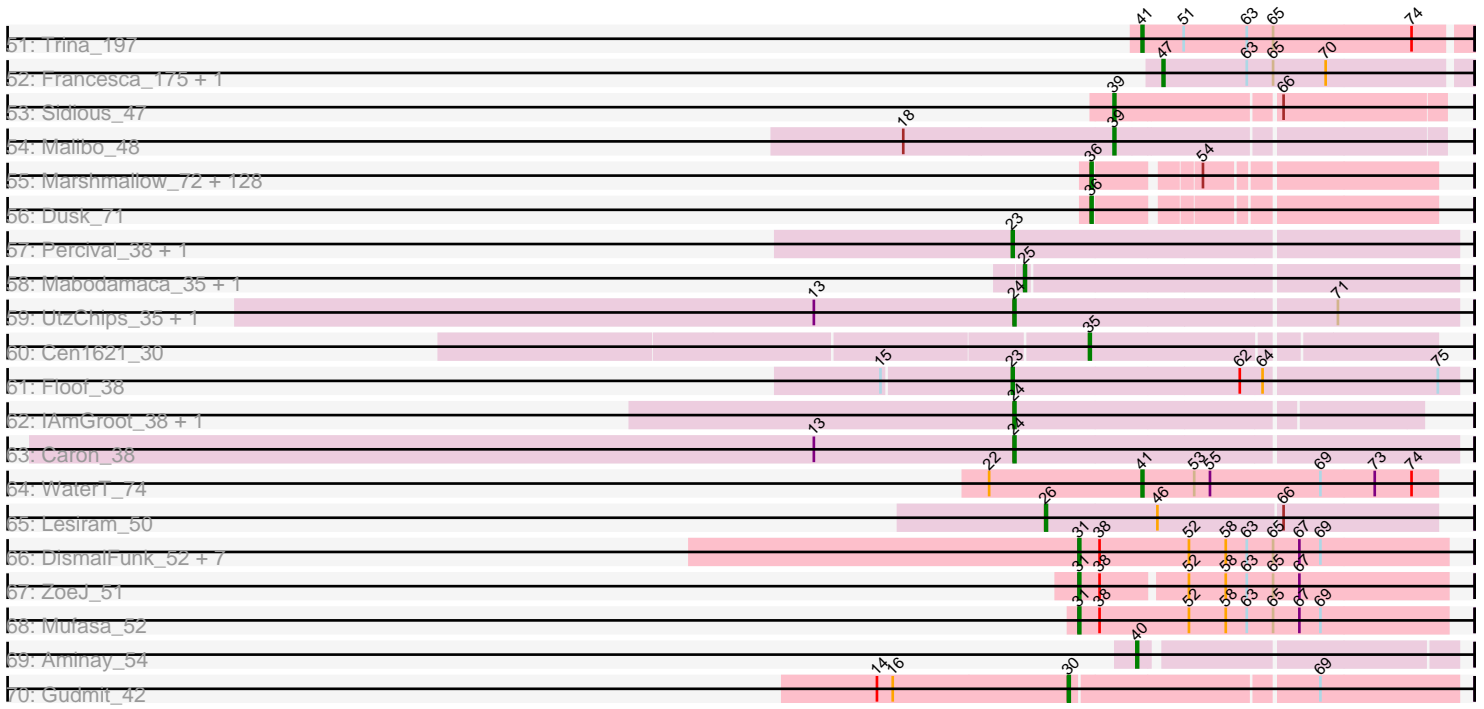


Pham 193709



Pham 193709



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 193709 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193709 has 244 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Exile_50, Soondubu_51
- Track 2 : AinMach_54
- Track 3 : Tutumahutu_56, Kaylissa_56
- Track 4 : Eraser_56, Niobe_56, Asa16_56, London_56
- Track 5 : JuneStar_58
- Track 6 : Warda_56
- Track 7 : AEgle_52, Turab_53, Adumb2043_53
- Track 8 : Reedo_54
- Track 9 : Tbone_55, Mudpuppy_52
- Track 10 : Elezi_55, Jstan_57
- Track 11 : ObiToo_61
- Track 12 : Lizalica_54
- Track 13 : Cyan_55
- Track 14 : Community_58, Amyev_57, Tian_56
- Track 15 : Yang_57
- Track 16 : DrSierra_54
- Track 17 : Ascela_58
- Track 18 : Janeemi_57
- Track 19 : Tallboi_56
- Track 20 : Phives_59
- Track 21 : Adolin_58, DrManhattan_58
- Track 22 : Cassia_55
- Track 23 : Lego_54
- Track 24 : TforTroy_57
- Track 25 : AGrandiflora_57, Joemato_55, Simpson_57
- Track 26 : Iter_58, Tuck_58
- Track 27 : Powerpuff_57, YesChef_55
- Track 28 : Pixelle_57
- Track 29 : Pumpkins_54
- Track 30 : IttyBittyPiggy_56
- Track 31 : MissSwiss_57
- Track 32 : Crewmate_61, JohnDoe_55
- Track 33 : KeAlii_54
- Track 34 : VResidence_55
- Track 35 : Wildwest_53
- Track 36 : Berrie_56
- Track 37 : Nitro_58

- Track 38 : Sue2_54
- Track 39 : MaGuCo_53
- Track 40 : Liebe_58, Maureen_58
- Track 41 : Snek_57, Tweety19_58
- Track 42 : VroomVroom_56
- Track 43 : ShakeltOph_62, MiniMommy_63, JasmineDragon_60
- Track 44 : Emotion_61
- Track 45 : Forrest_104, Gilson_101, Jada_101, Phredrick_100, Emma1919_102
- Track 46 : Beuffert_94
- Track 47 : Francob_99, Kenrey_102
- Track 48 : SparkleGoddess_99, Belfort_101, Karp_97, Moab_100, Stigma_98, Comrade_98, Patelgo_99
- Track 49 : Blueeyedbeauty_96, Annadreamy_94, Limpid_93
- Track 50 : NiceHouse_187
- Track 51 : Trina_197
- Track 52 : Francesca_175, Dorin_173
- Track 53 : Sidious_47
- Track 54 : Malibo_48
- Track 55 : Marshmallow_72, Barbarian_73, Traaww1_70, Mindy_73, Myrale_74, Dumbo_74, Flypotenuse_70, Hoonter_77, TBrady12_77, Kostya_74, Manda_75, Daikon_76, Lilac_76, Filch_75, Easy2Say_75, ShereKhan_73, Rimmer_75, Contagion_70, OrionPax_73, Teaspoon_75, ShamWow_74, Miniwave_69, Phaux_76, Buck_75, Tomaszewski_69, Porky_73, Amao_74, Highbury_73, SophKB_71, Ukulele_69, Cactus_77, NelitzaMV_72, NoSleep_75, Glexan_73, Czyszczonek_75, Nala_76, xkcd_77, Elph10_74, 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, Asriel_73, Hopey_74, Cookies_71, GooberAzure_77, Youngblood_77, Goldilocks_77, MPhalcon_75, Harella_74, Icee_75, Terminus_77, ChotaBhai_74, Eureka_72, Murphy_74, Murica_77, Bench_77, Balomoji_74, Gator_72, Kanye_71, Command613_76, Saints25_73, Gemini_79, Stark_75, 244_75, PhatBacter_78, Phrux_71, BugsBunny_74, Elite2014_73, Maxxinista_76, Mosby_70, Cjw1_74, DrDrey_74, JeTaime_74, Nimrod_75, Inca_71, ChosenOne_74, HuffyPuff_77, Pharsalus_71, Emmina_74, Misfit_75, Gage_76, Goku_72, Simpliphy_73, Kimchi_78, BadStone_71, Henry_72, BaboJay_71, Policronamos_78, ABCat_71, DoctorDiddles_73, Argent26_78, Phaja_72, Bask21_74, Petra64142_78, Palpatine_76, Bruin_71, FireRed_78, MISSy_75, Pumpkin_77, Xandras_73, HanKaySha_74, Sotrice96_75, Tuco_75, StolenFromERC_77, Rakim_75, Holt_79, Paperbeatsrock_73, Qualification_75, Moldemort_77, Toto_72, Lilpickle_73, Tarkin_73, Wiggin_76, MadamMonkfish_74, StellaBean_72, Willez_69, BilboSwaggins_73, Stank_77, YassJohnny_71
- Track 56 : Dusk_71
- Track 57 : Percival_38, Gretchen_38
- Track 58 : Mabodamaca_35, SuMoo_35
- Track 59 : UtzChips_35, Barnstormer_35
- Track 60 : Cen1621_30
- Track 61 : Floof_38
- Track 62 : IAmGroot_38, GardenState_38
- Track 63 : Caron_38
- Track 64 : WaterT_74
- Track 65 : Lesiram_50
- Track 66 : DismalFunk_52, Findley_52, DismalStressor_52, Marcoliusprime_52, Milly_52, Strobilo_52, TM4_47, BoostSeason_52

- Track 67 : ZoeJ_51
- Track 68 : Mufasa_52
- Track 69 : Aminay_54
- Track 70 : 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 36, it was called in 123 of the 225 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, Bench_77, BigBubba_74, BilboSwaggins_73, Bruin_71, Buck_75, BugsBunny_74, Cactus_77, ChosenOne_74, ChotaBhai_74, Cjw1_74, Command613_76, Contagion_70, Cookies_71, CrystalP_73, Czyszczonek_75, Daikon_76, DoctorDiddles_73, DrDrey_74, Dumbo_74, Dusk_71, Easy2Say_75, Elite2014_73, Elph10_74, Emmina_74, Eureka_72, Filch_75, FireRed_78, Flypotenuse_70, Gage_76, Gator_72, Gemini_79, Glexan_73, Goku_72, GoldenSpark_78, Goldilocks_77, GooberAzure_77, HanKaySha_74, Harella_74, Henry_72, Highbury_73, Holt_79, Hoonter_77, Hopey_74, HuffyPuff_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, Mosby_70, Murica_77, Murphy_74, Myrale_74, Nala_76, NelitzaMV_72, Nimrod_75, NoSleep_75, OrionPax_73, Palpatine_76, Paperbeatsrock_73, Pat3_72, Petra64142_78, Phaja_72, Pharsalus_71, PhatBacter_78, Phaux_76, Phrux_71, Policronamos_78, Porky_73, 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, TBrady12_77, Tarkin_73, TeardropMSU_70, Teaspoon_75, Terminus_77, Thresher_76, Tomaszewski_69, Toto_72, Traaww1_70, Tuco_75, Ukulele_69, Wiggins_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, Amyev_57, Annadreamy_94, Asa16_56, Ascela_58, Barnstormer_35, Belfort_101, Berrie_56, Beuffert_94, Blueeyedbeauty_96, BoostSeason_52, Caron_38, Cassia_55, Cen1621_30, Community_58, Comrade_98, Crewmate_61, Cyan_55, DismalFunk_52, DismalStressor_52, Dorin_173, DrManhattan_58, DrSierra_54, Elezi_55, Emma1919_102, Emotion_61, Eraser_56, Exile_50, Findley_52, Floof_38, Forrest_104, Francesca_175, Francob_99, GardenState_38, Gilson_101, Gretchen_38, Gudmit_42, IAmGroot_38, Iter_58, IttyBittyPiggy_56, Jada_101, Janeemi_57, JasmineDragon_60, Joemato_55, JohnDoe_55, Jstan_57, JuneStar_58, Karp_97, Kaylissa_56, KeAlii_54, Kenrey_102, Lego_54, Lesiram_50, Liebe_58, Limpid_93, Lizalica_54, London_56, MaGuCo_53, Mabodamaca_35,

Malibo_48, Marcoliusprime_52, Maureen_58, Milly_52, MiniMommy_63, MissSwiss_57, Moab_100, Mudpuppy_52, Mufasa_52, NiceHouse_187, Niobe_56, Nitro_58, ObiToo_61, Patelgo_99, Percival_38, Phives_59, Phredrick_100, Pixelle_57, Powerpuff_57, Pumpkins_54, Reedo_54, ShakeltOph_62, Sidious_47, Simpson_57, Snek_57, Soondubu_51, SparkleGoddess_99, Stigma_98, Strobilo_52, SuMoo_35, Sue2_54, TM4_47, Tallboi_56, Tbone_55, TforTroy_57, Tian_56, Trina_197, Tuck_58, Turab_53, Tutumahutu_56, Tweety19_58, UtzChips_35, VResidence_55, VroomVroom_56, Warda_56, WaterT_74, Wildwest_53, Yang_57, YesChef_55, ZoeJ_51,

Summary by start number:

Start 20:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wildwest_53 (AZ1),

Start 21:

- Found in 3 of 244 (1.2%) of genes in pham
- Manual Annotations of this start: 3 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe_58 (AZ2), MaGuCo_53 (AZ2), Maureen_58 (AZ2),

Start 23:

- Found in 4 of 244 (1.6%) of genes in pham
- Manual Annotations of this start: 4 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Floof_38 (EH), Gretchen_38 (EH), KeAlii_54 (AZ1), Percival_38 (EH),

Start 24:

- Found in 5 of 244 (2.0%) of genes in pham
- Manual Annotations of this start: 5 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer_35 (EH), Caron_38 (EH), GardenState_38 (EH), IAmGroot_38 (EH), UtzChips_35 (EH),

Start 25:

- Found in 2 of 244 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mabodamaca_35 (EH), SuMoo_35 (EH),

Start 26:

- Found in 4 of 244 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Lesiram_50 (GF),

Start 27:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion_61 (AZ4),

Start 28:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sue2_54 (AZ1),

Start 29:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: VroomVroom_56 (AZ4),

Start 30:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gudmit_42 (singleton),

Start 31:

- Found in 10 of 244 (4.1%) of genes in pham
- Manual Annotations of this start: 10 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason_52 (K2), DismalFunk_52 (K2), DismalStressor_52 (K2), Findley_52 (K2), Marcoliusprime_52 (K2), Milly_52 (K2), Mufasa_52 (K2), Strobilo_52 (K2), TM4_47 (K2), ZoeJ_51 (K2),

Start 32:

- Found in 11 of 244 (4.5%) of genes in pham
- Manual Annotations of this start: 7 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_52 (AZ1), AGrandiflora_57 (AZ1), Adumb2043_53 (AZ1), Cyan_55 (AZ1), Joemato_55 (AZ1), Lego_54 (AZ1), Powerpuff_57 (AZ1), Simpson_57 (AZ1), Tallboi_56 (AZ1), Turab_53 (AZ1), YesChef_55 (AZ1),

Start 33:

- Found in 17 of 244 (7.0%) of genes in pham
- Manual Annotations of this start: 14 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev_57 (AZ1), Berrie_56 (AZ1), Community_58 (AZ1), DrSierra_54 (AZ1), Elezi_55 (AZ1), Iter_58 (AZ1), Janeemi_57 (AZ1), Jstan_57 (AZ1), Kaylissa_56 (AZ1), Lizalica_54 (AZ1), Phives_59 (AZ1), Pixelle_57 (AZ1), Tian_56 (AZ1), Tuck_58 (AZ1), Tutumahutu_56 (AZ1), VResidence_55 (AZ1), Warda_56 (AZ1),

Start 34:

- Found in 5 of 244 (2.0%) of genes in pham
- Manual Annotations of this start: 5 of 225

- 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),

Start 35:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cen1621_30 (EH),

Start 36:

- Found in 130 of 244 (53.3%) of genes in pham
- Manual Annotations of this start: 123 of 225
- 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), Bench_77 (E), BigBubba_74 (E), BilboSwaggins_73 (E), Bruin_71 (E), Buck_75 (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), Czyszczo1_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), Filch_75 (E), FireRed_78 (E), Flypotenuse_70 (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), 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), JeTaimie_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), Mosby_70 (E), Murica_77 (E), Murphy_74 (E), Myrale_74 (E), Nala_76 (E), NelitzaMV_72 (E), Nimrod_75 (E), NoSleep_75 (E), OrionPax_73 (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_78 (E), Porky_73 (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), TBrady12_77 (E), Tarkin_73 (E), TeardropMSU_70 (E), Teaspoon_75 (E), Terminus_77 (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 37:

- Found in 12 of 244 (4.9%) of genes in pham
- Manual Annotations of this start: 11 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ascela_58 (AZ1), Cassia_55 (AZ1), Crewmate_61 (AZ1), IttyBittyPiggy_56 (AZ1), JohnDoe_55 (AZ1), JuneStar_58 (AZ1), Mudpuppy_52 (AZ1), ObiToo_61 (AZ1), Pumpkins_54 (AZ1), Tbone_55 (AZ1), TforTroy_57 (AZ1), Yang_57 (AZ1),

Start 39:

- Found in 2 of 244 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Malibo_48 (DW), Sidious_47 (CZ7),

Start 40:

- Found in 1 of 244 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aminay_54 (K7),

Start 41:

- Found in 3 of 244 (1.2%) of genes in pham
- Manual Annotations of this start: 3 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NiceHouse_187 (CE), Trina_197 (CE), WaterT_74 (GB),

Start 43:

- Found in 11 of 244 (4.5%) of genes in pham
- Manual Annotations of this start: 11 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy_94 (BK1), Beuffert_94 (BK1), Blueeyedbeauty_96 (BK1), Emma1919_102 (BK1), Forrest_104 (BK1), Francob_99 (BK1), Gilson_101 (BK1), Jada_101 (BK1), Kenrey_102 (BK1), Limpid_93 (BK1), Phredrick_100 (BK1),

Start 44:

- Found in 7 of 244 (2.9%) of genes in pham
- Manual Annotations of this start: 7 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort_101 (BK1), Comrade_98 (BK1), Karp_97 (BK1), Moab_100 (BK1), Patelgo_99 (BK1), SparkleGoddess_99 (BK1), Stigma_98 (BK1),

Start 45:

- Found in 12 of 244 (4.9%) of genes in pham
- Manual Annotations of this start: 7 of 225
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Adolin_58 (AZ1), AinMach_54 (AZ), DrManhattan_58 (AZ1), JasmineDragon_60 (AZ4), MiniMommy_63 (AZ4), MissSwiss_57 (AZ1), Reedo_54 (AZ1), ShakeltOph_62 (AZ4), Sneek_57 (AZ3), Tweety19_58 (AZ3),

Start 47:

- Found in 2 of 244 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorin_173 (CG), Francesca_175 (CG),

Start 48:

- Found in 3 of 244 (1.2%) of genes in pham

- Manual Annotations of this start: 1 of 225
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Exile_50 (AZ), Soondubu_51 (AZ),

Summary by clusters:

There are 17 clusters represented in this pham: singleton, AZ, E, EH, GF, CG, CZ7, CE, K2, K7, BK1, DW, AZ1, AZ2, AZ3, AZ4, GB,

Info for manual annotations of cluster AZ:

- Start number 48 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 20 was manually annotated 1 time for cluster AZ1.
- Start number 23 was manually annotated 1 time for cluster AZ1.
- Start number 28 was manually annotated 1 time for cluster AZ1.
- Start number 32 was manually annotated 7 times for cluster AZ1.
- Start number 33 was manually annotated 14 times for cluster AZ1.
- Start number 34 was manually annotated 5 times for cluster AZ1.
- Start number 37 was manually annotated 11 times for cluster AZ1.
- Start number 45 was manually annotated 4 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 21 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 45 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 27 was manually annotated 1 time for cluster AZ4.
- Start number 29 was manually annotated 1 time for cluster AZ4.
- Start number 45 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster BK1:

- Start number 43 was manually annotated 11 times for cluster BK1.
- Start number 44 was manually annotated 7 times for cluster BK1.

Info for manual annotations of cluster CE:

- Start number 41 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster CG:

- Start number 47 was manually annotated 2 times for cluster CG.

Info for manual annotations of cluster CZ7:

- Start number 39 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DW:

- Start number 39 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster E:

- Start number 36 was manually annotated 123 times for cluster E.

Info for manual annotations of cluster EH:

- Start number 23 was manually annotated 3 times for cluster EH.
- Start number 24 was manually annotated 5 times for cluster EH.
- Start number 25 was manually annotated 2 times for cluster EH.
- Start number 35 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster GB:

- Start number 41 was manually annotated 1 time for cluster GB.

Info for manual annotations of cluster GF:

- Start number 26 was manually annotated 1 time for cluster GF.

Info for manual annotations of cluster K2:

- Start number 31 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K7:

- Start number 40 was manually annotated 1 time for cluster K7.

Gene Information:

Gene: 244_75 Start: 47793, Stop: 47966, Start Num: 36

Candidate Starts for 244_75:

(Start: 36 @47793 has 123 MA's), (54, 47844),

Gene: ABCat_71 Start: 48146, Stop: 48319, Start Num: 36

Candidate Starts for ABCat_71:

(Start: 36 @48146 has 123 MA's), (54, 48197),

Gene: AEgle_52 Start: 37591, Stop: 37782, Start Num: 32

Candidate Starts for AEgle_52:

(7, 37285), (Start: 32 @37591 has 7 MA's),

Gene: AGrandiflora_57 Start: 38760, Stop: 38960, Start Num: 32

Candidate Starts for AGrandiflora_57:

(2, 38211), (Start: 32 @38760 has 7 MA's), (70, 38892),

Gene: Adnama_78 Start: 48172, Stop: 48345, Start Num: 36

Candidate Starts for Adnama_78:

(Start: 36 @48172 has 123 MA's), (54, 48223),

Gene: Adolin_58 Start: 37478, Stop: 37633, Start Num: 45

Candidate Starts for Adolin_58:

(Start: 45 @37478 has 7 MA's), (67, 37556),

Gene: Adumb2043_53 Start: 37614, Stop: 37805, Start Num: 32

Candidate Starts for Adumb2043_53:

(7, 37308), (Start: 32 @37614 has 7 MA's),

Gene: AinMach_54 Start: 37308, Stop: 37466, Start Num: 45

Candidate Starts for AinMach_54:

(Start: 45 @37308 has 7 MA's), (57, 37350), (61, 37356),

Gene: Amao_74 Start: 47566, Stop: 47739, Start Num: 36
Candidate Starts for Amao_74:
(Start: 36 @47566 has 123 MA's), (54, 47617),

Gene: AmericanBeauty_78 Start: 48315, Stop: 48488, Start Num: 36
Candidate Starts for AmericanBeauty_78:
(Start: 36 @48315 has 123 MA's), (54, 48366),

Gene: Aminay_54 Start: 38354, Stop: 38521, Start Num: 40
Candidate Starts for Aminay_54:
(Start: 40 @38354 has 1 MA's),

Gene: Amyev_57 Start: 40846, Stop: 41031, Start Num: 33
Candidate Starts for Amyev_57:
(Start: 33 @40846 has 14 MA's),

Gene: Annadreamy_94 Start: 66362, Stop: 66547, Start Num: 43
Candidate Starts for Annadreamy_94:
(Start: 43 @66362 has 11 MA's), (65, 66434),

Gene: Argent26_78 Start: 47953, Stop: 48126, Start Num: 36
Candidate Starts for Argent26_78:
(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: Asa16_56 Start: 39543, Stop: 39728, Start Num: 34
Candidate Starts for Asa16_56:
(Start: 34 @39543 has 5 MA's),

Gene: Ascela_58 Start: 39002, Stop: 39196, Start Num: 37
Candidate Starts for Ascela_58:
(Start: 37 @39002 has 11 MA's),

Gene: Asriel_73 Start: 46509, Stop: 46682, Start Num: 36
Candidate Starts for Asriel_73:
(Start: 36 @46509 has 123 MA's), (54, 46560),

Gene: BaboJay_71 Start: 47346, Stop: 47519, Start Num: 36
Candidate Starts for BaboJay_71:
(Start: 36 @47346 has 123 MA's), (54, 47397),

Gene: BadStone_71 Start: 47715, Stop: 47888, Start Num: 36
Candidate Starts for BadStone_71:
(Start: 36 @47715 has 123 MA's), (54, 47766),

Gene: Balomoji_74 Start: 48276, Stop: 48449, Start Num: 36
Candidate Starts for Balomoji_74:
(Start: 36 @48276 has 123 MA's), (54, 48327),

Gene: Barbarian_73 Start: 46509, Stop: 46682, Start Num: 36
Candidate Starts for Barbarian_73:
(Start: 36 @46509 has 123 MA's), (54, 46560),

Gene: Barnstormer_35 Start: 24679, Stop: 24924, Start Num: 24

Candidate Starts for Barnstormer_35:
(13, 24565), (Start: 24 @24679 has 5 MA's), (71, 24856),

Gene: Bask21_74 Start: 47129, Stop: 47302, Start Num: 36
Candidate Starts for Bask21_74:
(Start: 36 @47129 has 123 MA's), (54, 47180),

Gene: Belfort_101 Start: 68605, Stop: 68790, Start Num: 44
Candidate Starts for Belfort_101:
(Start: 44 @68605 has 7 MA's), (65, 68677),

Gene: Bench_77 Start: 47813, Stop: 47992, Start Num: 36
Candidate Starts for Bench_77:
(Start: 36 @47813 has 123 MA's), (54, 47864),

Gene: Berrie_56 Start: 38817, Stop: 38999, Start Num: 33
Candidate Starts for Berrie_56:
(Start: 33 @38817 has 14 MA's),

Gene: Beuffert_94 Start: 66921, Stop: 67106, Start Num: 43
Candidate Starts for Beuffert_94:
(Start: 43 @66921 has 11 MA's),

Gene: BigBubba_74 Start: 47525, Stop: 47704, Start Num: 36
Candidate Starts for BigBubba_74:
(Start: 36 @47525 has 123 MA's), (54, 47576),

Gene: BilboSwaggins_73 Start: 48154, Stop: 48327, Start Num: 36
Candidate Starts for BilboSwaggins_73:
(Start: 36 @48154 has 123 MA's), (54, 48205),

Gene: Blueeyedbeauty_96 Start: 66320, Stop: 66505, Start Num: 43
Candidate Starts for Blueeyedbeauty_96:
(Start: 43 @66320 has 11 MA's), (65, 66392),

Gene: BoostSeason_52 Start: 38177, Stop: 38386, Start Num: 31
Candidate Starts for BoostSeason_52:
(Start: 31 @38177 has 10 MA's), (38, 38189), (52, 38240), (58, 38261), (63, 38273), (65, 38288), (67, 38303), (69, 38315),

Gene: Bruin_71 Start: 46689, Stop: 46868, Start Num: 36
Candidate Starts for Bruin_71:
(Start: 36 @46689 has 123 MA's), (54, 46740),

Gene: Buck_75 Start: 48394, Stop: 48567, Start Num: 36
Candidate Starts for Buck_75:
(Start: 36 @48394 has 123 MA's), (54, 48445),

Gene: BugsBunny_74 Start: 48221, Stop: 48400, Start Num: 36
Candidate Starts for BugsBunny_74:
(Start: 36 @48221 has 123 MA's), (54, 48272),

Gene: Cactus_77 Start: 47170, Stop: 47343, Start Num: 36

Candidate Starts for Cactus_77:
(Start: 36 @47170 has 123 MA's), (54, 47221),

Gene: Caron_38 Start: 25164, Stop: 25409, Start Num: 24
Candidate Starts for Caron_38:
(13, 25050), (Start: 24 @25164 has 5 MA's),

Gene: Cassia_55 Start: 38504, Stop: 38698, Start Num: 37
Candidate Starts for Cassia_55:
(Start: 37 @38504 has 11 MA's),

Gene: Cen1621_30 Start: 22502, Stop: 22687, Start Num: 35
Candidate Starts for Cen1621_30:
(Start: 35 @22502 has 1 MA's),

Gene: ChosenOne_74 Start: 47170, Stop: 47343, Start Num: 36
Candidate Starts for ChosenOne_74:
(Start: 36 @47170 has 123 MA's), (54, 47221),

Gene: ChotaBhai_74 Start: 47494, Stop: 47667, Start Num: 36
Candidate Starts for ChotaBhai_74:
(Start: 36 @47494 has 123 MA's), (54, 47545),

Gene: Cjw1_74 Start: 48867, Stop: 49040, Start Num: 36
Candidate Starts for Cjw1_74:
(Start: 36 @48867 has 123 MA's), (54, 48918),

Gene: Command613_76 Start: 48209, Stop: 48382, Start Num: 36
Candidate Starts for Command613_76:
(Start: 36 @48209 has 123 MA's), (54, 48260),

Gene: Community_58 Start: 40395, Stop: 40577, Start Num: 33
Candidate Starts for Community_58:
(Start: 33 @40395 has 14 MA's),

Gene: Comrade_98 Start: 67922, Stop: 68107, Start Num: 44
Candidate Starts for Comrade_98:
(Start: 44 @67922 has 7 MA's), (65, 67994),

Gene: Contagion_70 Start: 46970, Stop: 47149, Start Num: 36
Candidate Starts for Contagion_70:
(Start: 36 @46970 has 123 MA's), (54, 47021),

Gene: Cookies_71 Start: 47351, Stop: 47524, Start Num: 36
Candidate Starts for Cookies_71:
(Start: 36 @47351 has 123 MA's), (54, 47402),

Gene: Crewmate_61 Start: 40124, Stop: 40318, Start Num: 37
Candidate Starts for Crewmate_61:
(Start: 37 @40124 has 11 MA's), (70, 40250),

Gene: CrystalP_73 Start: 48154, Stop: 48327, Start Num: 36
Candidate Starts for CrystalP_73:

(Start: 36 @48154 has 123 MA's), (54, 48205),

Gene: Cyan_55 Start: 38301, Stop: 38501, Start Num: 32

Candidate Starts for Cyan_55:

(Start: 32 @38301 has 7 MA's), (70, 38433),

Gene: Czyszczone1_75 Start: 47676, Stop: 47855, Start Num: 36

Candidate Starts for Czyszczone1_75:

(Start: 36 @47676 has 123 MA's), (54, 47727),

Gene: Daikon_76 Start: 48297, Stop: 48470, Start Num: 36

Candidate Starts for Daikon_76:

(Start: 36 @48297 has 123 MA's), (54, 48348),

Gene: DismalFunk_52 Start: 38608, Stop: 38817, Start Num: 31

Candidate Starts for DismalFunk_52:

(Start: 31 @38608 has 10 MA's), (38, 38620), (52, 38671), (58, 38692), (63, 38704), (65, 38719), (67, 38734), (69, 38746),

Gene: DismalStressor_52 Start: 38608, Stop: 38817, Start Num: 31

Candidate Starts for DismalStressor_52:

(Start: 31 @38608 has 10 MA's), (38, 38620), (52, 38671), (58, 38692), (63, 38704), (65, 38719), (67, 38734), (69, 38746),

Gene: DoctorDiddles_73 Start: 47538, Stop: 47711, Start Num: 36

Candidate Starts for DoctorDiddles_73:

(Start: 36 @47538 has 123 MA's), (54, 47589),

Gene: Dorin_173 Start: 95195, Stop: 95365, Start Num: 47

Candidate Starts for Dorin_173:

(Start: 47 @95195 has 2 MA's), (63, 95243), (65, 95258), (70, 95288),

Gene: DrDrey_74 Start: 48595, Stop: 48774, Start Num: 36

Candidate Starts for DrDrey_74:

(Start: 36 @48595 has 123 MA's), (54, 48646),

Gene: DrManhattan_58 Start: 37046, Stop: 37201, Start Num: 45

Candidate Starts for DrManhattan_58:

(Start: 45 @37046 has 7 MA's), (67, 37124),

Gene: DrSierra_54 Start: 37220, Stop: 37399, Start Num: 33

Candidate Starts for DrSierra_54:

(Start: 33 @37220 has 14 MA's),

Gene: Dumbo_74 Start: 47075, Stop: 47248, Start Num: 36

Candidate Starts for Dumbo_74:

(Start: 36 @47075 has 123 MA's), (54, 47126),

Gene: Dusk_71 Start: 47375, Stop: 47548, Start Num: 36

Candidate Starts for Dusk_71:

(Start: 36 @47375 has 123 MA's),

Gene: Easy2Say_75 Start: 48619, Stop: 48792, Start Num: 36

Candidate Starts for Easy2Say_75:
(Start: 36 @48619 has 123 MA's), (54, 48670),

Gene: Elezi_55 Start: 39303, Stop: 39485, Start Num: 33
Candidate Starts for Elezi_55:
(11, 39096), (Start: 33 @39303 has 14 MA's),

Gene: Elite2014_73 Start: 47169, Stop: 47342, Start Num: 36
Candidate Starts for Elite2014_73:
(Start: 36 @47169 has 123 MA's), (54, 47220),

Gene: Elph10_74 Start: 47174, Stop: 47353, Start Num: 36
Candidate Starts for Elph10_74:
(Start: 36 @47174 has 123 MA's), (54, 47225),

Gene: Emma1919_102 Start: 67382, Stop: 67567, Start Num: 43
Candidate Starts for Emma1919_102:
(Start: 43 @67382 has 11 MA's),

Gene: Emmina_74 Start: 47076, Stop: 47249, Start Num: 36
Candidate Starts for Emmina_74:
(Start: 36 @47076 has 123 MA's), (54, 47127),

Gene: Emotion_61 Start: 40785, Stop: 40988, Start Num: 27
Candidate Starts for Emotion_61:
(17, 40701), (Start: 27 @40785 has 1 MA's), (Start: 45 @40836 has 7 MA's),

Gene: Eraser_56 Start: 39550, Stop: 39735, Start Num: 34
Candidate Starts for Eraser_56:
(Start: 34 @39550 has 5 MA's),

Gene: Eureka_72 Start: 47640, Stop: 47813, Start Num: 36
Candidate Starts for Eureka_72:
(Start: 36 @47640 has 123 MA's), (54, 47691),

Gene: Exile_50 Start: 40505, Stop: 40657, Start Num: 48
Candidate Starts for Exile_50:
(Start: 48 @40505 has 1 MA's), (62, 40547), (74, 40637),

Gene: Filch_75 Start: 47101, Stop: 47280, Start Num: 36
Candidate Starts for Filch_75:
(Start: 36 @47101 has 123 MA's), (54, 47152),

Gene: Findley_52 Start: 38601, Stop: 38810, Start Num: 31
Candidate Starts for Findley_52:
(Start: 31 @38601 has 10 MA's), (38, 38613), (52, 38664), (58, 38685), (63, 38697), (65, 38712), (67, 38727), (69, 38739),

Gene: FireRed_78 Start: 48663, Stop: 48836, Start Num: 36
Candidate Starts for FireRed_78:
(Start: 36 @48663 has 123 MA's), (54, 48714),

Gene: Floop_38 Start: 25665, Stop: 25910, Start Num: 23

Candidate Starts for Floof_38:
(15, 25593), (Start: 23 @25665 has 4 MA's), (62, 25791), (64, 25803), (75, 25899),

Gene: Flypotenuse_70 Start: 47160, Stop: 47333, Start Num: 36
Candidate Starts for Flypotenuse_70:
(Start: 36 @47160 has 123 MA's), (54, 47211),

Gene: Forrest_104 Start: 69125, Stop: 69310, Start Num: 43
Candidate Starts for Forrest_104:
(Start: 43 @69125 has 11 MA's),

Gene: Francesca_175 Start: 96114, Stop: 96284, Start Num: 47
Candidate Starts for Francesca_175:
(Start: 47 @96114 has 2 MA's), (63, 96162), (65, 96177), (70, 96207),

Gene: Francob_99 Start: 67565, Stop: 67750, Start Num: 43
Candidate Starts for Francob_99:
(Start: 43 @67565 has 11 MA's), (65, 67637),

Gene: Gage_76 Start: 47953, Stop: 48126, Start Num: 36
Candidate Starts for Gage_76:
(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: GardenState_38 Start: 25346, Stop: 25567, Start Num: 24
Candidate Starts for GardenState_38:
(Start: 24 @25346 has 5 MA's),

Gene: Gator_72 Start: 48006, Stop: 48185, Start Num: 36
Candidate Starts for Gator_72:
(Start: 36 @48006 has 123 MA's), (54, 48057),

Gene: Gemini_79 Start: 48470, Stop: 48643, Start Num: 36
Candidate Starts for Gemini_79:
(Start: 36 @48470 has 123 MA's), (54, 48521),

Gene: Gilson_101 Start: 67344, Stop: 67529, Start Num: 43
Candidate Starts for Gilson_101:
(Start: 43 @67344 has 11 MA's),

Gene: Glexan_73 Start: 48290, Stop: 48463, Start Num: 36
Candidate Starts for Glexan_73:
(Start: 36 @48290 has 123 MA's), (54, 48341),

Gene: Goku_72 Start: 47369, Stop: 47542, Start Num: 36
Candidate Starts for Goku_72:
(Start: 36 @47369 has 123 MA's), (54, 47420),

Gene: GoldenSpark_78 Start: 47953, Stop: 48126, Start Num: 36
Candidate Starts for GoldenSpark_78:
(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: Goldilocks_77 Start: 47451, Stop: 47624, Start Num: 36
Candidate Starts for Goldilocks_77:

(Start: 36 @47451 has 123 MA's), (54, 47502),

Gene: GooberAzure_77 Start: 47953, Stop: 48126, Start Num: 36

Candidate Starts for GooberAzure_77:

(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: Gretchen_38 Start: 26776, Stop: 27021, Start Num: 23

Candidate Starts for Gretchen_38:

(Start: 23 @26776 has 4 MA's),

Gene: Gudmit_42 Start: 28762, Stop: 28971, Start Num: 30

Candidate Starts for Gudmit_42:

(14, 28654), (16, 28663), (Start: 30 @28762 has 1 MA's), (69, 28894),

Gene: HanKaySha_74 Start: 47254, Stop: 47433, Start Num: 36

Candidate Starts for HanKaySha_74:

(Start: 36 @47254 has 123 MA's), (54, 47305),

Gene: Harella_74 Start: 48806, Stop: 48979, Start Num: 36

Candidate Starts for Harella_74:

(Start: 36 @48806 has 123 MA's), (54, 48857),

Gene: Henry_72 Start: 47594, Stop: 47767, Start Num: 36

Candidate Starts for Henry_72:

(Start: 36 @47594 has 123 MA's), (54, 47645),

Gene: Highbury_73 Start: 47242, Stop: 47415, Start Num: 36

Candidate Starts for Highbury_73:

(Start: 36 @47242 has 123 MA's), (54, 47293),

Gene: Holt_79 Start: 48367, Stop: 48540, Start Num: 36

Candidate Starts for Holt_79:

(Start: 36 @48367 has 123 MA's), (54, 48418),

Gene: Hoonter_77 Start: 47953, Stop: 48126, Start Num: 36

Candidate Starts for Hoonter_77:

(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: Hokey_74 Start: 47786, Stop: 47965, Start Num: 36

Candidate Starts for Hokey_74:

(Start: 36 @47786 has 123 MA's), (54, 47837),

Gene: HufflyPuff_77 Start: 48619, Stop: 48792, Start Num: 36

Candidate Starts for HufflyPuff_77:

(Start: 36 @48619 has 123 MA's), (54, 48670),

Gene: IAmGroot_38 Start: 26011, Stop: 26232, Start Num: 24

Candidate Starts for IAmGroot_38:

(Start: 24 @26011 has 5 MA's),

Gene: IHOP_72 Start: 47718, Stop: 47891, Start Num: 36

Candidate Starts for IHOP_72:

(Start: 36 @47718 has 123 MA's), (54, 47769),

Gene: Icee_75 Start: 47617, Stop: 47790, Start Num: 36
Candidate Starts for Icee_75:
(Start: 36 @47617 has 123 MA's), (54, 47668),

Gene: Inca_71 Start: 46243, Stop: 46416, Start Num: 36
Candidate Starts for Inca_71:
(Start: 36 @46243 has 123 MA's), (54, 46294),

Gene: Iter_58 Start: 38994, Stop: 39182, Start Num: 33
Candidate Starts for Iter_58:
(Start: 33 @38994 has 14 MA's),

Gene: IttyBittyPiggy_56 Start: 38132, Stop: 38326, Start Num: 37
Candidate Starts for IttyBittyPiggy_56:
(Start: 37 @38132 has 11 MA's), (74, 38306),

Gene: Jada_101 Start: 67857, Stop: 68042, Start Num: 43
Candidate Starts for Jada_101:
(Start: 43 @67857 has 11 MA's),

Gene: Janeemi_57 Start: 39872, Stop: 40054, Start Num: 33
Candidate Starts for Janeemi_57:
(Start: 33 @39872 has 14 MA's), (68, 39989),

Gene: JasmineDragon_60 Start: 40141, Stop: 40287, Start Num: 45
Candidate Starts for JasmineDragon_60:
(Start: 45 @40141 has 7 MA's), (67, 40219),

Gene: JeTaime_74 Start: 48435, Stop: 48608, Start Num: 36
Candidate Starts for JeTaime_74:
(Start: 36 @48435 has 123 MA's), (54, 48486),

Gene: Joemato_55 Start: 38382, Stop: 38582, Start Num: 32
Candidate Starts for Joemato_55:
(2, 37833), (Start: 32 @38382 has 7 MA's), (70, 38514),

Gene: JohnDoe_55 Start: 38368, Stop: 38562, Start Num: 37
Candidate Starts for JohnDoe_55:
(Start: 37 @38368 has 11 MA's), (70, 38494),

Gene: Jstan_57 Start: 39307, Stop: 39489, Start Num: 33
Candidate Starts for Jstan_57:
(11, 39100), (Start: 33 @39307 has 14 MA's),

Gene: JuneStar_58 Start: 41416, Stop: 41610, Start Num: 37
Candidate Starts for JuneStar_58:
(12, 41221), (Start: 37 @41416 has 11 MA's),

Gene: Kanye_71 Start: 47299, Stop: 47472, Start Num: 36
Candidate Starts for Kanye_71:
(Start: 36 @47299 has 123 MA's), (54, 47350),

Gene: Karp_97 Start: 67879, Stop: 68064, Start Num: 44
Candidate Starts for Karp_97:
(Start: 44 @67879 has 7 MA's), (65, 67951),

Gene: Kaylissa_56 Start: 38763, Stop: 38960, Start Num: 33
Candidate Starts for Kaylissa_56:
(Start: 33 @38763 has 14 MA's), (70, 38892),

Gene: KeAlii_54 Start: 38009, Stop: 38218, Start Num: 23
Candidate Starts for KeAlii_54:
(Start: 23 @38009 has 4 MA's),

Gene: Kenrey_102 Start: 67572, Stop: 67757, Start Num: 43
Candidate Starts for Kenrey_102:
(Start: 43 @67572 has 11 MA's), (65, 67644),

Gene: Kimchi_78 Start: 47956, Stop: 48129, Start Num: 36
Candidate Starts for Kimchi_78:
(Start: 36 @47956 has 123 MA's), (54, 48007),

Gene: Kostya_74 Start: 47817, Stop: 47990, Start Num: 36
Candidate Starts for Kostya_74:
(Start: 36 @47817 has 123 MA's), (54, 47868),

Gene: Lego_54 Start: 38079, Stop: 38279, Start Num: 32
Candidate Starts for Lego_54:
(1, 37506), (3, 37554), (8, 37797), (Start: 32 @38079 has 7 MA's), (70, 38211),

Gene: Lesiram_50 Start: 28642, Stop: 28860, Start Num: 26
Candidate Starts for Lesiram_50:
(Start: 26 @28642 has 1 MA's), (46, 28705), (66, 28774),

Gene: Liebe_58 Start: 41412, Stop: 41675, Start Num: 21
Candidate Starts for Liebe_58:
(Start: 21 @41412 has 3 MA's), (Start: 26 @41445 has 1 MA's), (50, 41514), (59, 41544), (62, 41550),
(70, 41595), (74, 41643), (76, 41667),

Gene: Lilac_76 Start: 47571, Stop: 47750, Start Num: 36
Candidate Starts for Lilac_76:
(Start: 36 @47571 has 123 MA's), (54, 47622),

Gene: Lilizi_75 Start: 47284, Stop: 47463, Start Num: 36
Candidate Starts for Lilizi_75:
(Start: 36 @47284 has 123 MA's), (54, 47335),

Gene: Lilpickle_73 Start: 47169, Stop: 47342, Start Num: 36
Candidate Starts for Lilpickle_73:
(Start: 36 @47169 has 123 MA's), (54, 47220),

Gene: Limpid_93 Start: 66361, Stop: 66546, Start Num: 43
Candidate Starts for Limpid_93:
(Start: 43 @66361 has 11 MA's), (65, 66433),

Gene: Lizalica_54 Start: 37826, Stop: 38008, Start Num: 33
Candidate Starts for Lizalica_54:
(Start: 33 @37826 has 14 MA's),

Gene: London_56 Start: 39541, Stop: 39726, Start Num: 34
Candidate Starts for London_56:
(Start: 34 @39541 has 5 MA's),

Gene: MISSy_75 Start: 47675, Stop: 47854, Start Num: 36
Candidate Starts for MISSy_75:
(Start: 36 @47675 has 123 MA's), (54, 47726),

Gene: MPhalcon_75 Start: 47668, Stop: 47847, Start Num: 36
Candidate Starts for MPhalcon_75:
(Start: 36 @47668 has 123 MA's), (54, 47719),

Gene: MaGuCo_53 Start: 39882, Stop: 40133, Start Num: 21
Candidate Starts for MaGuCo_53:
(Start: 21 @39882 has 3 MA's), (Start: 26 @39915 has 1 MA's), (50, 39984), (56, 40005), (62, 40020),
(68, 40059), (70, 40065), (74, 40113),

Gene: Mabodamaca_35 Start: 25059, Stop: 25295, Start Num: 25
Candidate Starts for Mabodamaca_35:
(Start: 25 @25059 has 2 MA's),

Gene: MadamMonkfish_74 Start: 46893, Stop: 47066, Start Num: 36
Candidate Starts for MadamMonkfish_74:
(Start: 36 @46893 has 123 MA's), (54, 46944),

Gene: Malibo_48 Start: 36272, Stop: 36448, Start Num: 39
Candidate Starts for Malibo_48:
(18, 36155), (Start: 39 @36272 has 2 MA's),

Gene: Manda_75 Start: 48755, Stop: 48928, Start Num: 36
Candidate Starts for Manda_75:
(Start: 36 @48755 has 123 MA's), (54, 48806),

Gene: Marcoliusprime_52 Start: 38608, Stop: 38817, Start Num: 31
Candidate Starts for Marcoliusprime_52:
(Start: 31 @38608 has 10 MA's), (38, 38620), (52, 38671), (58, 38692), (63, 38704), (65, 38719), (67,
38734), (69, 38746),

Gene: Marshmallow_72 Start: 48448, Stop: 48621, Start Num: 36
Candidate Starts for Marshmallow_72:
(Start: 36 @48448 has 123 MA's), (54, 48499),

Gene: Maureen_58 Start: 41411, Stop: 41674, Start Num: 21
Candidate Starts for Maureen_58:
(Start: 21 @41411 has 3 MA's), (Start: 26 @41444 has 1 MA's), (50, 41513), (59, 41543), (62, 41549),
(70, 41594), (74, 41642), (76, 41666),

Gene: Maxxinista_76 Start: 47544, Stop: 47723, Start Num: 36
Candidate Starts for Maxxinista_76:

(Start: 36 @47544 has 123 MA's), (54, 47595),

Gene: Milly_52 Start: 38581, Stop: 38790, Start Num: 31

Candidate Starts for Milly_52:

(Start: 31 @38581 has 10 MA's), (38, 38593), (52, 38644), (58, 38665), (63, 38677), (65, 38692), (67, 38707), (69, 38719),

Gene: Mindy_73 Start: 46760, Stop: 46933, Start Num: 36

Candidate Starts for Mindy_73:

(Start: 36 @46760 has 123 MA's), (54, 46811),

Gene: MiniMommy_63 Start: 40144, Stop: 40290, Start Num: 45

Candidate Starts for MiniMommy_63:

(Start: 45 @40144 has 7 MA's), (67, 40222),

Gene: Miniwave_69 Start: 47213, Stop: 47386, Start Num: 36

Candidate Starts for Miniwave_69:

(Start: 36 @47213 has 123 MA's), (54, 47264),

Gene: Misfit_75 Start: 48687, Stop: 48866, Start Num: 36

Candidate Starts for Misfit_75:

(Start: 36 @48687 has 123 MA's), (54, 48738),

Gene: MissSwiss_57 Start: 37199, Stop: 37351, Start Num: 45

Candidate Starts for MissSwiss_57:

(Start: 45 @37199 has 7 MA's),

Gene: Moab_100 Start: 69731, Stop: 69916, Start Num: 44

Candidate Starts for Moab_100:

(Start: 44 @69731 has 7 MA's), (65, 69803),

Gene: Moldemort_77 Start: 47772, Stop: 47945, Start Num: 36

Candidate Starts for Moldemort_77:

(Start: 36 @47772 has 123 MA's), (54, 47823),

Gene: Mosby_70 Start: 46970, Stop: 47149, Start Num: 36

Candidate Starts for Mosby_70:

(Start: 36 @46970 has 123 MA's), (54, 47021),

Gene: Mudpuppy_52 Start: 38242, Stop: 38436, Start Num: 37

Candidate Starts for Mudpuppy_52:

(Start: 37 @38242 has 11 MA's), (70, 38368),

Gene: Mufasa_52 Start: 38162, Stop: 38371, Start Num: 31

Candidate Starts for Mufasa_52:

(Start: 31 @38162 has 10 MA's), (38, 38174), (52, 38225), (58, 38246), (63, 38258), (65, 38273), (67, 38288), (69, 38300),

Gene: Murica_77 Start: 48619, Stop: 48792, Start Num: 36

Candidate Starts for Murica_77:

(Start: 36 @48619 has 123 MA's), (54, 48670),

Gene: Murphy_74 Start: 48056, Stop: 48235, Start Num: 36

Candidate Starts for Murphy_74:
(Start: 36 @48056 has 123 MA's), (54, 48107),

Gene: Myrale_74 Start: 48313, Stop: 48486, Start Num: 36
Candidate Starts for Myrale_74:
(Start: 36 @48313 has 123 MA's), (54, 48364),

Gene: Nala_76 Start: 48177, Stop: 48350, Start Num: 36
Candidate Starts for Nala_76:
(Start: 36 @48177 has 123 MA's), (54, 48228),

Gene: NelitzaMV_72 Start: 47259, Stop: 47432, Start Num: 36
Candidate Starts for NelitzaMV_72:
(Start: 36 @47259 has 123 MA's), (54, 47310),

Gene: NiceHouse_187 Start: 105087, Stop: 105269, Start Num: 41
Candidate Starts for NiceHouse_187:
(Start: 41 @105087 has 3 MA's), (49, 105102), (60, 105138), (63, 105147), (65, 105162),

Gene: Nimrod_75 Start: 48880, Stop: 49053, Start Num: 36
Candidate Starts for Nimrod_75:
(Start: 36 @48880 has 123 MA's), (54, 48931),

Gene: Niobe_56 Start: 39544, Stop: 39729, Start Num: 34
Candidate Starts for Niobe_56:
(Start: 34 @39544 has 5 MA's),

Gene: Nitro_58 Start: 40465, Stop: 40653, Start Num: 34
Candidate Starts for Nitro_58:
(Start: 34 @40465 has 5 MA's),

Gene: NoSleep_75 Start: 47514, Stop: 47687, Start Num: 36
Candidate Starts for NoSleep_75:
(Start: 36 @47514 has 123 MA's), (54, 47565),

Gene: ObiToo_61 Start: 39721, Stop: 39915, Start Num: 37
Candidate Starts for ObiToo_61:
(Start: 37 @39721 has 11 MA's), (70, 39847), (73, 39874),

Gene: OrionPax_73 Start: 47265, Stop: 47438, Start Num: 36
Candidate Starts for OrionPax_73:
(Start: 36 @47265 has 123 MA's), (54, 47316),

Gene: Palpatine_76 Start: 48646, Stop: 48825, Start Num: 36
Candidate Starts for Palpatine_76:
(Start: 36 @48646 has 123 MA's), (54, 48697),

Gene: Paperbeatsrock_73 Start: 47891, Stop: 48064, Start Num: 36
Candidate Starts for Paperbeatsrock_73:
(Start: 36 @47891 has 123 MA's), (54, 47942),

Gene: Pat3_72 Start: 46423, Stop: 46596, Start Num: 36
Candidate Starts for Pat3_72:

(Start: 36 @46423 has 123 MA's), (54, 46474),

Gene: Patelgo_99 Start: 68817, Stop: 69002, Start Num: 44

Candidate Starts for Patelgo_99:

(Start: 44 @68817 has 7 MA's), (65, 68889),

Gene: Percival_38 Start: 26610, Stop: 26855, Start Num: 23

Candidate Starts for Percival_38:

(Start: 23 @26610 has 4 MA's),

Gene: Petra64142_78 Start: 49110, Stop: 49283, Start Num: 36

Candidate Starts for Petra64142_78:

(Start: 36 @49110 has 123 MA's), (54, 49161),

Gene: Phaja_72 Start: 47717, Stop: 47890, Start Num: 36

Candidate Starts for Phaja_72:

(Start: 36 @47717 has 123 MA's), (54, 47768),

Gene: Pharsalus_71 Start: 47691, Stop: 47864, Start Num: 36

Candidate Starts for Pharsalus_71:

(Start: 36 @47691 has 123 MA's), (54, 47742),

Gene: PhatBacter_78 Start: 48663, Stop: 48842, Start Num: 36

Candidate Starts for PhatBacter_78:

(Start: 36 @48663 has 123 MA's), (54, 48714),

Gene: Phaux_76 Start: 48658, Stop: 48837, Start Num: 36

Candidate Starts for Phaux_76:

(Start: 36 @48658 has 123 MA's), (54, 48709),

Gene: Phives_59 Start: 40511, Stop: 40693, Start Num: 33

Candidate Starts for Phives_59:

(5, 40142), (Start: 33 @40511 has 14 MA's),

Gene: Phredrick_100 Start: 66672, Stop: 66857, Start Num: 43

Candidate Starts for Phredrick_100:

(Start: 43 @66672 has 11 MA's),

Gene: Phrux_71 Start: 47254, Stop: 47433, Start Num: 36

Candidate Starts for Phrux_71:

(Start: 36 @47254 has 123 MA's), (54, 47305),

Gene: Pixelle_57 Start: 40947, Stop: 41132, Start Num: 33

Candidate Starts for Pixelle_57:

(6, 40599), (Start: 33 @40947 has 14 MA's),

Gene: Policronamos_78 Start: 48658, Stop: 48837, Start Num: 36

Candidate Starts for Policronamos_78:

(Start: 36 @48658 has 123 MA's), (54, 48709),

Gene: Porky_73 Start: 47084, Stop: 47257, Start Num: 36

Candidate Starts for Porky_73:

(Start: 36 @47084 has 123 MA's), (54, 47135),

Gene: Powerpuff_57 Start: 39483, Stop: 39683, Start Num: 32
Candidate Starts for Powerpuff_57:
(Start: 32 @39483 has 7 MA's), (70, 39615),

Gene: Pumpkin_77 Start: 48312, Stop: 48491, Start Num: 36
Candidate Starts for Pumpkin_77:
(Start: 36 @48312 has 123 MA's), (54, 48363),

Gene: Pumpkins_54 Start: 39127, Stop: 39321, Start Num: 37
Candidate Starts for Pumpkins_54:
(Start: 37 @39127 has 11 MA's),

Gene: Quallification_75 Start: 48299, Stop: 48472, Start Num: 36
Candidate Starts for Quallification_75:
(Start: 36 @48299 has 123 MA's), (54, 48350),

Gene: Rakim_75 Start: 47768, Stop: 47947, Start Num: 36
Candidate Starts for Rakim_75:
(Start: 36 @47768 has 123 MA's), (54, 47819),

Gene: Reedo_54 Start: 36267, Stop: 36416, Start Num: 45
Candidate Starts for Reedo_54:
(Start: 45 @36267 has 7 MA's), (67, 36342),

Gene: Rimmer_75 Start: 48004, Stop: 48177, Start Num: 36
Candidate Starts for Rimmer_75:
(Start: 36 @48004 has 123 MA's), (54, 48055),

Gene: RiverMonster_74 Start: 47832, Stop: 48011, Start Num: 36
Candidate Starts for RiverMonster_74:
(Start: 36 @47832 has 123 MA's), (54, 47883),

Gene: Saints25_73 Start: 47242, Stop: 47415, Start Num: 36
Candidate Starts for Saints25_73:
(Start: 36 @47242 has 123 MA's), (54, 47293),

Gene: Sassay_69 Start: 45932, Stop: 46111, Start Num: 36
Candidate Starts for Sassay_69:
(Start: 36 @45932 has 123 MA's), (54, 45983),

Gene: ShakeltOph_62 Start: 40141, Stop: 40287, Start Num: 45
Candidate Starts for ShakeltOph_62:
(Start: 45 @40141 has 7 MA's), (67, 40219),

Gene: ShamWow_74 Start: 48154, Stop: 48327, Start Num: 36
Candidate Starts for ShamWow_74:
(Start: 36 @48154 has 123 MA's), (54, 48205),

Gene: ShereKhan_73 Start: 48223, Stop: 48396, Start Num: 36
Candidate Starts for ShereKhan_73:
(Start: 36 @48223 has 123 MA's), (54, 48274),

Gene: Sidious_47 Start: 36440, Stop: 36616, Start Num: 39
Candidate Starts for Sidious_47:
(Start: 39 @36440 has 2 MA's), (66, 36527),

Gene: Simpliphy_73 Start: 47232, Stop: 47405, Start Num: 36
Candidate Starts for Simpliphy_73:
(Start: 36 @47232 has 123 MA's), (54, 47283),

Gene: Simpson_57 Start: 38386, Stop: 38586, Start Num: 32
Candidate Starts for Simpson_57:
(2, 37837), (Start: 32 @38386 has 7 MA's), (70, 38518),

Gene: SirDuracell_73 Start: 46518, Stop: 46691, Start Num: 36
Candidate Starts for SirDuracell_73:
(Start: 36 @46518 has 123 MA's), (54, 46569),

Gene: Snek_57 Start: 37403, Stop: 37558, Start Num: 45
Candidate Starts for Snek_57:
(Start: 45 @37403 has 7 MA's), (74, 37541),

Gene: Soondubu_51 Start: 41018, Stop: 41170, Start Num: 48
Candidate Starts for Soondubu_51:
(Start: 48 @41018 has 1 MA's), (62, 41060), (74, 41150),

Gene: SophKB_71 Start: 46910, Stop: 47083, Start Num: 36
Candidate Starts for SophKB_71:
(Start: 36 @46910 has 123 MA's), (54, 46961),

Gene: Sotrice96_75 Start: 47913, Stop: 48086, Start Num: 36
Candidate Starts for Sotrice96_75:
(Start: 36 @47913 has 123 MA's), (54, 47964),

Gene: SparkleGoddess_99 Start: 68222, Stop: 68407, Start Num: 44
Candidate Starts for SparkleGoddess_99:
(Start: 44 @68222 has 7 MA's), (65, 68294),

Gene: Stank_77 Start: 48171, Stop: 48344, Start Num: 36
Candidate Starts for Stank_77:
(Start: 36 @48171 has 123 MA's), (54, 48222),

Gene: Stark_75 Start: 47715, Stop: 47894, Start Num: 36
Candidate Starts for Stark_75:
(Start: 36 @47715 has 123 MA's), (54, 47766),

Gene: StellaBean_72 Start: 47478, Stop: 47651, Start Num: 36
Candidate Starts for StellaBean_72:
(Start: 36 @47478 has 123 MA's), (54, 47529),

Gene: Stigma_98 Start: 68230, Stop: 68415, Start Num: 44
Candidate Starts for Stigma_98:
(Start: 44 @68230 has 7 MA's), (65, 68302),

Gene: StolenFromERC_77 Start: 47953, Stop: 48126, Start Num: 36

Candidate Starts for StolenFromERC_77:
(Start: 36 @47953 has 123 MA's), (54, 48004),

Gene: Strobilo_52 Start: 38583, Stop: 38792, Start Num: 31
Candidate Starts for Strobilo_52:
(Start: 31 @38583 has 10 MA's), (38, 38595), (52, 38646), (58, 38667), (63, 38679), (65, 38694), (67, 38709), (69, 38721),

Gene: SuMoo_35 Start: 24005, Stop: 24241, Start Num: 25
Candidate Starts for SuMoo_35:
(Start: 25 @24005 has 2 MA's),

Gene: Sue2_54 Start: 38086, Stop: 38286, Start Num: 28
Candidate Starts for Sue2_54:
(10, 37828), (Start: 28 @38086 has 1 MA's), (42, 38131), (Start: 48 @38143 has 1 MA's),

Gene: TBrady12_77 Start: 47652, Stop: 47825, Start Num: 36
Candidate Starts for TBrady12_77:
(Start: 36 @47652 has 123 MA's), (54, 47703),

Gene: TM4_47 Start: 32969, Stop: 33172, Start Num: 31
Candidate Starts for TM4_47:
(Start: 31 @32969 has 10 MA's), (38, 32981), (52, 33026), (58, 33047), (63, 33059), (65, 33074), (67, 33089), (69, 33101),

Gene: Tallboi_56 Start: 39686, Stop: 39874, Start Num: 32
Candidate Starts for Tallboi_56:
(Start: 32 @39686 has 7 MA's),

Gene: Tarkin_73 Start: 47900, Stop: 48073, Start Num: 36
Candidate Starts for Tarkin_73:
(Start: 36 @47900 has 123 MA's), (54, 47951),

Gene: Tbone_55 Start: 38934, Stop: 39128, Start Num: 37
Candidate Starts for Tbone_55:
(Start: 37 @38934 has 11 MA's), (70, 39060),

Gene: TeardropMSU_70 Start: 46900, Stop: 47073, Start Num: 36
Candidate Starts for TeardropMSU_70:
(Start: 36 @46900 has 123 MA's), (54, 46951),

Gene: Teaspoon_75 Start: 47794, Stop: 47967, Start Num: 36
Candidate Starts for Teaspoon_75:
(Start: 36 @47794 has 123 MA's), (54, 47845),

Gene: Terminus_77 Start: 48687, Stop: 48866, Start Num: 36
Candidate Starts for Terminus_77:
(Start: 36 @48687 has 123 MA's), (54, 48738),

Gene: TforTroy_57 Start: 39052, Stop: 39246, Start Num: 37
Candidate Starts for TforTroy_57:
(12, 38854), (Start: 37 @39052 has 11 MA's), (70, 39178),

Gene: Thresher_76 Start: 48774, Stop: 48953, Start Num: 36
Candidate Starts for Thresher_76:
(Start: 36 @48774 has 123 MA's), (54, 48825),

Gene: Tian_56 Start: 40845, Stop: 41030, Start Num: 33
Candidate Starts for Tian_56:
(Start: 33 @40845 has 14 MA's),

Gene: Tomaszewski_69 Start: 47063, Stop: 47236, Start Num: 36
Candidate Starts for Tomaszewski_69:
(Start: 36 @47063 has 123 MA's), (54, 47114),

Gene: Toto_72 Start: 48154, Stop: 48327, Start Num: 36
Candidate Starts for Toto_72:
(Start: 36 @48154 has 123 MA's), (54, 48205),

Gene: Traaww1_70 Start: 47338, Stop: 47511, Start Num: 36
Candidate Starts for Traaww1_70:
(Start: 36 @47338 has 123 MA's), (54, 47389),

Gene: Trina_197 Start: 106567, Stop: 106749, Start Num: 41
Candidate Starts for Trina_197:
(Start: 41 @106567 has 3 MA's), (51, 106591), (63, 106627), (65, 106642), (74, 106720),

Gene: Tuck_58 Start: 40300, Stop: 40482, Start Num: 33
Candidate Starts for Tuck_58:
(Start: 33 @40300 has 14 MA's),

Gene: Tuco_75 Start: 48662, Stop: 48835, Start Num: 36
Candidate Starts for Tuco_75:
(Start: 36 @48662 has 123 MA's), (54, 48713),

Gene: Turab_53 Start: 37635, Stop: 37826, Start Num: 32
Candidate Starts for Turab_53:
(7, 37329), (Start: 32 @37635 has 7 MA's),

Gene: Tutumahutu_56 Start: 38356, Stop: 38553, Start Num: 33
Candidate Starts for Tutumahutu_56:
(Start: 33 @38356 has 14 MA's), (70, 38485),

Gene: Tweety19_58 Start: 37403, Stop: 37558, Start Num: 45
Candidate Starts for Tweety19_58:
(Start: 45 @37403 has 7 MA's), (74, 37541),

Gene: Ukulele_69 Start: 47045, Stop: 47218, Start Num: 36
Candidate Starts for Ukulele_69:
(Start: 36 @47045 has 123 MA's), (54, 47096),

Gene: UtzChips_35 Start: 24664, Stop: 24909, Start Num: 24
Candidate Starts for UtzChips_35:
(13, 24550), (Start: 24 @24664 has 5 MA's), (71, 24841),

Gene: VResidence_55 Start: 37492, Stop: 37677, Start Num: 33

Candidate Starts for VResidence_55:

(Start: 33 @37492 has 14 MA's),

Gene: VroomVroom_56 Start: 39271, Stop: 39462, Start Num: 29

Candidate Starts for VroomVroom_56:

(4, 38755), (9, 39007), (19, 39190), (Start: 29 @39271 has 1 MA's), (Start: 45 @39316 has 7 MA's), (67, 39394), (72, 39427),

Gene: Warda_56 Start: 38671, Stop: 38853, Start Num: 33

Candidate Starts for Warda_56:

(Start: 33 @38671 has 14 MA's),

Gene: WaterT_74 Start: 43421, Stop: 43254, Start Num: 41

Candidate Starts for WaterT_74:

(22, 43508), (Start: 41 @43421 has 3 MA's), (53, 43391), (55, 43382), (69, 43319), (73, 43289), (74, 43268),

Gene: Wiggin_76 Start: 47739, Stop: 47912, Start Num: 36

Candidate Starts for Wiggin_76:

(Start: 36 @47739 has 123 MA's), (54, 47790),

Gene: Wildwest_53 Start: 38260, Stop: 38493, Start Num: 20

Candidate Starts for Wildwest_53:

(Start: 20 @38260 has 1 MA's),

Gene: Willez_69 Start: 45932, Stop: 46111, Start Num: 36

Candidate Starts for Willez_69:

(Start: 36 @45932 has 123 MA's), (54, 45983),

Gene: Xandras_73 Start: 47147, Stop: 47326, Start Num: 36

Candidate Starts for Xandras_73:

(Start: 36 @47147 has 123 MA's), (54, 47198),

Gene: Yang_57 Start: 39052, Stop: 39246, Start Num: 37

Candidate Starts for Yang_57:

(Start: 37 @39052 has 11 MA's), (74, 39226),

Gene: YassJohnny_71 Start: 47102, Stop: 47275, Start Num: 36

Candidate Starts for YassJohnny_71:

(Start: 36 @47102 has 123 MA's), (54, 47153),

Gene: YesChef_55 Start: 38342, Stop: 38542, Start Num: 32

Candidate Starts for YesChef_55:

(Start: 32 @38342 has 7 MA's), (70, 38474),

Gene: Youngblood_77 Start: 48614, Stop: 48793, Start Num: 36

Candidate Starts for Youngblood_77:

(Start: 36 @48614 has 123 MA's), (54, 48665),

Gene: ZoeJ_51 Start: 38060, Stop: 38263, Start Num: 31

Candidate Starts for ZoeJ_51:

(Start: 31 @38060 has 10 MA's), (38, 38072), (52, 38117), (58, 38138), (63, 38150), (65, 38165), (67, 38180),

Gene: xkcd_77 Start: 48804, Stop: 48977, Start Num: 36
Candidate Starts for xkcd_77:
(Start: 36 @48804 has 123 MA's), (54, 48855),