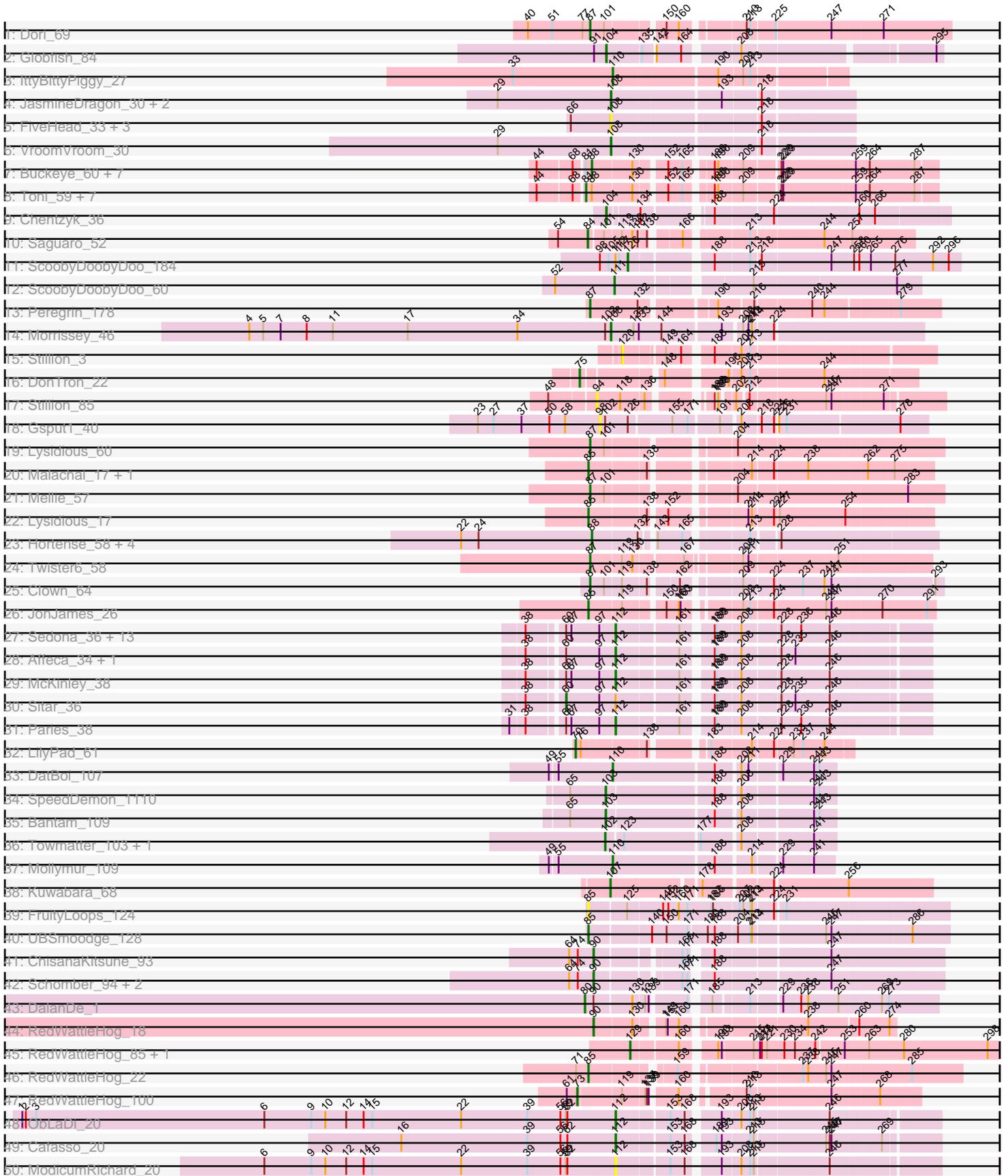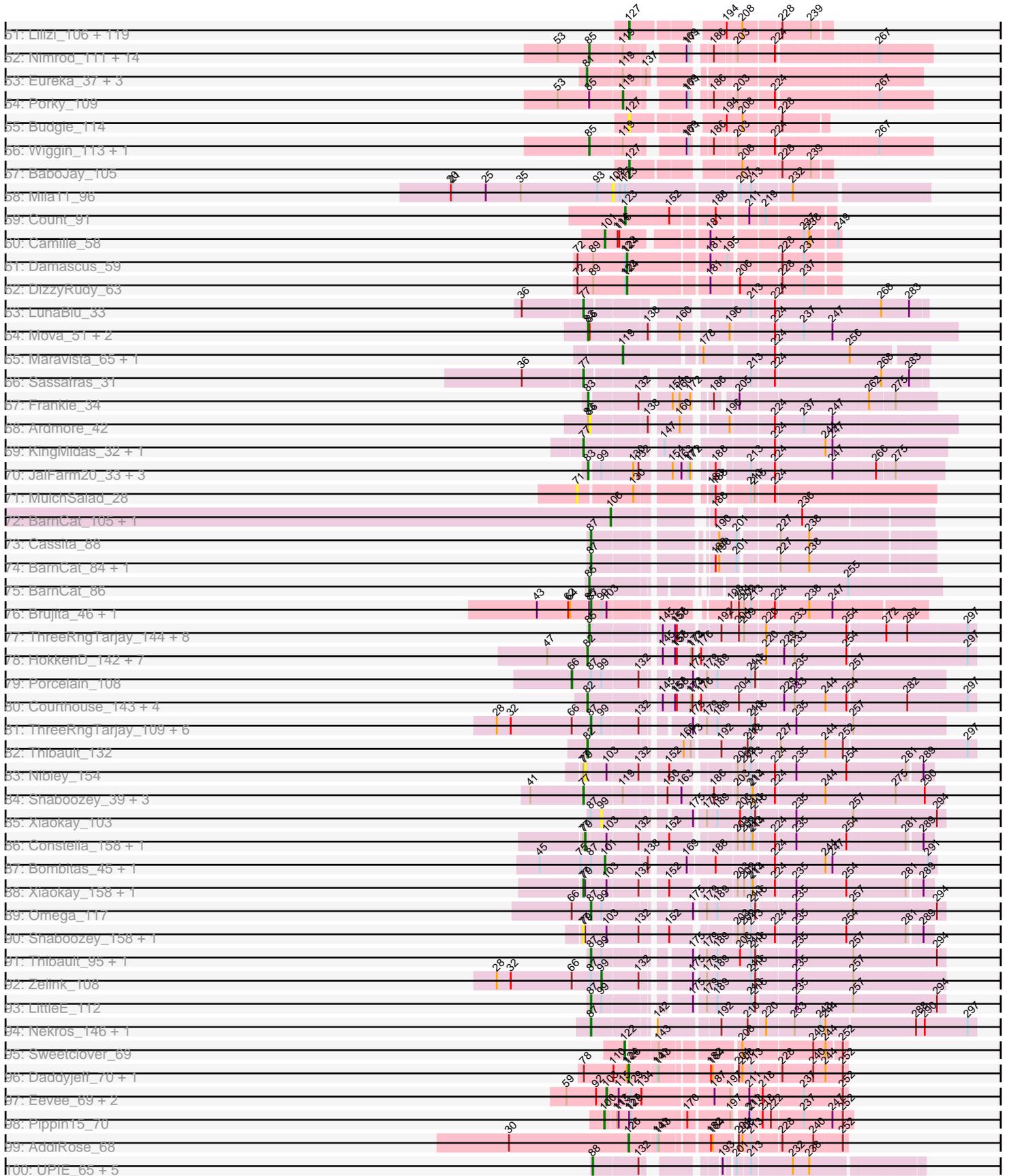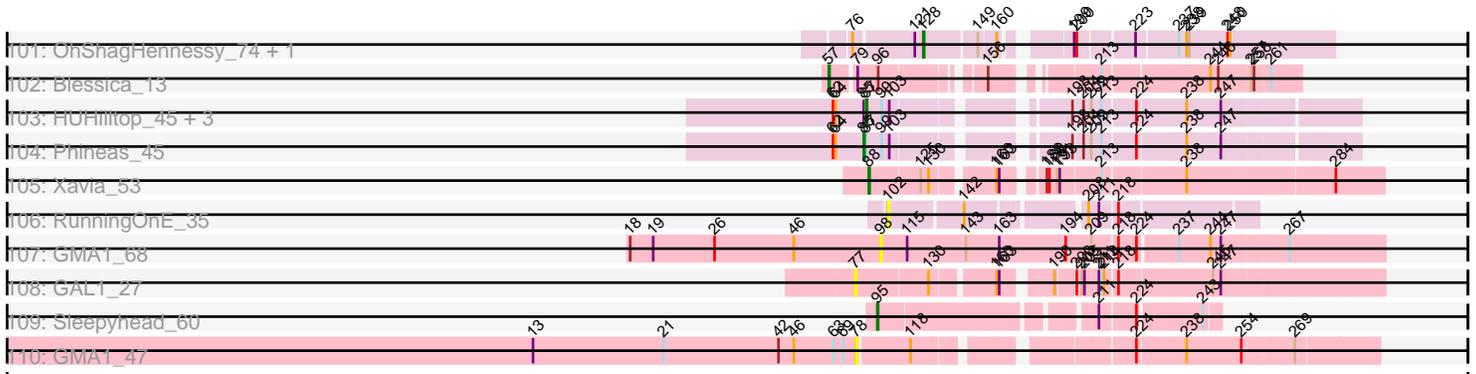# Pham 283402

Pham 283402

Pham 283402

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 283402 Report

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

Pham number 283402 has 345 members, 33 are drafts.

Phages represented in each track:
• Track 1 : Dori_69
• Track 2 : Globfish_84
• Track 3 : IttyBittyPiggy_27
• Track 4 : JasmineDragon_30, MiniMommy_29, ShakeItOph_30
• Track 5 : FiveHead_33, LadyAstra_31, Origami_31, JohnThicc_32
• Track 6 : VroomVroom_30
• Track 7 : Buckeye_60, Mesmerelda_59, Lopsy_58, KingTut_52, Matalotodo_59, Podrick_58, LeiMonet_62, Adriana_61
• Track 8 : Toni_59, Coletti_62, LostAndPhound_60, Jesabah_61, FugateOSU_60, Placalicious_60, Happabalu_60, Orfeu_58
• Track 9 : Chentzyk_36
• Track 10 : Saguaro_52
• Track 11 : ScoobyDoobyDoo_184
• Track 12 : ScoobyDoobyDoo_60
• Track 13 : Peregrin_178
• Track 14 : Morrissey_46
• Track 15 : Stillion_3
• Track 16 : DonTron_22
• Track 17 : Stillion_85
• Track 18 : Gsput1_40
• Track 19 : Lysidious_60
• Track 20 : Malachai_17, Begonia_17
• Track 21 : Mellie_57
• Track 22 : Lysidious_17
• Track 23 : Hortense_58, Twinkle_57, Adora_55, Shlim410_56, Howe_58
• Track 24 : Twister6_58
• Track 25 : Clown_64
• Track 26 : JonJames_26
• Track 27 : Sedona_36, Angelicage_34, BobBob_33, Brandonk123_37, McCrothy_36, Nordenberg_30, Charming_36, Tangent_36, Rofo_36, Bibwit_35, Love_39, Fosterous_34, Galadriel_36, Vivi2_38
• Track 28 : Affeca_34, Lennon_36
• Track 29 : McKinley_38
• Track 30 : Sitar_36
• Track 31 : Paries_38
• Track 32 : LilyPad_61
• Track 33 : DatBoi_107

- Track 34 : SpeedDemon_1110
- Track 35 : Bantam_109
- Track 36 : Towmatter_103, Daredevil_104
- Track 37 : Mollymur_109
- Track 38 : Kuwabara_68
- Track 39 : FruityLoops_124
- Track 40 : UBSmoodge_128
- Track 41 : ChisanaKitsune_93
- Track 42 : Schomber_94, Chidiebere_96, Kabocha_97
- Track 43 : DalanDe_1
- Track 44 : RedWattleHog_18
- Track 45 : RedWattleHog_85, Stormageddon_82
- Track 46 : RedWattleHog_22
- Track 47 : RedWattleHog_100
- Track 48 : ObLaDi_20
- Track 49 : Cafasso_20
- Track 50 : ModicumRichard_20
- Track 51 : Lilizi_106, Glexan_105, Nimrod_106, Moldemort_108, ShamWow_106, Emmina_106, RiverMonster_105, Contagion_102, Adnama_110, Misfit_107, SirDuracell_106, StolenFromERC_108, Bruin_103, Manda_107, GoldenSpark_110, Harella_106, NelitzaMV_103, Terminus_109, DoctorDiddles_105, 244_106, Gator_104, Hoonter_109, Easy2Say_106, Flypotenuse_102, FireRed_109, Dusk_103, Balomoji_106, Tuco_107, StellaBean_105, Pharsalus_103, Filch_107, GooberAzure_109, Eureka_105, Porky_104, Simpliphy_104, Inca_103, Hopey_106, Nala_108, Traaww1_102, Phaja_104, Cookies_103, Sassay_101, Phaux_108, Mindy_105, Pumpkin_107, ChotaBhai_106, Barbarian_105, OrionPax_104, ABCat_103, Cactus_110, Gemini_111, Goldilocks_109, MPhalcon_107, Rimmer_104, HufflyPuff_108, Elph10_105, ShereKhan_104, Willez_101, Goku_105, Icee_107, Tomaszewski_101, TBrady12_109, Murica_109, Murphy_105, Paperbeatsrock_105, Stark_106, Teaspoon_106, HanKaySha_106, Tarkin_105, Elite2014_105, Command613_108, Gage_108, CrystalP_105, Ukulele_100, Maxxinista_107, Saints25_102, Lilac_107, Thresher_107, Thimble_108, Highbury_102, Mosby_102, NoSleep_106, Kanye_103, Miniwave_101, IHOP_104, Bench_108, JeTaime_104, Lilpickle_105, DrDrey_106, Kimchi_110, Cjw1_106, Pat3_103, Henry_103, Toto_104, PhatBacter_109, ChosenOne_106, Kostya_106, Dumbo_105, Wiggin_108, Bask21_106, xkcd_109, TeardropMSU_102, Buck_107, YassJohnny_103, Sotrice96_107, BadStone_103, Asriel_104, Youngblood_109, Argent26_110, Phrux_102, Czyszczon1_106, SophKB_104, MISSy_107, BigBubba_106, Stank_108, Myrale_106, Marshmallow_103, MadamMonkfish_105, Holt_111, Rakim_107
- Track 52 : Nimrod_111, Icee_112, Goku_110, Teaspoon_111, Stank_113, BigBubba_112, Goldilocks_114, JeTaime_109, Kimchi_115, TBrady12_114, 244_112, BaboJay_110, Filch_113, Xandras_110, Holt_116
- Track 53 : Eureka_37, Bogg_37, BaboJay_36, Goku_37
- Track 54 : Porky_109
- Track 55 : Budgie_114
- Track 56 : Wiggin_113, Marshmallow_109
- Track 57 : BaboJay_105
- Track 58 : Mila11_96
- Track 59 : Count_91
- Track 60 : Camille_58
- Track 61 : Damascus_59
- Track 62 : DizzyRudy_63

- Track 63 : LunaBlu_33
- Track 64 : Mova_51, Bobi_53, Mutaforma13_54
- Track 65 : Maravista_65, Pippy_62
- Track 66 : Sassafras_31
- Track 67 : Frankie_34
- Track 68 : Ardmore_42
- Track 69 : KingMidas_32, Leozinho_32
- Track 70 : JalFarm20_33, NewHope4_33, Coco12_30, Starcevich_34
- Track 71 : MulchSalad_28
- Track 72 : BarnCat_105, LeeroyJenkins_114
- Track 73 : Cassita_88
- Track 74 : BarnCat_84, LeeroyJenkins_94
- Track 75 : BarnCat_86
- Track 76 : Brujita_46, Island3_46
- Track 77 : ThreeRngTarjay_144, Dove_135, Minerva_148, Bobby_139, Phoebus_149, Zelink_143, Kalah2_140, Hughesyang_148, Wanda_148
- Track 78 : HokkenD_142, EricMillard_142, Bagrid_151, Klein_147, Optimus_141, Duke13_146, BAKA_150, Gonephishing_141
- Track 79 : Porcelain_108
- Track 80 : Courthouse_143, Beem_151, Hannaconda_141, Superphikiman_145, Ariel_147
- Track 81 : ThreeRngTarjay_109, Phoebus_113, Dallas_113, EricMillard_105, Kalah2_105, Hughesyang_111, DmpstrDiver_113
- Track 82 : Thibault_132
- Track 83 : Nibley_154
- Track 84 : Shaboozey_39, Hannaconda_43, KashFlow_40, BronnyJames_39
- Track 85 : Xiaokay_103
- Track 86 : Constella_158, Hidrated_155
- Track 87 : Bombitas_45, Pound_50
- Track 88 : Xiaokay_158, Minerva_162
- Track 89 : Omega_117
- Track 90 : Shaboozey_158, BronnyJames_155
- Track 91 : Thibault_95, Constella_97
- Track 92 : Zelink_108
- Track 93 : LittleE_112
- Track 94 : Nekros_146, KashFlow_148
- Track 95 : Sweetclover_69
- Track 96 : Daddyjeff_70, Serenabean_69
- Track 97 : Eevee_69, Yotsuba_69, JoyLin_69
- Track 98 : Pippin15_70
- Track 99 : AddiRose_68
- Track 100 : UPIE_65, Poochiewood_65, Rose5_65, Enceladus_63, Wamburgrxpress_65, JoeDirt_64
- Track 101 : OhShagHennessy_74, JoeDirt_76
- Track 102 : Blessica_13
- Track 103 : HUHilltop_45, Pygmy_47, Shipwreck_47, Bogie_47
- Track 104 : Phineas_45
- Track 105 : Xavia_53
- Track 106 : RunningOnE_35
- Track 107 : GMA1_68
- Track 108 : GAL1_27
- Track 109 : Sleepyhead_60
- Track 110 : GMA1_47

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

The start number called the most often in the published annotations is 127, it was called in 121 of the 312 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 244_106, ABCat_103, Adnama_110, Argent26_110, Asriel_104, BaboJay_105, BadStone_103, Balomoji_106, Barbarian_105, Bask21_106, Bench_108, BigBubba_106, Bruin_103, Buck_107, Budgie_114, Cactus_110, ChosenOne_106, ChotaBhai_106, Cjw1_106, Command613_108, Contagion_102, Cookies_103, CrystalP_105, Czyszczon1_106, DoctorDiddles_105, DrDrey_106, Dumbo_105, Dusk_103, Easy2Say_106, Elite2014_105, Elph10_105, Emmina_106, Eureka_105, Filch_107, FireRed_109, Flypotenuse_102, Gage_108, Gator_104, Gemini_111, Glexan_105, Goku_105, GoldenSpark_110, Goldilocks_109, GooberAzure_109, HanKaySha_106, Harella_106, Henry_103, Highbury_102, Holt_111, Hoonter_109, Hopey_106, HufflyPuff_108, IHOP_104, Icee_107, Inca_103, JeTaime_104, Kanye_103, Kimchi_110, Kostya_106, Lilac_107, Lilizi_106, Lilpickle_105, MISSy_107, MPhalcon_107, MadamMonkfish_105, Manda_107, Marshmallow_103, Maxxinista_107, Mindy_105, Miniwave_101, Misfit_107, Moldemort_108, Mosby_102, Murica_109, Murphy_105, Myrale_106, Nala_108, NelitzaMV_103, Nimrod_106, NoSleep_106, OrionPax_104, Paperbeatsrock_105, Pat3_103, Phaja_104, Pharsalus_103, PhatBacter_109, Phaux_108, Phrux_102, Porky_104, Pumpkin_107, Rakim_107, Rimmer_104, RiverMonster_105, Saints25_102, Sassay_101, ShamWow_106, ShereKhan_104, Simpliphy_104, SirDuracell_106, SophKB_104, Sotrice96_107, Stank_108, Stark_106, StellaBean_105, StolenFromERC_108, TBrady12_109, Tarkin_105, TeardropMSU_102, Teaspoon_106, Terminus_109, Thimble_108, Thresher_107, Tomaszewski_101, Toto_104, Traaww1_102, Tuco_107, Ukulele_100, Wiggin_108, Willez_101, YassJohnny_103, Youngblood_109, xkcd_109,

Genes that have the "Most Annotated" start but do not call it:
• Pippin15_70,

Genes that do not have the "Most Annotated" start:
• 244_112, AddiRose_68, Adora_55, Adriana_61, Affeca_34, Angelicage_34, Ardmore_42, Ariel_147, BAKA_150, BaboJay_110, BaboJay_36, Bagrid_151, Bantam_109, BarnCat_105, BarnCat_84, BarnCat_86, Beem_151, Begonia_17, Bibwit_35, BigBubba_112, Blessica_13, BobBob_33, Bobby_139, Bobi_53, Bogg_37, Bogie_47, Bombitas_45, Brandonk123_37, BronnyJames_155, BronnyJames_39, Brujita_46, Buckeye_60, Cafasso_20, Camille_58, Cassita_88, Charming_36, Chentzyk_36, Chidiebere_96, ChisanaKitsune_93, Clown_64, Coco12_30, Coletti_62, Constella_158, Constella_97, Count_91, Courthouse_143, Daddyjeff_70, DalanDe_1, Dallas_113, Damascus_59, Daredevil_104, DatBoi_107, DizzyRudy_63, DmpstrDiver_113, DonTron_22, Dori_69, Dove_135, Duke13_146, Eevee_69, Enceladus_63, EricMillard_105, EricMillard_142, Eureka_37, Filch_113, FiveHead_33, Fosterous_34, Frankie_34, FruityLoops_124, FugateOSU_60, GAL1_27, GMA1_47, GMA1_68, Galadriel_36, Globfish_84, Goku_110, Goku_37, Goldilocks_114, Gonephishing_141, Gsput1_40, HUHilltop_45, Hannaconda_141, Hannaconda_43, Happabalu_60, Hidrated_155, HokkenD_142, Holt_116,

Hortense_58, Howe_58, Hughesyang_111, Hughesyang_148, Icee_112, Island3_46, IttyBittyPiggy_27, JalFarm20_33, JasmineDragon_30, JeTaime_109, Jesabah_61, JoeDirt_64, JoeDirt_76, JohnThicc_32, JonJames_26, JoyLin_69, Kabocha_97, Kalah2_105, Kalah2_140, KashFlow_148, KashFlow_40, Kimchi_115, KingMidas_32, KingTut_52, Klein_147, Kuwabara_68, LadyAstra_31, LeeroyJenkins_114, LeeroyJenkins_94, LeiMonet_62, Lennon_36, Leozinho_32, LilyPad_61, LittleE_112, Lopsy_58, LostAndPhound_60, Love_39, LunaBlu_33, Lysidious_17, Lysidious_60, Malachai_17, Maravista_65, Marshmallow_109, Matalotodo_59, McCrothy_36, McKinley_38, Mellie_57, Mesmerelda_59, Mila11_96, Minerva_148, Minerva_162, MiniMommy_29, ModicumRichard_20, Mollymur_109, Morrissey_46, Mova_51, MulchSalad_28, Mutaforma13_54, Nekros_146, NewHope4_33, Nibley_154, Nimrod_111, Nordenberg_30, ObLaDi_20, OhShagHennessy_74, Omega_117, Optimus_141, Orfeu_58, Origami_31, Paries_38, Peregrin_178, Phineas_45, Phoebus_113, Phoebus_149, Pippy_62, Placalicious_60, Podrick_58, Poochiewood_65, Porcelain_108, Porky_109, Pound_50, Pygmy_47, RedWattleHog_100, RedWattleHog_18, RedWattleHog_22, RedWattleHog_85, Rofo_36, Rose5_65, RunningOnE_35, Saguaro_52, Sassafras_31, Schomber_94, ScoobyDoobyDoo_184, ScoobyDoobyDoo_60, Sedona_36, Serenabean_69, Shaboozey_158, Shaboozey_39, ShakeItOph_30, Shipwreck_47, Shlim410_56, Sitar_36, Sleepyhead_60, SpeedDemon_1110, Stank_113, Starcevich_34, Stillion_3, Stillion_85, Stormageddon_82, Superphikiman_145, Sweetclover_69, TBrady12_114, Tangent_36, Teaspoon_111, Thibault_132, Thibault_95, ThreeRngTarjay_109, ThreeRngTarjay_144, Toni_59, Towmatter_103, Twinkle_57, Twister6_58, UBSmoodge_128, UPIE_65, Vivi2_38, VroomVroom_30, Wamburgrxpress_65, Wanda_148, Wiggin_113, Xandras_110, Xavia_53, Xiaokay_103, Xiaokay_158, Yotsuba_69, Zelink_108, Zelink_143,

Summary by start number:

Start 57:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Blessica_13 (O),

Start 60:
• Found in 19 of 345 (5.5%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 5.3% of time when present
• Phage (with cluster) where this start called: Sitar_36 (DE1),

Start 66:
• Found in 14 of 345 (4.1%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 7.1% of time when present
• Phage (with cluster) where this start called: Porcelain_108 (J),

Start 70:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LilyPad_61 (DG1),

Start 71:
• Found in 2 of 345 (0.6%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: MulchSalad_28 (F7),

Start 73:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: RedWattleHog_100 (DX),

Start 75:
• Found in 3 of 345 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 33.3% of time when present
• Phage (with cluster) where this start called: DonTron_22 (CP),

Start 77:
• Found in 17 of 345 (4.9%) of genes in pham
• Manual Annotations of this start: 7 of 312
• Called 76.5% of time when present
• Phage (with cluster) where this start called: BronnyJames_155 (J), BronnyJames_39
(J), GAL1_27 (singleton), Hannaconda_43 (J), KashFlow_40 (J), KingMidas_32 (F1),
Leozinho_32 (F1), LunaBlu_33 (F1), Minerva_162 (J), Sassafras_31 (F1),
Shaboozey_158 (J), Shaboozey_39 (J), Xiaokay_158 (J),

Start 78:
• Found in 3 of 345 (0.9%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: GMA1_47 (singleton),

Start 79:
• Found in 8 of 345 (2.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Constella_158 (J), Hidrated_155 (J),
Nibley_154 (J),

Start 80:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DalanDe_1 (DQ),

Start 81:
• Found in 20 of 345 (5.8%) of genes in pham
• Manual Annotations of this start: 10 of 312
• Called 60.0% of time when present
• Phage (with cluster) where this start called: BaboJay_36 (E), Bogg_37 (E),
Coletti_62 (B1), Eureka_37 (E), FugateOSU_60 (B1), Goku_37 (E), Happabalu_60
(B1), Jesabah_61 (B1), LostAndPhound_60 (B1), Orfeu_58 (B1), Placalicious_60

(B1), Toni_59 (B1),

Start 82:
• Found in 14 of 345 (4.1%) of genes in pham
• Manual Annotations of this start: 12 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_147 (J), BAKA_150 (J), Bagrid_151 (J), Beem_151 (J), Courthouse_143 (J), Duke13_146 (J), EricMillard_142 (J), Gonephishing_141 (J), Hannaconda_141 (J), HokkenD_142 (J), Klein_147 (J), Optimus_141 (J), Superphikiman_145 (J), Thibault_132 (J),

Start 83:
• Found in 9 of 345 (2.6%) of genes in pham
• Manual Annotations of this start: 8 of 312
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Bobi_53 (F1), Coco12_30 (F1), Frankie_34 (F1), JalFarm20_33 (F1), Mova_51 (F1), Mutaforma13_54 (F1), NewHope4_33 (F1), Starcevich_34 (F1),

Start 84:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Saguaro_52 (B7),

Start 85:
• Found in 42 of 345 (12.2%) of genes in pham
• Manual Annotations of this start: 34 of 312
• Called 83.3% of time when present
• Phage (with cluster) where this start called: 244_112 (E), BaboJay_110 (E), BarnCat_86 (GB), Begonia_17 (CV), BigBubba_112 (E), Bobby_139 (J), Dove_135 (J), Filch_113 (E), FruityLoops_124 (DQ), Goku_110 (E), Goldilocks_114 (E), Holt_116 (E), Hughesyang_148 (J), Icee_112 (E), JeTaime_109 (E), JonJames_26 (DD), Kalah2_140 (J), Kimchi_115 (E), Lysidious_17 (CV), Malachai_17 (CV), Marshmallow_109 (E), Minerva_148 (J), Nimrod_111 (E), Phineas_45 (P1), Phoebus_149 (J), RedWattleHog_22 (DX), Stank_113 (E), TBrady12_114 (E), Teaspoon_111 (E), ThreeRngTarjay_144 (J), UBSmoodge_128 (DQ), Wanda_148 (J), Wiggin_113 (E), Xandras_110 (E), Zelink_143 (J),

Start 86:
• Found in 4 of 345 (1.2%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Ardmore_42 (F1),

Start 87:
• Found in 34 of 345 (9.9%) of genes in pham
• Manual Annotations of this start: 27 of 312
• Called 82.4% of time when present
• Phage (with cluster) where this start called: BarnCat_84 (GB), Bogie_47 (P1), Brujita_46 (I1), Cassita_88 (GB), Clown_64 (DC2), Constella_97 (J), Dallas_113 (J), DmpstrDiver_113 (J), Dori_69 (AD), EricMillard_105 (J), HUHilltop_45 (P1), Hughesyang_111 (J), Island3_46 (I1), Kalah2_105 (J), KashFlow_148 (J),

LeeroyJenkins_94 (GB), LittleE_112 (J), Lysidious_60 (CV), Mellie_57 (CV), Nekros_146 (J), Omega_117 (J), Peregrin_178 (CB), Phoebus_113 (J), Pygmy_47 (P1), Shipwreck_47 (P1), Thibault_95 (J), ThreeRngTarjay_109 (J), Twister6_58 (DC1),

Start 88:
• Found in 28 of 345 (8.1%) of genes in pham
• Manual Annotations of this start: 18 of 312
• Called 71.4% of time when present
• Phage (with cluster) where this start called: Adora_55 (CZ4), Adriana_61 (B1), Buckeye_60 (B1), Enceladus_63 (L1), Hortense_58 (CZ4), Howe_58 (CZ4), JoeDirt_64 (L1), KingTut_52 (B1), LeiMonet_62 (B1), Lopsy_58 (B1), Matalotodo_59 (B1), Mesmerelda_59 (B1), Podrick_58 (B1), Poochiewood_65 (L1), Rose5_65 (L1), Shlim410_56 (CZ4), Twinkle_57 (CZ4), UPIE_65 (L1), Wamburgrxpress_65 (L1), Xavia_53 (P3),

Start 90:
• Found in 6 of 345 (1.7%) of genes in pham
• Manual Annotations of this start: 5 of 312
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Chidiebere_96 (DQ), ChisanaKitsune_93 (DQ), Kabocha_97 (DQ), RedWattleHog_18 (DX), Schomber_94 (DQ),

Start 94:
• Found in 1 of 345 (0.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Stillion_85 (CP),

Start 95:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sleepyhead_60 (singleton),

Start 98:
• Found in 3 of 345 (0.9%) of genes in pham
• No Manual Annotations of this start.
• Called 66.7% of time when present
• Phage (with cluster) where this start called: GMA1_68 (singleton), Gsput1_40 (CU2),

Start 99:
• Found in 25 of 345 (7.2%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 8.0% of time when present
• Phage (with cluster) where this start called: Xiaokay_103 (J), Zelink_108 (J),

Start 100:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pippin15_70 (JA),

Start 101:
• Found in 8 of 345 (2.3%) of genes in pham
• Manual Annotations of this start: 3 of 312
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Bombitas_45 (J), Camille_58 (EL), Pound_50 (J),

Start 102:
• Found in 5 of 345 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Daredevil_104 (DL), RunningOnE_35 (UNK), Towmatter_103 (DL),

Start 103:
• Found in 19 of 345 (5.5%) of genes in pham
• Manual Annotations of this start: 5 of 312
• Called 26.3% of time when present
• Phage (with cluster) where this start called: Bantam_109 (DL), Eevee_69 (JA), JoyLin_69 (JA), SpeedDemon_1110 (DL), Yotsuba_69 (JA),

Start 104:
• Found in 2 of 345 (0.6%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chentzyk_36 (B3), Globfish_84 (AY),

Start 106:
• Found in 2 of 345 (0.6%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BarnCat_105 (GB), LeeroyJenkins_114 (GB),

Start 107:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kuwabara_68 (DN4),

Start 108:
• Found in 9 of 345 (2.6%) of genes in pham
• Manual Annotations of this start: 5 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: FiveHead_33 (AZ4), JasmineDragon_30 (AZ4), JohnThicc_32 (AZ4), LadyAstra_31 (AZ4), MiniMommy_29 (AZ4), Morrissey_46 (CD), Origami_31 (AZ4), ShakeItOph_30 (AZ4), VroomVroom_30 (AZ4),

Start 109:
• Found in 1 of 345 (0.3%) of genes in pham
• No Manual Annotations of this start.

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mila11_96 (EG),

Start 110:
• Found in 5 of 345 (1.4%) of genes in pham
• Manual Annotations of this start: 3 of 312
• Called 60.0% of time when present
• Phage (with cluster) where this start called: DatBoi_107 (DL), IttyBittyPiggy_27 (AZ1), Mollymur_109 (DL),

Start 111:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ScoobyDoobyDoo_60 (C2),

Start 112:
• Found in 23 of 345 (6.7%) of genes in pham
• Manual Annotations of this start: 19 of 312
• Called 91.3% of time when present
• Phage (with cluster) where this start called: Affeca_34 (DE1), Angelicage_34 (DE1), Bibwit_35 (DE1), BobBob_33 (DE1), Brandonk123_37 (DE1), Cafasso_20 (DZ), Charming_36 (DE1), Fosterous_34 (DE1), Galadriel_36 (DE1), Lennon_36 (DE1), Love_39 (DE1), McCrothy_36 (DE1), McKinley_38 (DE1), ModicumRichard_20 (DZ), Nordenberg_30 (DE1), ObLaDi_20 (DZ), Paries_38 (DE1), Rofo_36 (DE1), Sedona_36 (DE1), Tangent_36 (DE1), Vivi2_38 (DE1),

Start 119:
• Found in 33 of 345 (9.6%) of genes in pham
• Manual Annotations of this start: 3 of 312
• Called 9.1% of time when present
• Phage (with cluster) where this start called: Maravista_65 (F1), Pippy_62 (F1), Porky_109 (E),

Start 120:
• Found in 1 of 345 (0.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Stillion_3 (CP),

Start 122:
• Found in 1 of 345 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sweetclover_69 (JA),

Start 123:
• Found in 6 of 345 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 312
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Count_91 (EL),

Start 124:

• Found in 4 of 345 (1.2%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Damascus_59 (EL), DizzyRudy_63 (EL),

Start 126:
• Found in 5 of 345 (1.4%) of genes in pham
• Manual Annotations of this start: 4 of 312
• Called 80.0% of time when present
• Phage (with cluster) where this start called: AddiRose_68 (JA), Daddyjeff_70 (JA),
ScoobyDoobyDoo_184 (C2), Serenabean_69 (JA),

Start 127:
• Found in 123 of 345 (35.7%) of genes in pham
• Manual Annotations of this start: 121 of 312
• Called 99.2% of time when present
• Phage (with cluster) where this start called: 244_106 (E), ABCat_103 (E),
Adnama_110 (E), Argent26_110 (E), Asriel_104 (E), BaboJay_105 (E),
BadStone_103 (E), Balomoji_106 (E), Barbarian_105 (E), Bask21_106 (E),
Bench_108 (E), BigBubba_106 (E), Bruin_103 (E), Buck_107 (E), Budgie_114 (E),
Cactus_110 (E), ChosenOne_106 (E), ChotaBhai_106 (E), Cjw1_106 (E),
Command613_108 (E), Contagion_102 (E), Cookies_103 (E), CrystalP_105 (E),
Czyszczon1_106 (E), DoctorDiddles_105 (E), DrDrey_106 (E), Dumbo_105 (E),
Dusk_103 (E), Easy2Say_106 (E), Elite2014_105 (E), Elph10_105 (E), Emmina_106
(E), Eureka_105 (E), Filch_107 (E), FireRed_109 (E), Flypotenuse_102 (E),
Gage_108 (E), Gator_104 (E), Gemini_111 (E), Glexan_105 (E), Goku_105 (E),
GoldenSpark_110 (E), Goldilocks_109 (E), GooberAzure_109 (E), HanKaySha_106
(E), Harella_106 (E), Henry_103 (E), Highbury_102 (E), Holt_111 (E), Hoonter_109
(E), Hopey_106 (E), HufflyPuff_108 (E), IHOP_104 (E), Icee_107 (E), Inca_103 (E),
JeTaime_104 (E), Kanye_103 (E), Kimchi_110 (E), Kostya_106 (E), Lilac_107 (E),
Lilizi_106 (E), Lilpickle_105 (E), MISSy_107 (E), MPhalcon_107 (E),
MadamMonkfish_105 (E), Manda_107 (E), Marshmallow_103 (E), Maxxinista_107
(E), Mindy_105 (E), Miniwave_101 (E), Misfit_107 (E), Moldemort_108 (E),
Mosby_102 (E), Murica_109 (E), Murphy_105 (E), Myrale_106 (E), Nala_108 (E),
NelitzaMV_103 (E), Nimrod_106 (E), NoSleep_106 (E), OrionPax_104 (E),
Paperbeatsrock_105 (E), Pat3_103 (E), Phaja_104 (E), Pharsalus_103 (E),
PhatBacter_109 (E), Phaux_108 (E), Phrux_102 (E), Porky_104 (E), Pumpkin_107
(E), Rakim_107 (E), Rimmer_104 (E), RiverMonster_105 (E), Saints25_102 (E),
Sassay_101 (E), ShamWow_106 (E), ShereKhan_104 (E), Simpliphy_104 (E),
SirDuracell_106 (E), SophKB_104 (E), Sotrice96_107 (E), Stank_108 (E), Stark_106
(E), StellaBean_105 (E), StolenFromERC_108 (E), TBrady12_109 (E), Tarkin_105
(E), TeardropMSU_102 (E), Teaspoon_106 (E), Terminus_109 (E), Thimble_108 (E),
Thresher_107 (E), Tomaszewski_101 (E), Toto_104 (E), Traaww1_102 (E),
Tuco_107 (E), Ukulele_100 (E), Wiggin_108 (E), Willez_101 (E), YassJohnny_103
(E), Youngblood_109 (E), xkcd_109 (E),

Start 128:
• Found in 2 of 345 (0.6%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JoeDirt_76 (L1), OhShagHennessy_74
(L1),

Start 129:
• Found in 6 of 345 (1.7%) of genes in pham
• Manual Annotations of this start: 2 of 312
• Called 33.3% of time when present
• Phage (with cluster) where this start called: RedWattleHog_85 (DX), Stormageddon_82 (DX),

Summary by clusters:

There are 39 clusters represented in this pham: DL, P3, DD, singleton, CZ4, DZ, DX, JA, DQ, UNK, CU2, I1, DN4, C2, EL, P1, E, AD, CB, EG, J, O, CD, DG1, GB, L1, AY, CP, DC2, CV, DC1, F1, F7, DE1, B7, B1, B3, AZ1, AZ4,

Info for manual annotations of cluster AD:
•Start number 87 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AY:
•Start number 104 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster AZ1:
•Start number 110 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ4:
•Start number 108 was manually annotated 4 times for cluster AZ4.

Info for manual annotations of cluster B1:
•Start number 81 was manually annotated 7 times for cluster B1.
•Start number 88 was manually annotated 7 times for cluster B1.

Info for manual annotations of cluster B3:
•Start number 104 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B7:
•Start number 84 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster C2:
•Start number 111 was manually annotated 1 time for cluster C2.
•Start number 126 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CB:
•Start number 87 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CD:
•Start number 108 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CP:
•Start number 75 was manually annotated 1 time for cluster CP.

Info for manual annotations of cluster CV:
•Start number 85 was manually annotated 3 times for cluster CV.
•Start number 87 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CZ4:
•Start number 88 was manually annotated 5 times for cluster CZ4.

Info for manual annotations of cluster DC1:
•Start number 87 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DC2:
•Start number 87 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DD:
•Start number 85 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DE1:
•Start number 60 was manually annotated 1 time for cluster DE1.
•Start number 112 was manually annotated 17 times for cluster DE1.

Info for manual annotations of cluster DG1:
•Start number 70 was manually annotated 1 time for cluster DG1.

Info for manual annotations of cluster DL:
•Start number 102 was manually annotated 2 times for cluster DL.
•Start number 103 was manually annotated 2 times for cluster DL.
•Start number 110 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DN4:
•Start number 107 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DQ:
•Start number 80 was manually annotated 1 time for cluster DQ.
•Start number 85 was manually annotated 1 time for cluster DQ.
•Start number 90 was manually annotated 4 times for cluster DQ.

Info for manual annotations of cluster DX:
•Start number 73 was manually annotated 1 time for cluster DX.
•Start number 85 was manually annotated 1 time for cluster DX.
•Start number 90 was manually annotated 1 time for cluster DX.
•Start number 129 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster DZ:
•Start number 112 was manually annotated 2 times for cluster DZ.

Info for manual annotations of cluster E:
•Start number 81 was manually annotated 3 times for cluster E.
•Start number 85 was manually annotated 17 times for cluster E.
•Start number 119 was manually annotated 1 time for cluster E.
•Start number 127 was manually annotated 121 times for cluster E.

Info for manual annotations of cluster EL:
•Start number 101 was manually annotated 1 time for cluster EL.
•Start number 123 was manually annotated 1 time for cluster EL.
•Start number 124 was manually annotated 2 times for cluster EL.

Info for manual annotations of cluster F1:
•Start number 77 was manually annotated 4 times for cluster F1.
•Start number 83 was manually annotated 8 times for cluster F1.
•Start number 119 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster GB:
•Start number 85 was manually annotated 1 time for cluster GB.
•Start number 87 was manually annotated 3 times for cluster GB.
•Start number 106 was manually annotated 2 times for cluster GB.

Info for manual annotations of cluster I1:
•Start number 87 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster J:
•Start number 66 was manually annotated 1 time for cluster J.
•Start number 77 was manually annotated 3 times for cluster J.
•Start number 79 was manually annotated 1 time for cluster J.
•Start number 82 was manually annotated 12 times for cluster J.
•Start number 85 was manually annotated 9 times for cluster J.
•Start number 87 was manually annotated 12 times for cluster J.
•Start number 99 was manually annotated 1 time for cluster J.
•Start number 101 was manually annotated 2 times for cluster J.

Info for manual annotations of cluster JA:
•Start number 100 was manually annotated 1 time for cluster JA.
•Start number 103 was manually annotated 3 times for cluster JA.
•Start number 122 was manually annotated 1 time for cluster JA.
•Start number 126 was manually annotated 3 times for cluster JA.

Info for manual annotations of cluster L1:
•Start number 88 was manually annotated 5 times for cluster L1.
•Start number 128 was manually annotated 2 times for cluster L1.

Info for manual annotations of cluster O:
•Start number 57 was manually annotated 1 time for cluster O.

Info for manual annotations of cluster P1:
•Start number 85 was manually annotated 1 time for cluster P1.
•Start number 87 was manually annotated 4 times for cluster P1.

Info for manual annotations of cluster P3:
•Start number 88 was manually annotated 1 time for cluster P3.

Gene Information:

Gene: 244_106 Start: 61588, Stop: 61878, Start Num: 127
Candidate Starts for 244_106:
(Start: 127 @61588 has 121 MA's), (194, 61717), (208, 61741), (228, 61801), (239, 61849),

Gene: 244_112 Start: 62827, Stop: 63327, Start Num: 85
Candidate Starts for 244_112:
(53, 62773), (Start: 85 @62827 has 34 MA's), (Start: 119 @62881 has 3 MA's), (169, 62962), (171, 62965), (186, 62989), (203, 63022), (224, 63079), (267, 63241),

Gene: ABCat_103 Start: 62792, Stop: 63082, Start Num: 127
Candidate Starts for ABCat_103:
(Start: 127 @62792 has 121 MA's), (194, 62921), (208, 62945), (228, 63005), (239, 63053),

Gene: AddiRose_68 Start: 43648, Stop: 43974, Start Num: 126
Candidate Starts for AddiRose_68:
(30, 43444), (Start: 126 @43648 has 4 MA's), (141, 43690), (143, 43693), (182, 43765), (184, 43768), (204, 43804), (208, 43810), (213, 43825), (228, 43867), (240, 43918), (252, 43966),

Gene: Adnama_110 Start: 62081, Stop: 62371, Start Num: 127
Candidate Starts for Adnama_110:
(Start: 127 @62081 has 121 MA's), (194, 62210), (208, 62234), (228, 62294), (239, 62342),

Gene: Adora_55 Start: 40141, Stop: 40647, Start Num: 88
Candidate Starts for Adora_55:
(22, 39916), (24, 39946), (Start: 88 @40141 has 18 MA's), (132, 40216), (143, 40228), (165, 40270), (213, 40357), (228, 40396),

Gene: Adriana_61 Start: 53245, Stop: 52730, Start Num: 88
Candidate Starts for Adriana_61:
(44, 53323), (68, 53269), (Start: 81 @53254 has 10 MA's), (Start: 88 @53245 has 18 MA's), (130, 53179), (152, 53134), (165, 53110), (188, 53074), (190, 53068), (209, 53035), (228, 52981), (229, 52978), (259, 52861), (264, 52840), (287, 52765),

Gene: Affeca_34 Start: 32900, Stop: 32427, Start Num: 112
Candidate Starts for Affeca_34:
(38, 33038), (Start: 60 @32984 has 1 MA's), (97, 32927), (Start: 112 @32900 has 19 MA's), (161, 32801), (188, 32759), (189, 32756), (208, 32720), (228, 32663), (235, 32639), (246, 32582),

Gene: Angelicage_34 Start: 33318, Stop: 32845, Start Num: 112
Candidate Starts for Angelicage_34:
(38, 33456), (Start: 60 @33402 has 1 MA's), (67, 33393), (97, 33345), (Start: 112 @33318 has 19 MA's), (161, 33219), (188, 33177), (189, 33174), (208, 33138), (228, 33081), (236, 33048), (246, 33000),

Gene: Ardmore_42 Start: 34484, Stop: 35032, Start Num: 86
Candidate Starts for Ardmore_42:
(Start: 83 @34481 has 8 MA's), (86, 34484), (138, 34574), (160, 34616), (196, 34676), (224, 34742), (237, 34784), (247, 34832),

Gene: Argent26_110 Start: 62005, Stop: 62295, Start Num: 127
Candidate Starts for Argent26_110:
(Start: 127 @62005 has 121 MA's), (194, 62134), (208, 62158), (228, 62218), (239, 62266),

Gene: Ariel_147 Start: 75437, Stop: 76039, Start Num: 82
Candidate Starts for Ariel_147:
(Start: 82 @75437 has 12 MA's), (145, 75542), (157, 75563), (158, 75566), (173, 75590), (174, 75593), (176, 75599), (204, 75659), (229, 75728), (233, 75746), (244, 75797), (254, 75833), (282, 75929),

(297, 76025),

Gene: Asriel_104 Start: 60418, Stop: 60708, Start Num: 127
Candidate Starts for Asriel_104:
(Start: 127 @60418 has 121 MA's), (194, 60547), (208, 60571), (228, 60631), (239, 60679),

Gene: BAKA_150 Start: 78761, Stop: 79363, Start Num: 82
Candidate Starts for BAKA_150:
(47, 78692), (Start: 82 @78761 has 12 MA's), (145, 78866), (157, 78887), (158, 78890), (173, 78914), (174, 78917), (176, 78923), (220, 79025), (229, 79052), (233, 79070), (254, 79157), (297, 79349),

Gene: BaboJay_36 Start: 33175, Stop: 32675, Start Num: 81
Candidate Starts for BaboJay_36:
(Start: 81 @33175 has 10 MA's), (Start: 119 @33118 has 3 MA's), (137, 33082),

Gene: BaboJay_105 Start: 62761, Stop: 63051, Start Num: 127
Candidate Starts for BaboJay_105:
(Start: 127 @62761 has 121 MA's), (208, 62914), (228, 62974), (239, 63022),

Gene: BaboJay_110 Start: 64000, Stop: 64500, Start Num: 85
Candidate Starts for BaboJay_110:
(53, 63946), (Start: 85 @64000 has 34 MA's), (Start: 119 @64054 has 3 MA's), (169, 64135), (171, 64138), (186, 64162), (203, 64195), (224, 64252), (267, 64414),

Gene: BadStone_103 Start: 62340, Stop: 62630, Start Num: 127
Candidate Starts for BadStone_103:
(Start: 127 @62340 has 121 MA's), (194, 62469), (208, 62493), (228, 62553), (239, 62601),

Gene: Bagrid_151 Start: 79456, Stop: 80058, Start Num: 82
Candidate Starts for Bagrid_151:
(47, 79387), (Start: 82 @79456 has 12 MA's), (145, 79561), (157, 79582), (158, 79585), (173, 79609), (174, 79612), (176, 79618), (220, 79720), (229, 79747), (233, 79765), (254, 79852), (297, 80044),

Gene: Balomoji_106 Start: 62201, Stop: 62491, Start Num: 127
Candidate Starts for Balomoji_106:
(Start: 127 @62201 has 121 MA's), (194, 62330), (208, 62354), (228, 62414), (239, 62462),

Gene: Bantam_109 Start: 70339, Stop: 70695, Start Num: 103
Candidate Starts for Bantam_109:
(65, 70279), (Start: 103 @70339 has 5 MA's), (188, 70510), (208, 70546), (241, 70657), (243, 70666),

Gene: Barbarian_105 Start: 60418, Stop: 60708, Start Num: 127
Candidate Starts for Barbarian_105:
(Start: 127 @60418 has 121 MA's), (194, 60547), (208, 60571), (228, 60631), (239, 60679),

Gene: BarnCat_105 Start: 54966, Stop: 54505, Start Num: 106
Candidate Starts for BarnCat_105:
(Start: 106 @54966 has 2 MA's), (188, 54837), (236, 54714),

Gene: BarnCat_84 Start: 47542, Stop: 47033, Start Num: 87
Candidate Starts for BarnCat_84:
(Start: 87 @47542 has 27 MA's), (188, 47371), (190, 47365), (201, 47335), (227, 47281), (238, 47233),

Gene: BarnCat_86 Start: 49536, Stop: 49024, Start Num: 85
Candidate Starts for BarnCat_86:
(Start: 85 @49536 has 34 MA's), (255, 49179),

Gene: Bask21_106 Start: 61036, Stop: 61323, Start Num: 127
Candidate Starts for Bask21_106:
(Start: 127 @61036 has 121 MA's), (194, 61165), (208, 61189), (228, 61249), (239, 61297),

Gene: Beem_151 Start: 80198, Stop: 80800, Start Num: 82
Candidate Starts for Beem_151:
(Start: 82 @80198 has 12 MA's), (145, 80303), (157, 80324), (158, 80327), (173, 80351), (174, 80354), (176, 80360), (204, 80420), (229, 80489), (233, 80507), (244, 80558), (254, 80594), (282, 80690), (297, 80786),

Gene: Begonia_17 Start: 10279, Stop: 10785, Start Num: 85
Candidate Starts for Begonia_17:
(Start: 85 @10279 has 34 MA's), (138, 10369), (214, 10504), (224, 10537), (238, 10588), (262, 10681), (275, 10723),

Gene: Bench_108 Start: 62762, Stop: 63052, Start Num: 127
Candidate Starts for Bench_108:
(Start: 127 @62762 has 121 MA's), (194, 62891), (208, 62915), (228, 62975), (239, 63023),

Gene: Bibwit_35 Start: 32719, Stop: 32246, Start Num: 112
Candidate Starts for Bibwit_35:
(38, 32857), (Start: 60 @32803 has 1 MA's), (67, 32794), (97, 32746), (Start: 112 @32719 has 19 MA's), (161, 32620), (188, 32578), (189, 32575), (208, 32539), (228, 32482), (236, 32449), (246, 32401),

Gene: BigBubba_112 Start: 62473, Stop: 62973, Start Num: 85
Candidate Starts for BigBubba_112:
(53, 62419), (Start: 85 @62473 has 34 MA's), (Start: 119 @62527 has 3 MA's), (169, 62608), (171, 62611), (186, 62635), (203, 62668), (224, 62725), (267, 62887),

Gene: BigBubba_106 Start: 61114, Stop: 61404, Start Num: 127
Candidate Starts for BigBubba_106:
(Start: 127 @61114 has 121 MA's), (194, 61243), (208, 61267), (228, 61327), (239, 61375),

Gene: Blessica_13 Start: 5453, Stop: 5890, Start Num: 57
Candidate Starts for Blessica_13:
(Start: 57 @5453 has 1 MA's), (Start: 79 @5477 has 1 MA's), (96, 5501), (156, 5594), (213, 5681), (244, 5795), (246, 5804), (257, 5837), (258, 5840), (261, 5855),

Gene: BobBob_33 Start: 31999, Stop: 31526, Start Num: 112
Candidate Starts for BobBob_33:
(38, 32137), (Start: 60 @32083 has 1 MA's), (67, 32074), (97, 32026), (Start: 112 @31999 has 19 MA's), (161, 31900), (188, 31858), (189, 31855), (208, 31819), (228, 31762), (236, 31729), (246, 31681),

Gene: Bobby_139 Start: 80254, Stop: 80853, Start Num: 85
Candidate Starts for Bobby_139:
(Start: 85 @80254 has 34 MA's), (145, 80356), (157, 80377), (158, 80380), (192, 80443), (204, 80473), (209, 80482), (220, 80515), (233, 80560), (254, 80647), (272, 80707), (282, 80743), (297, 80839),

Gene: Bobi_53 Start: 37484, Stop: 38035, Start Num: 83
Candidate Starts for Bobi_53:
(Start: 83 @37484 has 8 MA's), (86, 37487), (138, 37577), (160, 37619), (196, 37679), (224, 37745), (237, 37787), (247, 37835),

Gene: Bogg_37 Start: 32525, Stop: 32025, Start Num: 81
Candidate Starts for Bogg_37:
(Start: 81 @32525 has 10 MA's), (Start: 119 @32468 has 3 MA's), (137, 32432),

Gene: Bogie_47 Start: 33238, Stop: 33729, Start Num: 87
Candidate Starts for Bogie_47:
(62, 33199), (64, 33202), (Start: 85 @33235 has 34 MA's), (Start: 87 @33238 has 27 MA's), (Start: 99 @33256 has 1 MA's), (Start: 103 @33265 has 5 MA's), (198, 33430), (204, 33439), (209, 33445), (213, 33457), (224, 33493), (238, 33544), (247, 33583),

Gene: Bombitas_45 Start: 41655, Stop: 42164, Start Num: 101
Candidate Starts for Bombitas_45:
(45, 41544), (Start: 75 @41613 has 1 MA's), (Start: 87 @41631 has 27 MA's), (Start: 101 @41655 has 3 MA's), (138, 41721), (169, 41775), (188, 41820), (224, 41907), (244, 41985), (247, 41997), (291, 42150),

Gene: Brandonk123_37 Start: 33065, Stop: 32592, Start Num: 112
Candidate Starts for Brandonk123_37:
(38, 33203), (Start: 60 @33149 has 1 MA's), (67, 33140), (97, 33092), (Start: 112 @33065 has 19 MA's), (161, 32966), (188, 32924), (189, 32921), (208, 32885), (228, 32828), (236, 32795), (246, 32747),

Gene: BronnyJames_155 Start: 83033, Stop: 83545, Start Num: 77
Candidate Starts for BronnyJames_155:
(Start: 77 @83033 has 7 MA's), (Start: 79 @83036 has 1 MA's), (Start: 103 @83069 has 5 MA's), (132, 83120), (152, 83156), (203, 83246), (209, 83255), (213, 83267), (224, 83303), (235, 83333), (254, 83414), (281, 83507), (289, 83531),

Gene: BronnyJames_39 Start: 35483, Stop: 36025, Start Num: 77
Candidate Starts for BronnyJames_39:
(41, 35396), (Start: 77 @35483 has 7 MA's), (Start: 119 @35546 has 3 MA's), (150, 35612), (163, 35636), (186, 35669), (203, 35702), (213, 35723), (214, 35726), (224, 35759), (244, 35837), (275, 35948), (290, 35996),

Gene: Bruin_103 Start: 61446, Stop: 61736, Start Num: 127
Candidate Starts for Bruin_103:
(Start: 127 @61446 has 121 MA's), (194, 61575), (208, 61599), (228, 61659), (239, 61707),

Gene: Brujita_46 Start: 33137, Stop: 33628, Start Num: 87
Candidate Starts for Brujita_46:
(43, 33044), (62, 33098), (64, 33101), (Start: 85 @33134 has 34 MA's), (Start: 87 @33137 has 27 MA's), (Start: 99 @33155 has 1 MA's), (Start: 103 @33164 has 5 MA's), (198, 33329), (204, 33338), (209, 33344), (213, 33356), (224, 33392), (238, 33443), (247, 33482),

Gene: Buck_107 Start: 63262, Stop: 63552, Start Num: 127
Candidate Starts for Buck_107:
(Start: 127 @63262 has 121 MA's), (194, 63391), (208, 63415), (228, 63475), (239, 63523),

Gene: Buckeye_60 Start: 52975, Stop: 52460, Start Num: 88
Candidate Starts for Buckeye_60:
(44, 53053), (68, 52999), (Start: 81 @52984 has 10 MA's), (Start: 88 @52975 has 18 MA's), (130, 52909), (152, 52864), (165, 52840), (188, 52804), (190, 52798), (209, 52765), (228, 52711), (229, 52708), (259, 52591), (264, 52570), (287, 52495),

Gene: Budgie_114 Start: 62448, Stop: 62732, Start Num: 127
Candidate Starts for Budgie_114:
(Start: 127 @62448 has 121 MA's), (194, 62577), (208, 62601), (228, 62661),

Gene: Cactus_110 Start: 61700, Stop: 61990, Start Num: 127
Candidate Starts for Cactus_110:
(Start: 127 @61700 has 121 MA's), (194, 61829), (208, 61853), (228, 61913), (239, 61961),

Gene: Cafasso_20 Start: 18713, Stop: 18225, Start Num: 112
Candidate Starts for Cafasso_20:
(16, 19079), (39, 18863), (56, 18806), (62, 18794), (Start: 112 @18713 has 19 MA's), (153, 18629), (168, 18605), (189, 18569), (193, 18560), (213, 18521), (215, 18515), (245, 18401), (246, 18395), (247, 18392), (269, 18314),

Gene: Camille_58 Start: 41232, Stop: 41567, Start Num: 101
Candidate Starts for Camille_58:
(Start: 101 @41232 has 3 MA's), (114, 41253), (116, 41256), (181, 41376), (237, 41511), (238, 41520), (249, 41562),

Gene: Cassita_88 Start: 48685, Stop: 48176, Start Num: 87
Candidate Starts for Cassita_88:
(Start: 87 @48685 has 27 MA's), (190, 48508), (201, 48478), (227, 48424), (238, 48376),

Gene: Charming_36 Start: 32566, Stop: 32093, Start Num: 112
Candidate Starts for Charming_36:
(38, 32704), (Start: 60 @32650 has 1 MA's), (67, 32641), (97, 32593), (Start: 112 @32566 has 19 MA's), (161, 32467), (188, 32425), (189, 32422), (208, 32386), (228, 32329), (236, 32296), (246, 32248),

Gene: Chentzyk_36 Start: 34824, Stop: 35315, Start Num: 104
Candidate Starts for Chentzyk_36:
(Start: 104 @34824 has 2 MA's), (134, 34869), (188, 34959), (224, 35046), (260, 35178), (266, 35202),

Gene: Chidiebere_96 Start: 69963, Stop: 70481, Start Num: 90
Candidate Starts for Chidiebere_96:
(64, 69921), (74, 69936), (Start: 90 @69963 has 5 MA's), (165, 70086), (171, 70095), (188, 70119), (247, 70299),

Gene: ChisanaKitsune_93 Start: 68907, Stop: 69425, Start Num: 90
Candidate Starts for ChisanaKitsune_93:
(64, 68865), (74, 68880), (Start: 90 @68907 has 5 MA's), (165, 69030), (171, 69039), (188, 69063), (247, 69243),

Gene: ChosenOne_106 Start: 61646, Stop: 61936, Start Num: 127
Candidate Starts for ChosenOne_106:
(Start: 127 @61646 has 121 MA's), (194, 61775), (208, 61799), (228, 61859), (239, 61907),

Gene: ChotaBhai_106 Start: 62098, Stop: 62385, Start Num: 127
Candidate Starts for ChotaBhai_106:
(Start: 127 @62098 has 121 MA's), (194, 62227), (208, 62251), (228, 62311), (239, 62359),

Gene: Cjw1_106 Start: 63455, Stop: 63745, Start Num: 127
Candidate Starts for Cjw1_106:
(Start: 127 @63455 has 121 MA's), (194, 63584), (208, 63608), (228, 63668), (239, 63716),

Gene: Clown_64 Start: 45007, Stop: 45525, Start Num: 87
Candidate Starts for Clown_64:
(Start: 87 @45007 has 27 MA's), (Start: 101 @45031 has 3 MA's), (Start: 119 @45058 has 3 MA's), (138, 45097), (162, 45136), (209, 45214), (224, 45262), (237, 45304), (244, 45340), (247, 45352), (293, 45511),

Gene: Coco12_30 Start: 26826, Stop: 26320, Start Num: 83
Candidate Starts for Coco12_30:
(Start: 83 @26826 has 8 MA's), (Start: 99 @26811 has 1 MA's), (130, 26760), (132, 26751), (154, 26709), (163, 26694), (171, 26682), (172, 26679), (188, 26658), (213, 26619), (224, 26583), (247, 26493), (266, 26427), (275, 26397),

Gene: Coletti_62 Start: 53249, Stop: 52725, Start Num: 81
Candidate Starts for Coletti_62:
(44, 53318), (68, 53264), (Start: 81 @53249 has 10 MA's), (Start: 88 @53240 has 18 MA's), (130, 53174), (152, 53129), (165, 53105), (188, 53069), (190, 53063), (209, 53030), (228, 52976), (229, 52973), (259, 52856), (264, 52835), (287, 52760),

Gene: Command613_108 Start: 62194, Stop: 62484, Start Num: 127
Candidate Starts for Command613_108:
(Start: 127 @62194 has 121 MA's), (194, 62323), (208, 62347), (228, 62407), (239, 62455),

Gene: Constella_158 Start: 86054, Stop: 86563, Start Num: 79
Candidate Starts for Constella_158:
(Start: 77 @86051 has 7 MA's), (Start: 79 @86054 has 1 MA's), (Start: 103 @86087 has 5 MA's), (132, 86138), (152, 86174), (203, 86264), (209, 86273), (213, 86285), (214, 86288), (224, 86321), (235, 86351), (254, 86432), (281, 86525), (289, 86549),

Gene: Constella_97 Start: 58172, Stop: 58714, Start Num: 87
Candidate Starts for Constella_97:
(Start: 87 @58172 has 27 MA's), (Start: 99 @58190 has 1 MA's), (175, 58310), (179, 58325), (189, 58343), (206, 58382), (213, 58400), (216, 58406), (235, 58466), (257, 58559), (294, 58700),

Gene: Contagion_102 Start: 61808, Stop: 62098, Start Num: 127
Candidate Starts for Contagion_102:
(Start: 127 @61808 has 121 MA's), (194, 61937), (208, 61961), (228, 62021), (239, 62069),

Gene: Cookies_103 Start: 61964, Stop: 62251, Start Num: 127
Candidate Starts for Cookies_103:
(Start: 127 @61964 has 121 MA's), (194, 62093), (208, 62117), (228, 62177), (239, 62225),

Gene: Count_91 Start: 59562, Stop: 59873, Start Num: 123
Candidate Starts for Count_91:
(Start: 123 @59562 has 1 MA's), (152, 59631), (188, 59697), (211, 59745), (219, 59766),

Gene: Courthouse_143 Start: 75295, Stop: 75897, Start Num: 82
Candidate Starts for Courthouse_143:
(Start: 82 @75295 has 12 MA's), (145, 75400), (157, 75421), (158, 75424), (173, 75448), (174, 75451), (176, 75457), (204, 75517), (229, 75586), (233, 75604), (244, 75655), (254, 75691), (282, 75787), (297, 75883),

Gene: CrystalP_105 Start: 62698, Stop: 62988, Start Num: 127
Candidate Starts for CrystalP_105:
(Start: 127 @62698 has 121 MA's), (194, 62827), (208, 62851), (228, 62911), (239, 62959),

Gene: Czyszczon1_106 Start: 61801, Stop: 62091, Start Num: 127
Candidate Starts for Czyszczon1_106:
(Start: 127 @61801 has 121 MA's), (194, 61930), (208, 61954), (228, 62014), (239, 62062),

Gene: Daddyjeff_70 Start: 44061, Stop: 44387, Start Num: 126
Candidate Starts for Daddyjeff_70:
(78, 43989), (Start: 110 @44040 has 3 MA's), (Start: 124 @44058 has 2 MA's), (Start: 126 @44061 has 4 MA's), (141, 44103), (143, 44106), (182, 44178), (184, 44181), (204, 44217), (208, 44223), (213, 44238), (228, 44280), (240, 44331), (244, 44349), (252, 44379),

Gene: DalanDe_1 Start: 1, Stop: 522, Start Num: 80
Candidate Starts for DalanDe_1:
(Start: 80 @1 has 1 MA's), (Start: 90 @16 has 5 MA's), (130, 76), (137, 94), (139, 100), (171, 154), (185, 175), (213, 226), (229, 271), (236, 301), (238, 313), (251, 364), (269, 430), (273, 442),

Gene: Dallas_113 Start: 64402, Stop: 64944, Start Num: 87
Candidate Starts for Dallas_113:
(28, 64240), (32, 64264), (Start: 66 @64369 has 1 MA's), (Start: 87 @64402 has 27 MA's), (Start: 99 @64420 has 1 MA's), (132, 64477), (175, 64540), (179, 64555), (189, 64573), (213, 64630), (216, 64636), (235, 64696), (257, 64789),

Gene: Damascus_59 Start: 42669, Stop: 42986, Start Num: 124
Candidate Starts for Damascus_59:
(72, 42585), (89, 42612), (Start: 123 @42666 has 1 MA's), (Start: 124 @42669 has 2 MA's), (181, 42795), (195, 42822), (228, 42894), (237, 42930),

Gene: Daredevil_104 Start: 67182, Stop: 67538, Start Num: 102
Candidate Starts for Daredevil_104:
(Start: 102 @67182 has 2 MA's), (Start: 123 @67206 has 1 MA's), (177, 67329), (208, 67389), (241, 67500),

Gene: DatBoi_107 Start: 69816, Stop: 70166, Start Num: 110
Candidate Starts for DatBoi_107:
(49, 69714), (55, 69726), (Start: 110 @69816 has 3 MA's), (188, 69981), (208, 70017), (211, 70029), (229, 70077), (241, 70128), (243, 70137),

Gene: DizzyRudy_63 Start: 42556, Stop: 42873, Start Num: 124
Candidate Starts for DizzyRudy_63:
(72, 42472), (89, 42499), (Start: 123 @42553 has 1 MA's), (Start: 124 @42556 has 2 MA's), (181, 42682), (206, 42721), (228, 42781), (237, 42817),

Gene: DmpstrDiver_113 Start: 63822, Stop: 64364, Start Num: 87

Candidate Starts for DmpstrDiver_113:
(28, 63660), (32, 63684), (Start: 66 @63789 has 1 MA's), (Start: 87 @63822 has 27 MA's), (Start: 99 @63840 has 1 MA's), (132, 63897), (175, 63960), (179, 63975), (189, 63993), (213, 64050), (216, 64056), (235, 64116), (257, 64209),

Gene: DoctorDiddles_105 Start: 61466, Stop: 61753, Start Num: 127
Candidate Starts for DoctorDiddles_105:
(Start: 127 @61466 has 121 MA's), (194, 61595), (208, 61619), (228, 61679), (239, 61727),

Gene: DonTron_22 Start: 10785, Stop: 11264, Start Num: 75
Candidate Starts for DonTron_22:
(Start: 75 @10785 has 1 MA's), (148, 10896), (196, 10980), (208, 10998), (213, 11010), (244, 11124),

Gene: Dori_69 Start: 53193, Stop: 53732, Start Num: 87
Candidate Starts for Dori_69:
(40, 53091), (51, 53133), (Start: 77 @53184 has 7 MA's), (Start: 87 @53193 has 27 MA's), (Start: 101 @53214 has 3 MA's), (150, 53301), (160, 53322), (210, 53409), (213, 53415), (225, 53454), (247, 53541), (271, 53619),

Gene: Dove_135 Start: 75231, Stop: 75830, Start Num: 85
Candidate Starts for Dove_135:
(Start: 85 @75231 has 34 MA's), (145, 75333), (157, 75354), (158, 75357), (192, 75420), (204, 75450), (209, 75459), (220, 75492), (233, 75537), (254, 75624), (272, 75684), (282, 75720), (297, 75816),

Gene: DrDrey_106 Start: 63478, Stop: 63768, Start Num: 127
Candidate Starts for DrDrey_106:
(Start: 127 @63478 has 121 MA's), (194, 63607), (208, 63631), (228, 63691), (239, 63739),

Gene: Duke13_146 Start: 77046, Stop: 77648, Start Num: 82
Candidate Starts for Duke13_146:
(47, 76977), (Start: 82 @77046 has 12 MA's), (145, 77151), (157, 77172), (158, 77175), (173, 77199), (174, 77202), (176, 77208), (220, 77310), (229, 77337), (233, 77355), (254, 77442), (297, 77634),

Gene: Dumbo_105 Start: 61838, Stop: 62128, Start Num: 127
Candidate Starts for Dumbo_105:
(Start: 127 @61838 has 121 MA's), (194, 61967), (208, 61991), (228, 62051), (239, 62099),

Gene: Dusk_103 Start: 62000, Stop: 62290, Start Num: 127
Candidate Starts for Dusk_103:
(Start: 127 @62000 has 121 MA's), (194, 62129), (208, 62153), (228, 62213), (239, 62261),

Gene: Easy2Say_106 Start: 62472, Stop: 62762, Start Num: 127
Candidate Starts for Easy2Say_106:
(Start: 127 @62472 has 121 MA's), (194, 62601), (208, 62625), (228, 62685), (239, 62733),

Gene: Eevee_69 Start: 47508, Stop: 47876, Start Num: 103
Candidate Starts for Eevee_69:
(59, 47439), (92, 47490), (Start: 103 @47508 has 5 MA's), (115, 47529), (Start: 129 @47547 has 2 MA's), (134, 47562), (187, 47673), (197, 47700), (211, 47721), (218, 47739), (237, 47802), (252, 47868),

Gene: Elite2014_105 Start: 61645, Stop: 61935, Start Num: 127
Candidate Starts for Elite2014_105:

(Start: 127 @61645 has 121 MA's), (194, 61774), (208, 61798), (228, 61858), (239, 61906),

Gene: Elph10_105 Start: 61484, Stop: 61774, Start Num: 127
Candidate Starts for Elph10_105:
(Start: 127 @61484 has 121 MA's), (194, 61613), (208, 61637), (228, 61697), (239, 61745),

Gene: Emmina_106 Start: 61423, Stop: 61713, Start Num: 127
Candidate Starts for Emmina_106:
(Start: 127 @61423 has 121 MA's), (194, 61552), (208, 61576), (228, 61636), (239, 61684),

Gene: Enceladus_63 Start: 44580, Stop: 45038, Start Num: 88
Candidate Starts for Enceladus_63:
(Start: 88 @44580 has 18 MA's), (132, 44652), (193, 44742), (201, 44754), (213, 44775), (232, 44838), (238, 44865),

Gene: EricMillard_142 Start: 78398, Stop: 79000, Start Num: 82
Candidate Starts for EricMillard_142:
(47, 78329), (Start: 82 @78398 has 12 MA's), (145, 78503), (157, 78524), (158, 78527), (173, 78551), (174, 78554), (176, 78560), (220, 78662), (229, 78689), (233, 78707), (254, 78794), (297, 78986),

Gene: EricMillard_105 Start: 63462, Stop: 64004, Start Num: 87
Candidate Starts for EricMillard_105:
(28, 63300), (32, 63324), (Start: 66 @63429 has 1 MA's), (Start: 87 @63462 has 27 MA's), (Start: 99 @63480 has 1 MA's), (132, 63537), (175, 63600), (179, 63615), (189, 63633), (213, 63690), (216, 63696), (235, 63756), (257, 63849),

Gene: Eureka_37 Start: 33608, Stop: 33108, Start Num: 81
Candidate Starts for Eureka_37:
(Start: 81 @33608 has 10 MA's), (Start: 119 @33551 has 3 MA's), (137, 33515),

Gene: Eureka_105 Start: 62611, Stop: 62901, Start Num: 127
Candidate Starts for Eureka_105:
(Start: 127 @62611 has 121 MA's), (194, 62740), (208, 62764), (228, 62824), (239, 62872),

Gene: Filch_107 Start: 61797, Stop: 62087, Start Num: 127
Candidate Starts for Filch_107:
(Start: 127 @61797 has 121 MA's), (194, 61926), (208, 61950), (228, 62010), (239, 62058),

Gene: Filch_113 Start: 63036, Stop: 63536, Start Num: 85
Candidate Starts for Filch_113:
(53, 62982), (Start: 85 @63036 has 34 MA's), (Start: 119 @63090 has 3 MA's), (169, 63171), (171, 63174), (186, 63198), (203, 63231), (224, 63288), (267, 63450),

Gene: FireRed_109 Start: 62887, Stop: 63177, Start Num: 127
Candidate Starts for FireRed_109:
(Start: 127 @62887 has 121 MA's), (194, 63016), (208, 63040), (228, 63100), (239, 63148),

Gene: FiveHead_33 Start: 22717, Stop: 23097, Start Num: 108
Candidate Starts for FiveHead_33:
(Start: 66 @22657 has 1 MA's), (Start: 108 @22717 has 5 MA's), (218, 22948),

Gene: Flypotenuse_102 Start: 61072, Stop: 61362, Start Num: 127
Candidate Starts for Flypotenuse_102:

(Start: 127 @61072 has 121 MA's), (194, 61201), (208, 61225), (228, 61285), (239, 61333),

Gene: Fosterous_34 Start: 32991, Stop: 32518, Start Num: 112
Candidate Starts for Fosterous_34:
(38, 33129), (Start: 60 @33075 has 1 MA's), (67, 33066), (97, 33018), (Start: 112 @32991 has 19 MA's), (161, 32892), (188, 32850), (189, 32847), (208, 32811), (228, 32754), (236, 32721), (246, 32673),

Gene: Frankie_34 Start: 27904, Stop: 27416, Start Num: 83
Candidate Starts for Frankie_34:
(Start: 83 @27904 has 8 MA's), (132, 27829), (154, 27787), (160, 27775), (172, 27757), (186, 27739), (205, 27712), (262, 27517), (275, 27478),

Gene: FruityLoops_124 Start: 91104, Stop: 91676, Start Num: 85
Candidate Starts for FruityLoops_124:
(Start: 85 @91104 has 34 MA's), (125, 91164), (146, 91221), (152, 91230), (160, 91248), (171, 91263), (183, 91302), (186, 91305), (207, 91347), (209, 91353), (213, 91365), (214, 91368), (224, 91401), (231, 91416),

Gene: FugateOSU_60 Start: 53224, Stop: 52700, Start Num: 81
Candidate Starts for FugateOSU_60:
(44, 53293), (68, 53239), (Start: 81 @53224 has 10 MA's), (Start: 88 @53215 has 18 MA's), (130, 53149), (152, 53104), (165, 53080), (188, 53044), (190, 53038), (209, 53005), (228, 52951), (229, 52948), (259, 52831), (264, 52810), (287, 52735),

Gene: GAL1_27 Start: 22156, Stop: 22695, Start Num: 77
Candidate Starts for GAL1_27:
(Start: 77 @22156 has 7 MA's), (130, 22234), (160, 22300), (163, 22303), (190, 22348), (200, 22366), (203, 22372), (205, 22375), (211, 22390), (213, 22393), (214, 22396), (218, 22408), (245, 22510), (247, 22519),

Gene: GMA1_68 Start: 40382, Stop: 40945, Start Num: 98
Candidate Starts for GMA1_68:
(18, 40088), (19, 40115), (26, 40187), (46, 40280), (98, 40382), (115, 40412), (143, 40481), (163, 40520), (194, 40598), (209, 40628), (218, 40655), (224, 40676), (237, 40718), (244, 40754), (247, 40766), (267, 40838),

Gene: GMA1_47 Start: 30722, Stop: 31246, Start Num: 78
Candidate Starts for GMA1_47:
(13, 30347), (21, 30500), (42, 30635), (46, 30653), (63, 30698), (69, 30707), (78, 30722), (118, 30779), (224, 30986), (238, 31037), (254, 31097), (269, 31154),

Gene: Gage_108 Start: 62143, Stop: 62433, Start Num: 127
Candidate Starts for Gage_108:
(Start: 127 @62143 has 121 MA's), (194, 62272), (208, 62296), (228, 62356), (239, 62404),

Gene: Galadriel_36 Start: 33480, Stop: 33007, Start Num: 112
Candidate Starts for Galadriel_36:
(38, 33618), (Start: 60 @33564 has 1 MA's), (67, 33555), (97, 33507), (Start: 112 @33480 has 19 MA's), (161, 33381), (188, 33339), (189, 33336), (208, 33300), (228, 33243), (236, 33210), (246, 33162),

Gene: Gator_104 Start: 61931, Stop: 62218, Start Num: 127

Candidate Starts for Gator_104:
(Start: 127 @61931 has 121 MA's), (194, 62060), (208, 62084), (228, 62144), (239, 62192),

Gene: Gemini_111 Start: 62522, Stop: 62812, Start Num: 127
Candidate Starts for Gemini_111:
(Start: 127 @62522 has 121 MA's), (194, 62651), (208, 62675), (228, 62735), (239, 62783),

Gene: Glexan_105 Start: 62202, Stop: 62492, Start Num: 127
Candidate Starts for Glexan_105:
(Start: 127 @62202 has 121 MA's), (194, 62331), (208, 62355), (228, 62415), (239, 62463),

Gene: Globfish_84 Start: 46529, Stop: 47017, Start Num: 104
Candidate Starts for Globfish_84:
(91, 46508), (Start: 104 @46529 has 2 MA's), (135, 46586), (142, 46604), (164, 46646), (208, 46721), (295, 47006),

Gene: Goku_105 Start: 62340, Stop: 62630, Start Num: 127
Candidate Starts for Goku_105:
(Start: 127 @62340 has 121 MA's), (194, 62469), (208, 62493), (228, 62553), (239, 62601),

Gene: Goku_110 Start: 63579, Stop: 64079, Start Num: 85
Candidate Starts for Goku_110:
(53, 63525), (Start: 85 @63579 has 34 MA's), (Start: 119 @63633 has 3 MA's), (169, 63714), (171, 63717), (186, 63741), (203, 63774), (224, 63831), (267, 63993),

Gene: Goku_37 Start: 33337, Stop: 32837, Start Num: 81
Candidate Starts for Goku_37:
(Start: 81 @33337 has 10 MA's), (Start: 119 @33280 has 3 MA's), (137, 33244),

Gene: GoldenSpark_110 Start: 62005, Stop: 62295, Start Num: 127
Candidate Starts for GoldenSpark_110:
(Start: 127 @62005 has 121 MA's), (194, 62134), (208, 62158), (228, 62218), (239, 62266),

Gene: Goldilocks_109 Start: 61901, Stop: 62191, Start Num: 127
Candidate Starts for Goldilocks_109:
(Start: 127 @61901 has 121 MA's), (194, 62030), (208, 62054), (228, 62114), (239, 62162),

Gene: Goldilocks_114 Start: 63260, Stop: 63760, Start Num: 85
Candidate Starts for Goldilocks_114:
(53, 63206), (Start: 85 @63260 has 34 MA's), (Start: 119 @63314 has 3 MA's), (169, 63395), (171, 63398), (186, 63422), (203, 63455), (224, 63512), (267, 63674),

Gene: Gonephishing_141 Start: 75522, Stop: 76124, Start Num: 82
Candidate Starts for Gonephishing_141:
(47, 75453), (Start: 82 @75522 has 12 MA's), (145, 75627), (157, 75648), (158, 75651), (173, 75675), (174, 75678), (176, 75684), (220, 75786), (229, 75813), (233, 75831), (254, 75918), (297, 76110),

Gene: GooberAzure_109 Start: 62005, Stop: 62295, Start Num: 127
Candidate Starts for GooberAzure_109:
(Start: 127 @62005 has 121 MA's), (194, 62134), (208, 62158), (228, 62218), (239, 62266),

Gene: Gsput1_40 Start: 30337, Stop: 30849, Start Num: 98
Candidate Starts for Gsput1_40:

(23, 30127), (27, 30154), (37, 30202), (50, 30250), (58, 30277), (98, 30337), (Start: 102 @30346 has 2 MA's), (Start: 126 @30382 has 4 MA's), (155, 30451), (171, 30475), (191, 30523), (208, 30550), (218, 30580), (224, 30601), (226, 30604), (231, 30616), (278, 30802),

Gene: HUHilltop_45 Start: 31495, Stop: 31986, Start Num: 87
Candidate Starts for HUHilltop_45:
(62, 31456), (64, 31459), (Start: 85 @31492 has 34 MA's), (Start: 87 @31495 has 27 MA's), (Start: 99 @31513 has 1 MA's), (Start: 103 @31522 has 5 MA's), (198, 31687), (204, 31696), (209, 31702), (213, 31714), (224, 31750), (238, 31801), (247, 31840),

Gene: HanKaySha_106 Start: 62193, Stop: 62483, Start Num: 127
Candidate Starts for HanKaySha_106:
(Start: 127 @62193 has 121 MA's), (194, 62322), (208, 62346), (228, 62406), (239, 62454),

Gene: Hannaconda_141 Start: 76044, Stop: 76646, Start Num: 82
Candidate Starts for Hannaconda_141:
(Start: 82 @76044 has 12 MA's), (145, 76149), (157, 76170), (158, 76173), (173, 76197), (174, 76200), (176, 76206), (204, 76266), (229, 76335), (233, 76353), (244, 76404), (254, 76440), (282, 76536), (297, 76632),

Gene: Hannaconda_43 Start: 36122, Stop: 36664, Start Num: 77
Candidate Starts for Hannaconda_43:
(41, 36035), (Start: 77 @36122 has 7 MA's), (Start: 119 @36185 has 3 MA's), (150, 36251), (163, 36275), (186, 36308), (203, 36341), (213, 36362), (214, 36365), (224, 36398), (244, 36476), (275, 36587), (290, 36635),

Gene: Happabalu_60 Start: 53248, Stop: 52724, Start Num: 81
Candidate Starts for Happabalu_60:
(44, 53317), (68, 53263), (Start: 81 @53248 has 10 MA's), (Start: 88 @53239 has 18 MA's), (130, 53173), (152, 53128), (165, 53104), (188, 53068), (190, 53062), (209, 53029), (228, 52975), (229, 52972), (259, 52855), (264, 52834), (287, 52759),

Gene: Harella_106 Start: 62718, Stop: 63008, Start Num: 127
Candidate Starts for Harella_106:
(Start: 127 @62718 has 121 MA's), (194, 62847), (208, 62871), (228, 62931), (239, 62979),

Gene: Henry_103 Start: 62003, Stop: 62293, Start Num: 127
Candidate Starts for Henry_103:
(Start: 127 @62003 has 121 MA's), (194, 62132), (208, 62156), (228, 62216), (239, 62264),

Gene: Hidrated_155 Start: 87549, Stop: 88058, Start Num: 79
Candidate Starts for Hidrated_155:
(Start: 77 @87546 has 7 MA's), (Start: 79 @87549 has 1 MA's), (Start: 103 @87582 has 5 MA's), (132, 87633), (152, 87669), (203, 87759), (209, 87768), (213, 87780), (214, 87783), (224, 87816), (235, 87846), (254, 87927), (281, 88020), (289, 88044),

Gene: Highbury_102 Start: 60350, Stop: 60640, Start Num: 127
Candidate Starts for Highbury_102:
(Start: 127 @60350 has 121 MA's), (194, 60479), (208, 60503), (228, 60563), (239, 60611),

Gene: HokkenD_142 Start: 79202, Stop: 79804, Start Num: 82
Candidate Starts for HokkenD_142:

(47, 79133), (Start: 82 @79202 has 12 MA's), (145, 79307), (157, 79328), (158, 79331), (173, 79355), (174, 79358), (176, 79364), (220, 79466), (229, 79493), (233, 79511), (254, 79598), (297, 79790),

Gene: Holt_111 Start: 62419, Stop: 62709, Start Num: 127
Candidate Starts for Holt_111:
(Start: 127 @62419 has 121 MA's), (194, 62548), (208, 62572), (228, 62632), (239, 62680),

Gene: Holt_116 Start: 63658, Stop: 64158, Start Num: 85
Candidate Starts for Holt_116:
(53, 63604), (Start: 85 @63658 has 34 MA's), (Start: 119 @63712 has 3 MA's), (169, 63793), (171, 63796), (186, 63820), (203, 63853), (224, 63910), (267, 64072),

Gene: Hoonter_109 Start: 62498, Stop: 62788, Start Num: 127
Candidate Starts for Hoonter_109:
(Start: 127 @62498 has 121 MA's), (194, 62627), (208, 62651), (228, 62711), (239, 62759),

Gene: Hopey_106 Start: 62804, Stop: 63094, Start Num: 127
Candidate Starts for Hopey_106:
(Start: 127 @62804 has 121 MA's), (194, 62933), (208, 62957), (228, 63017), (239, 63065),

Gene: Hortense_58 Start: 41496, Stop: 42002, Start Num: 88
Candidate Starts for Hortense_58:
(22, 41271), (24, 41301), (Start: 88 @41496 has 18 MA's), (132, 41571), (143, 41583), (165, 41625), (213, 41712), (228, 41751),

Gene: Howe_58 Start: 41496, Stop: 42002, Start Num: 88
Candidate Starts for Howe_58:
(22, 41271), (24, 41301), (Start: 88 @41496 has 18 MA's), (132, 41571), (143, 41583), (165, 41625), (213, 41712), (228, 41751),

Gene: HufflyPuff_108 Start: 63113, Stop: 63403, Start Num: 127
Candidate Starts for HufflyPuff_108:
(Start: 127 @63113 has 121 MA's), (194, 63242), (208, 63266), (228, 63326), (239, 63374),

Gene: Hughesyang_148 Start: 79867, Stop: 80466, Start Num: 85
Candidate Starts for Hughesyang_148:
(Start: 85 @79867 has 34 MA's), (145, 79969), (157, 79990), (158, 79993), (192, 80056), (204, 80086), (209, 80095), (220, 80128), (233, 80173), (254, 80260), (272, 80320), (282, 80356), (297, 80452),

Gene: Hughesyang_111 Start: 64353, Stop: 64895, Start Num: 87
Candidate Starts for Hughesyang_111:
(28, 64191), (32, 64215), (Start: 66 @64320 has 1 MA's), (Start: 87 @64353 has 27 MA's), (Start: 99 @64371 has 1 MA's), (132, 64428), (175, 64491), (179, 64506), (189, 64524), (213, 64581), (216, 64587), (235, 64647), (257, 64740),

Gene: IHOP_104 Start: 61721, Stop: 62011, Start Num: 127
Candidate Starts for IHOP_104:
(Start: 127 @61721 has 121 MA's), (194, 61850), (208, 61874), (228, 61934), (239, 61982),

Gene: Icee_112 Start: 62768, Stop: 63268, Start Num: 85
Candidate Starts for Icee_112:
(53, 62714), (Start: 85 @62768 has 34 MA's), (Start: 119 @62822 has 3 MA's), (169, 62903), (171, 62906), (186, 62930), (203, 62963), (224, 63020), (267, 63182),

Gene: Icee_107 Start: 61529, Stop: 61819, Start Num: 127
Candidate Starts for Icee_107:
(Start: 127 @61529 has 121 MA's), (194, 61658), (208, 61682), (228, 61742), (239, 61790),

Gene: Inca_103 Start: 60210, Stop: 60500, Start Num: 127
Candidate Starts for Inca_103:
(Start: 127 @60210 has 121 MA's), (194, 60339), (208, 60363), (228, 60423), (239, 60471),

Gene: Island3_46 Start: 33137, Stop: 33628, Start Num: 87
Candidate Starts for Island3_46:
(43, 33044), (62, 33098), (64, 33101), (Start: 85 @33134 has 34 MA's), (Start: 87 @33137 has 27 MA's), (Start: 99 @33155 has 1 MA's), (Start: 103 @33164 has 5 MA's), (198, 33329), (204, 33338), (209, 33344), (213, 33356), (224, 33392), (238, 33443), (247, 33482),

Gene: IttyBittyPiggy_27 Start: 22317, Stop: 22682, Start Num: 110
Candidate Starts for IttyBittyPiggy_27:
(33, 22149), (Start: 110 @22317 has 3 MA's), (190, 22482), (209, 22521), (213, 22533),

Gene: JalFarm20_33 Start: 27847, Stop: 27341, Start Num: 83
Candidate Starts for JalFarm20_33:
(Start: 83 @27847 has 8 MA's), (Start: 99 @27832 has 1 MA's), (130, 27781), (132, 27772), (154, 27730), (163, 27715), (171, 27703), (172, 27700), (188, 27679), (213, 27640), (224, 27604), (247, 27514), (266, 27448), (275, 27418),

Gene: JasmineDragon_30 Start: 22617, Stop: 23000, Start Num: 108
Candidate Starts for JasmineDragon_30:
(29, 22437), (Start: 108 @22617 has 5 MA's), (193, 22791), (218, 22851),

Gene: JeTaime_109 Start: 62868, Stop: 63383, Start Num: 85
Candidate Starts for JeTaime_109:
(53, 62814), (Start: 85 @62868 has 34 MA's), (Start: 119 @62922 has 3 MA's), (169, 63003), (171, 63006), (186, 63030), (203, 63063), (224, 63120), (267, 63282),

Gene: JeTaime_104 Start: 61629, Stop: 61919, Start Num: 127
Candidate Starts for JeTaime_104:
(Start: 127 @61629 has 121 MA's), (194, 61758), (208, 61782), (228, 61842), (239, 61890),

Gene: Jesabah_61 Start: 53289, Stop: 52765, Start Num: 81
Candidate Starts for Jesabah_61:
(44, 53358), (68, 53304), (Start: 81 @53289 has 10 MA's), (Start: 88 @53280 has 18 MA's), (130, 53214), (152, 53169), (165, 53145), (188, 53109), (190, 53103), (209, 53070), (228, 53016), (229, 53013), (259, 52896), (264, 52875), (287, 52800),

Gene: JoeDirt_76 Start: 51825, Stop: 52229, Start Num: 128
Candidate Starts for JoeDirt_76:
(76, 51750), (121, 51816), (Start: 128 @51825 has 2 MA's), (149, 51876), (160, 51894), (199, 51951), (200, 51954), (223, 52011), (237, 52053), (238, 52062), (239, 52065), (248, 52110), (250, 52113),

Gene: JoeDirt_64 Start: 45013, Stop: 45471, Start Num: 88
Candidate Starts for JoeDirt_64:
(Start: 88 @45013 has 18 MA's), (132, 45085), (193, 45175), (201, 45187), (213, 45208), (232, 45271), (238, 45298),

Gene: JohnThicc_32 Start: 22717, Stop: 23097, Start Num: 108
Candidate Starts for JohnThicc_32:
(Start: 66 @22657 has 1 MA's), (Start: 108 @22717 has 5 MA's), (218, 22948),

Gene: JonJames_26 Start: 9049, Stop: 9558, Start Num: 85
Candidate Starts for JonJames_26:
(Start: 85 @9049 has 34 MA's), (Start: 119 @9103 has 3 MA's), (150, 9160), (160, 9181), (163, 9184), (209, 9256), (213, 9268), (224, 9304), (245, 9385), (247, 9394), (270, 9472), (291, 9544),

Gene: JoyLin_69 Start: 47628, Stop: 47996, Start Num: 103
Candidate Starts for JoyLin_69:
(59, 47559), (92, 47610), (Start: 103 @47628 has 5 MA's), (115, 47649), (Start: 129 @47667 has 2 MA's), (134, 47682), (187, 47793), (197, 47820), (211, 47841), (218, 47859), (237, 47922), (252, 47988),

Gene: Kabocha_97 Start: 70776, Stop: 71294, Start Num: 90
Candidate Starts for Kabocha_97:
(64, 70734), (74, 70749), (Start: 90 @70776 has 5 MA's), (165, 70899), (171, 70908), (188, 70932), (247, 71112),

Gene: Kalah2_140 Start: 78988, Stop: 79587, Start Num: 85
Candidate Starts for Kalah2_140:
(Start: 85 @78988 has 34 MA's), (145, 79090), (157, 79111), (158, 79114), (192, 79177), (204, 79207), (209, 79216), (220, 79249), (233, 79294), (254, 79381), (272, 79441), (282, 79477), (297, 79573),

Gene: Kalah2_105 Start: 63688, Stop: 64230, Start Num: 87
Candidate Starts for Kalah2_105:
(28, 63526), (32, 63550), (Start: 66 @63655 has 1 MA's), (Start: 87 @63688 has 27 MA's), (Start: 99 @63706 has 1 MA's), (132, 63763), (175, 63826), (179, 63841), (189, 63859), (213, 63916), (216, 63922), (235, 63982), (257, 64075),

Gene: Kanye_103 Start: 62254, Stop: 62544, Start Num: 127
Candidate Starts for Kanye_103:
(Start: 127 @62254 has 121 MA's), (194, 62383), (208, 62407), (228, 62467), (239, 62515),

Gene: KashFlow_40 Start: 35743, Stop: 36285, Start Num: 77
Candidate Starts for KashFlow_40:
(41, 35656), (Start: 77 @35743 has 7 MA's), (Start: 119 @35806 has 3 MA's), (150, 35872), (163, 35896), (186, 35929), (203, 35962), (213, 35983), (214, 35986), (224, 36019), (244, 36097), (275, 36208), (290, 36256),

Gene: KashFlow_148 Start: 78305, Stop: 78904, Start Num: 87
Candidate Starts for KashFlow_148:
(Start: 87 @78305 has 27 MA's), (142, 78395), (192, 78491), (210, 78536), (220, 78563), (233, 78608), (243, 78650), (244, 78659), (288, 78806), (290, 78821), (297, 78890),

Gene: Kimchi_110 Start: 62146, Stop: 62436, Start Num: 127
Candidate Starts for Kimchi_110:
(Start: 127 @62146 has 121 MA's), (194, 62275), (208, 62299), (228, 62359), (239, 62407),

Gene: Kimchi_115 Start: 63385, Stop: 63885, Start Num: 85
Candidate Starts for Kimchi_115:

(53, 63331), (Start: 85 @63385 has 34 MA's), (Start: 119 @63439 has 3 MA's), (169, 63520), (171, 63523), (186, 63547), (203, 63580), (224, 63637), (267, 63799),

Gene: KingMidas_32 Start: 28828, Stop: 29370, Start Num: 77
Candidate Starts for KingMidas_32:
(Start: 77 @28828 has 7 MA's), (147, 28942), (224, 29095), (244, 29173), (247, 29185),

Gene: KingTut_52 Start: 48894, Stop: 48379, Start Num: 88
Candidate Starts for KingTut_52:
(44, 48972), (68, 48918), (Start: 81 @48903 has 10 MA's), (Start: 88 @48894 has 18 MA's), (130, 48828), (152, 48783), (165, 48759), (188, 48723), (190, 48717), (209, 48684), (228, 48630), (229, 48627), (259, 48510), (264, 48489), (287, 48414),

Gene: Klein_147 Start: 77536, Stop: 78138, Start Num: 82
Candidate Starts for Klein_147:
(47, 77467), (Start: 82 @77536 has 12 MA's), (145, 77641), (157, 77662), (158, 77665), (173, 77689), (174, 77692), (176, 77698), (220, 77800), (229, 77827), (233, 77845), (254, 77932), (297, 78124),

Gene: Kostya_106 Start: 61823, Stop: 62113, Start Num: 127
Candidate Starts for Kostya_106:
(Start: 127 @61823 has 121 MA's), (194, 61952), (208, 61976), (228, 62036), (239, 62084),

Gene: Kuwabara_68 Start: 41993, Stop: 42493, Start Num: 107
Candidate Starts for Kuwabara_68:
(Start: 107 @41993 has 1 MA's), (178, 42122), (224, 42230), (256, 42350),

Gene: LadyAstra_31 Start: 22651, Stop: 23034, Start Num: 108
Candidate Starts for LadyAstra_31:
(Start: 66 @22591 has 1 MA's), (Start: 108 @22651 has 5 MA's), (218, 22885),

Gene: LeeroyJenkins_94 Start: 49860, Stop: 49351, Start Num: 87
Candidate Starts for LeeroyJenkins_94:
(Start: 87 @49860 has 27 MA's), (188, 49689), (190, 49683), (201, 49653), (227, 49599), (238, 49551),

Gene: LeeroyJenkins_114 Start: 56842, Stop: 56381, Start Num: 106
Candidate Starts for LeeroyJenkins_114:
(Start: 106 @56842 has 2 MA's), (188, 56713), (236, 56590),

Gene: LeiMonet_62 Start: 52626, Stop: 52111, Start Num: 88
Candidate Starts for LeiMonet_62:
(44, 52704), (68, 52650), (Start: 81 @52635 has 10 MA's), (Start: 88 @52626 has 18 MA's), (130, 52560), (152, 52515), (165, 52491), (188, 52455), (190, 52449), (209, 52416), (228, 52362), (229, 52359), (259, 52242), (264, 52221), (287, 52146),

Gene: Lennon_36 Start: 34213, Stop: 33740, Start Num: 112
Candidate Starts for Lennon_36:
(38, 34351), (Start: 60 @34297 has 1 MA's), (97, 34240), (Start: 112 @34213 has 19 MA's), (161, 34114), (188, 34072), (189, 34069), (208, 34033), (228, 33976), (235, 33952), (246, 33895),

Gene: Leozinho_32 Start: 27392, Stop: 27934, Start Num: 77
Candidate Starts for Leozinho_32:
(Start: 77 @27392 has 7 MA's), (147, 27506), (224, 27659), (244, 27737), (247, 27749),

Gene: Lilac_107 Start: 62947, Stop: 63237, Start Num: 127
Candidate Starts for Lilac_107:
(Start: 127 @62947 has 121 MA's), (194, 63076), (208, 63100), (228, 63160), (239, 63208),

Gene: Lilizi_106 Start: 62233, Stop: 62523, Start Num: 127
Candidate Starts for Lilizi_106:
(Start: 127 @62233 has 121 MA's), (194, 62362), (208, 62386), (228, 62446), (239, 62494),

Gene: Lilpickle_105 Start: 61645, Stop: 61935, Start Num: 127
Candidate Starts for Lilpickle_105:
(Start: 127 @61645 has 121 MA's), (194, 61774), (208, 61798), (228, 61858), (239, 61906),

Gene: LilyPad_61 Start: 44847, Stop: 45245, Start Num: 70
Candidate Starts for LilyPad_61:
(Start: 70 @44847 has 1 MA's), (76, 44853), (138, 44955), (183, 45030), (214, 45090), (224, 45123), (233, 45150), (237, 45165), (244, 45201),

Gene: LittleE_112 Start: 62894, Stop: 63436, Start Num: 87
Candidate Starts for LittleE_112:
(Start: 87 @62894 has 27 MA's), (Start: 99 @62912 has 1 MA's), (175, 63032), (179, 63047), (189, 63065), (213, 63122), (216, 63128), (235, 63188), (257, 63281), (294, 63422),

Gene: Lopsy_58 Start: 51828, Stop: 51313, Start Num: 88
Candidate Starts for Lopsy_58:
(44, 51906), (68, 51852), (Start: 81 @51837 has 10 MA's), (Start: 88 @51828 has 18 MA's), (130, 51762), (152, 51717), (165, 51693), (188, 51657), (190, 51651), (209, 51618), (228, 51564), (229, 51561), (259, 51444), (264, 51423), (287, 51348),

Gene: LostAndPhound_60 Start: 52723, Stop: 52199, Start Num: 81
Candidate Starts for LostAndPhound_60:
(44, 52792), (68, 52738), (Start: 81 @52723 has 10 MA's), (Start: 88 @52714 has 18 MA's), (130, 52648), (152, 52603), (165, 52579), (188, 52543), (190, 52537), (209, 52504), (228, 52450), (229, 52447), (259, 52330), (264, 52309), (287, 52234),

Gene: Love_39 Start: 33996, Stop: 33523, Start Num: 112
Candidate Starts for Love_39:
(38, 34134), (Start: 60 @34080 has 1 MA's), (67, 34071), (97, 34023), (Start: 112 @33996 has 19 MA's), (161, 33897), (188, 33855), (189, 33852), (208, 33816), (228, 33759), (236, 33726), (246, 33678),

Gene: LunaBlu_33 Start: 28027, Stop: 28524, Start Num: 77
Candidate Starts for LunaBlu_33:
(36, 27925), (Start: 77 @28027 has 7 MA's), (213, 28249), (224, 28285), (268, 28450), (283, 28495),

Gene: Lysidious_60 Start: 40309, Stop: 40836, Start Num: 87
Candidate Starts for Lysidious_60:
(Start: 87 @40309 has 27 MA's), (Start: 101 @40330 has 3 MA's), (204, 40510),

Gene: Lysidious_17 Start: 10274, Stop: 10777, Start Num: 85
Candidate Starts for Lysidious_17:
(Start: 85 @10274 has 34 MA's), (138, 10364), (152, 10388), (211, 10493), (214, 10499), (224, 10532), (227, 10538), (254, 10643),

Gene: MISSy_107 Start: 62930, Stop: 63220, Start Num: 127
Candidate Starts for MISSy_107:
(Start: 127 @62930 has 121 MA's), (194, 63059), (208, 63083), (228, 63143), (239, 63191),

Gene: MPhalcon_107 Start: 62348, Stop: 62638, Start Num: 127
Candidate Starts for MPhalcon_107:
(Start: 127 @62348 has 121 MA's), (194, 62477), (208, 62501), (228, 62561), (239, 62609),

Gene: MadamMonkfish_105 Start: 61655, Stop: 61945, Start Num: 127
Candidate Starts for MadamMonkfish_105:
(Start: 127 @61655 has 121 MA's), (194, 61784), (208, 61808), (228, 61868), (239, 61916),

Gene: Malachai_17 Start: 10279, Stop: 10785, Start Num: 85
Candidate Starts for Malachai_17:
(Start: 85 @10279 has 34 MA's), (138, 10369), (214, 10504), (224, 10537), (238, 10588), (262, 10681), (275, 10723),

Gene: Manda_107 Start: 62385, Stop: 62675, Start Num: 127
Candidate Starts for Manda_107:
(Start: 127 @62385 has 121 MA's), (194, 62514), (208, 62538), (228, 62598), (239, 62646),

Gene: Maravista_65 Start: 42918, Stop: 43388, Start Num: 119
Candidate Starts for Maravista_65:
(Start: 119 @42918 has 3 MA's), (178, 43035), (224, 43143), (256, 43263),

Gene: Marshmallow_103 Start: 62343, Stop: 62633, Start Num: 127
Candidate Starts for Marshmallow_103:
(Start: 127 @62343 has 121 MA's), (194, 62472), (208, 62496), (228, 62556), (239, 62604),

Gene: Marshmallow_109 Start: 63582, Stop: 64082, Start Num: 85
Candidate Starts for Marshmallow_109:
(Start: 85 @63582 has 34 MA's), (Start: 119 @63636 has 3 MA's), (169, 63717), (171, 63720), (186, 63744), (203, 63777), (224, 63834), (267, 63996),

Gene: Matalotodo_59 Start: 52707, Stop: 52192, Start Num: 88
Candidate Starts for Matalotodo_59:
(44, 52785), (68, 52731), (Start: 81 @52716 has 10 MA's), (Start: 88 @52707 has 18 MA's), (130, 52641), (152, 52596), (165, 52572), (188, 52536), (190, 52530), (209, 52497), (228, 52443), (229, 52440), (259, 52323), (264, 52302), (287, 52227),

Gene: Maxxinista_107 Start: 62132, Stop: 62422, Start Num: 127
Candidate Starts for Maxxinista_107:
(Start: 127 @62132 has 121 MA's), (194, 62261), (208, 62285), (228, 62345), (239, 62393),

Gene: McCrothy_36 Start: 33804, Stop: 33331, Start Num: 112
Candidate Starts for McCrothy_36:
(38, 33942), (Start: 60 @33888 has 1 MA's), (67, 33879), (97, 33831), (Start: 112 @33804 has 19 MA's), (161, 33705), (188, 33663), (189, 33660), (208, 33624), (228, 33567), (236, 33534), (246, 33486),

Gene: McKinley_38 Start: 34022, Stop: 33549, Start Num: 112
Candidate Starts for McKinley_38:

(38, 34160), (Start: 60 @34106 has 1 MA's), (67, 34097), (97, 34049), (Start: 112 @34022 has 19 MA's), (161, 33923), (188, 33881), (189, 33878), (208, 33842), (228, 33785), (246, 33704),

Gene: Mellie_57 Start: 38319, Stop: 38846, Start Num: 87
Candidate Starts for Mellie_57:
(Start: 87 @38319 has 27 MA's), (Start: 101 @38340 has 3 MA's), (204, 38520), (283, 38784),

Gene: Mesmerelda_59 Start: 52711, Stop: 52196, Start Num: 88
Candidate Starts for Mesmerelda_59:
(44, 52789), (68, 52735), (Start: 81 @52720 has 10 MA's), (Start: 88 @52711 has 18 MA's), (130, 52645), (152, 52600), (165, 52576), (188, 52540), (190, 52534), (209, 52501), (228, 52447), (229, 52444), (259, 52327), (264, 52306), (287, 52231),

Gene: Mila11_96 Start: 59511, Stop: 59011, Start Num: 109
Candidate Starts for Mila11_96:
(20, 59790), (21, 59787), (25, 59730), (35, 59670), (93, 59538), (109, 59511), (117, 59499), (Start: 123 @59490 has 1 MA's), (207, 59310), (213, 59292), (232, 59232),

Gene: Mindy_105 Start: 61664, Stop: 61954, Start Num: 127
Candidate Starts for Mindy_105:
(Start: 127 @61664 has 121 MA's), (194, 61793), (208, 61817), (228, 61877), (239, 61925),

Gene: Minerva_148 Start: 78849, Stop: 79448, Start Num: 85
Candidate Starts for Minerva_148:
(Start: 85 @78849 has 34 MA's), (145, 78951), (157, 78972), (158, 78975), (192, 79038), (204, 79068), (209, 79077), (220, 79110), (233, 79155), (254, 79242), (272, 79302), (282, 79338), (297, 79434),

Gene: Minerva_162 Start: 85665, Stop: 86177, Start Num: 77
Candidate Starts for Minerva_162:
(Start: 77 @85665 has 7 MA's), (Start: 79 @85668 has 1 MA's), (Start: 103 @85701 has 5 MA's), (132, 85752), (152, 85788), (203, 85878), (209, 85887), (213, 85899), (214, 85902), (224, 85935), (235, 85965), (254, 86046), (281, 86139), (289, 86163),

Gene: MiniMommy_29 Start: 22618, Stop: 23001, Start Num: 108
Candidate Starts for MiniMommy_29:
(29, 22438), (Start: 108 @22618 has 5 MA's), (193, 22792), (218, 22852),

Gene: Miniwave_101 Start: 61841, Stop: 62131, Start Num: 127
Candidate Starts for Miniwave_101:
(Start: 127 @61841 has 121 MA's), (194, 61970), (208, 61994), (228, 62054), (239, 62102),

Gene: Misfit_107 Start: 63444, Stop: 63734, Start Num: 127
Candidate Starts for Misfit_107:
(Start: 127 @63444 has 121 MA's), (194, 63573), (208, 63597), (228, 63657), (239, 63705),

Gene: ModicumRichard_20 Start: 18713, Stop: 18225, Start Num: 112
Candidate Starts for ModicumRichard_20:
(6, 19316), (9, 19235), (10, 19211), (12, 19175), (14, 19145), (15, 19130), (22, 18977), (39, 18863), (56, 18806), (59, 18797), (62, 18794), (Start: 112 @18713 has 19 MA's), (153, 18629), (168, 18605), (193, 18560), (208, 18533), (213, 18521), (215, 18515), (246, 18395),

Gene: Moldemort_108 Start: 62113, Stop: 62403, Start Num: 127
Candidate Starts for Moldemort_108:

(Start: 127 @62113 has 121 MA's), (194, 62242), (208, 62266), (228, 62326), (239, 62374),

Gene: Mollymur_109 Start: 70923, Stop: 71270, Start Num: 110
Candidate Starts for Mollymur_109:
(49, 70821), (55, 70833), (Start: 110 @70923 has 3 MA's), (188, 71088), (214, 71142), (229, 71184), (241, 71235),

Gene: Morrissey_46 Start: 35134, Stop: 34631, Start Num: 108
Candidate Starts for Morrissey_46:
(4, 35755), (5, 35731), (7, 35701), (8, 35656), (11, 35611), (17, 35482), (34, 35293), (Start: 102 @35143 has 2 MA's), (Start: 108 @35134 has 5 MA's), (131, 35095), (133, 35086), (144, 35047), (193, 34954), (209, 34927), (211, 34918), (213, 34915), (214, 34912), (224, 34879),

Gene: Mosby_102 Start: 61808, Stop: 62098, Start Num: 127
Candidate Starts for Mosby_102:
(Start: 127 @61808 has 121 MA's), (194, 61937), (208, 61961), (228, 62021), (239, 62069),

Gene: Mova_51 Start: 35948, Stop: 36499, Start Num: 83
Candidate Starts for Mova_51:
(Start: 83 @35948 has 8 MA's), (86, 35951), (138, 36041), (160, 36083), (196, 36143), (224, 36209), (237, 36251), (247, 36299),

Gene: MulchSalad_28 Start: 23891, Stop: 24409, Start Num: 71
Candidate Starts for MulchSalad_28:
(71, 23891), (130, 23975), (183, 24071), (188, 24077), (213, 24119), (215, 24125), (224, 24155),

Gene: Murica_109 Start: 64147, Stop: 64437, Start Num: 127
Candidate Starts for Murica_109:
(Start: 127 @64147 has 121 MA's), (194, 64276), (208, 64300), (228, 64360), (239, 64408),

Gene: Murphy_105 Start: 62505, Stop: 62795, Start Num: 127
Candidate Starts for Murphy_105:
(Start: 127 @62505 has 121 MA's), (194, 62634), (208, 62658), (228, 62718), (239, 62766),

Gene: Mutaforma13_54 Start: 38739, Stop: 39290, Start Num: 83
Candidate Starts for Mutaforma13_54:
(Start: 83 @38739 has 8 MA's), (86, 38742), (138, 38832), (160, 38874), (196, 38934), (224, 39000), (237, 39042), (247, 39090),

Gene: Myrale_106 Start: 62482, Stop: 62772, Start Num: 127
Candidate Starts for Myrale_106:
(Start: 127 @62482 has 121 MA's), (194, 62611), (208, 62635), (228, 62695), (239, 62743),

Gene: Nala_108 Start: 62857, Stop: 63147, Start Num: 127
Candidate Starts for Nala_108:
(Start: 127 @62857 has 121 MA's), (194, 62986), (208, 63010), (228, 63070), (239, 63118),

Gene: Nekros_146 Start: 78699, Stop: 79298, Start Num: 87
Candidate Starts for Nekros_146:
(Start: 87 @78699 has 27 MA's), (142, 78789), (192, 78885), (210, 78930), (220, 78957), (233, 79002), (243, 79044), (244, 79053), (288, 79200), (290, 79215), (297, 79284),

Gene: NelitzaMV_103 Start: 60830, Stop: 61120, Start Num: 127

Candidate Starts for NelitzaMV_103:
(Start: 127 @60830 has 121 MA's), (194, 60959), (208, 60983), (228, 61043), (239, 61091),

Gene: NewHope4_33 Start: 27527, Stop: 27021, Start Num: 83
Candidate Starts for NewHope4_33:
(Start: 83 @27527 has 8 MA's), (Start: 99 @27512 has 1 MA's), (130, 27461), (132, 27452), (154, 27410), (163, 27395), (171, 27383), (172, 27380), (188, 27359), (213, 27320), (224, 27284), (247, 27194), (266, 27128), (275, 27098),

Gene: Nibley_154 Start: 82613, Stop: 83122, Start Num: 79
Candidate Starts for Nibley_154:
(Start: 77 @82610 has 7 MA's), (Start: 79 @82613 has 1 MA's), (Start: 103 @82646 has 5 MA's), (132, 82697), (152, 82733), (203, 82823), (209, 82832), (213, 82844), (224, 82880), (235, 82910), (254, 82991), (281, 83084), (289, 83108),

Gene: Nimrod_106 Start: 62491, Stop: 62781, Start Num: 127
Candidate Starts for Nimrod_106:
(Start: 127 @62491 has 121 MA's), (194, 62620), (208, 62644), (228, 62704), (239, 62752),

Gene: Nimrod_111 Start: 63730, Stop: 64230, Start Num: 85
Candidate Starts for Nimrod_111:
(53, 63676), (Start: 85 @63730 has 34 MA's), (Start: 119 @63784 has 3 MA's), (169, 63865), (171, 63868), (186, 63892), (203, 63925), (224, 63982), (267, 64144),

Gene: NoSleep_106 Start: 61665, Stop: 61955, Start Num: 127
Candidate Starts for NoSleep_106:
(Start: 127 @61665 has 121 MA's), (194, 61794), (208, 61818), (228, 61878), (239, 61926),

Gene: Nordenberg_30 Start: 32192, Stop: 31719, Start Num: 112
Candidate Starts for Nordenberg_30:
(38, 32330), (Start: 60 @32276 has 1 MA's), (67, 32267), (97, 32219), (Start: 112 @32192 has 19 MA's), (161, 32093), (188, 32051), (189, 32048), (208, 32012), (228, 31955), (236, 31922), (246, 31874),

Gene: ObLaDi_20 Start: 18692, Stop: 18204, Start Num: 112
Candidate Starts for ObLaDi_20:
(1, 19712), (2, 19706), (3, 19688), (6, 19295), (9, 19214), (10, 19190), (12, 19154), (14, 19124), (15, 19109), (22, 18956), (39, 18842), (56, 18785), (59, 18776), (62, 18773), (Start: 112 @18692 has 19 MA's), (153, 18608), (168, 18584), (193, 18539), (208, 18512), (213, 18500), (215, 18494), (246, 18374),

Gene: OhShagHennessy_74 Start: 50528, Stop: 50932, Start Num: 128
Candidate Starts for OhShagHennessy_74:
(76, 50453), (121, 50519), (Start: 128 @50528 has 2 MA's), (149, 50579), (160, 50597), (199, 50654), (200, 50657), (223, 50714), (237, 50756), (238, 50765), (239, 50768), (248, 50813), (250, 50816),

Gene: Omega_117 Start: 63909, Stop: 64451, Start Num: 87
Candidate Starts for Omega_117:
(Start: 66 @63876 has 1 MA's), (Start: 87 @63909 has 27 MA's), (Start: 99 @63927 has 1 MA's), (175, 64047), (179, 64062), (189, 64080), (213, 64137), (216, 64143), (235, 64203), (257, 64296), (294, 64437),

Gene: Optimus_141 Start: 76720, Stop: 77322, Start Num: 82

Candidate Starts for Optimus_141:
(47, 76651), (Start: 82 @76720 has 12 MA's), (145, 76825), (157, 76846), (158, 76849), (173, 76873), (174, 76876), (176, 76882), (220, 76984), (229, 77011), (233, 77029), (254, 77116), (297, 77308),

Gene: Orfeu_58 Start: 52711, Stop: 52187, Start Num: 81
Candidate Starts for Orfeu_58:
(44, 52780), (68, 52726), (Start: 81 @52711 has 10 MA's), (Start: 88 @52702 has 18 MA's), (130, 52636), (152, 52591), (165, 52567), (188, 52531), (190, 52525), (209, 52492), (228, 52438), (229, 52435), (259, 52318), (264, 52297), (287, 52222),

Gene: Origami_31 Start: 22651, Stop: 23034, Start Num: 108
Candidate Starts for Origami_31:
(Start: 66 @22591 has 1 MA's), (Start: 108 @22651 has 5 MA's), (218, 22885),

Gene: OrionPax_104 Start: 61738, Stop: 62028, Start Num: 127
Candidate Starts for OrionPax_104:
(Start: 127 @61738 has 121 MA's), (194, 61867), (208, 61891), (228, 61951), (239, 61999),

Gene: Paperbeatsrock_105 Start: 62519, Stop: 62809, Start Num: 127
Candidate Starts for Paperbeatsrock_105:
(Start: 127 @62519 has 121 MA's), (194, 62648), (208, 62672), (228, 62732), (239, 62780),

Gene: Paries_38 Start: 33658, Stop: 33185, Start Num: 112
Candidate Starts for Paries_38:
(31, 33820), (38, 33796), (Start: 60 @33742 has 1 MA's), (67, 33733), (97, 33685), (Start: 112 @33658 has 19 MA's), (161, 33559), (188, 33517), (189, 33514), (208, 33478), (228, 33421), (236, 33388), (246, 33340),

Gene: Pat3_103 Start: 61036, Stop: 61323, Start Num: 127
Candidate Starts for Pat3_103:
(Start: 127 @61036 has 121 MA's), (194, 61165), (208, 61189), (228, 61249), (239, 61297),

Gene: Peregrin_178 Start: 94313, Stop: 94846, Start Num: 87
Candidate Starts for Peregrin_178:
(Start: 87 @94313 has 27 MA's), (132, 94391), (190, 94499), (216, 94553), (240, 94640), (244, 94661), (279, 94781),

Gene: Phaja_104 Start: 61723, Stop: 62013, Start Num: 127
Candidate Starts for Phaja_104:
(Start: 127 @61723 has 121 MA's), (194, 61852), (208, 61876), (228, 61936), (239, 61984),

Gene: Pharsalus_103 Start: 62218, Stop: 62508, Start Num: 127
Candidate Starts for Pharsalus_103:
(Start: 127 @62218 has 121 MA's), (194, 62347), (208, 62371), (228, 62431), (239, 62479),

Gene: PhatBacter_109 Start: 62887, Stop: 63177, Start Num: 127
Candidate Starts for PhatBacter_109:
(Start: 127 @62887 has 121 MA's), (194, 63016), (208, 63040), (228, 63100), (239, 63148),

Gene: Phaux_108 Start: 63447, Stop: 63737, Start Num: 127
Candidate Starts for Phaux_108:
(Start: 127 @63447 has 121 MA's), (194, 63576), (208, 63600), (228, 63660), (239, 63708),

Gene: Phineas_45 Start: 31827, Stop: 32321, Start Num: 85
Candidate Starts for Phineas_45:
(62, 31791), (64, 31794), (Start: 85 @31827 has 34 MA's), (Start: 87 @31830 has 27 MA's), (Start: 99 @31848 has 1 MA's), (Start: 103 @31857 has 5 MA's), (198, 32022), (204, 32031), (209, 32037), (213, 32049), (224, 32085), (238, 32136), (247, 32175),

Gene: Phoebus_113 Start: 65664, Stop: 66206, Start Num: 87
Candidate Starts for Phoebus_113:
(28, 65502), (32, 65526), (Start: 66 @65631 has 1 MA's), (Start: 87 @65664 has 27 MA's), (Start: 99 @65682 has 1 MA's), (132, 65739), (175, 65802), (179, 65817), (189, 65835), (213, 65892), (216, 65898), (235, 65958), (257, 66051),

Gene: Phoebus_149 Start: 81221, Stop: 81820, Start Num: 85
Candidate Starts for Phoebus_149:
(Start: 85 @81221 has 34 MA's), (145, 81323), (157, 81344), (158, 81347), (192, 81410), (204, 81440), (209, 81449), (220, 81482), (233, 81527), (254, 81614), (272, 81674), (282, 81710), (297, 81806),

Gene: Phrux_102 Start: 61525, Stop: 61815, Start Num: 127
Candidate Starts for Phrux_102:
(Start: 127 @61525 has 121 MA's), (194, 61654), (208, 61678), (228, 61738), (239, 61786),

Gene: Pippin15_70 Start: 44587, Stop: 44967, Start Num: 100
Candidate Starts for Pippin15_70:
(Start: 100 @44587 has 1 MA's), (113, 44605), (115, 44608), (Start: 127 @44626 has 121 MA's), (Start: 129 @44629 has 2 MA's), (170, 44716), (197, 44782), (211, 44803), (213, 44806), (218, 44821), (222, 44833), (237, 44884), (247, 44932), (252, 44950),

Gene: Pippy_62 Start: 40280, Stop: 40750, Start Num: 119
Candidate Starts for Pippy_62:
(Start: 119 @40280 has 3 MA's), (178, 40397), (224, 40505), (256, 40625),

Gene: Placalicious_60 Start: 53221, Stop: 52697, Start Num: 81
Candidate Starts for Placalicious_60:
(44, 53290), (68, 53236), (Start: 81 @53221 has 10 MA's), (Start: 88 @53212 has 18 MA's), (130, 53146), (152, 53101), (165, 53077), (188, 53041), (190, 53035), (209, 53002), (228, 52948), (229, 52945), (259, 52828), (264, 52807), (287, 52732),

Gene: Podrick_58 Start: 51964, Stop: 51449, Start Num: 88
Candidate Starts for Podrick_58:
(44, 52042), (68, 51988), (Start: 81 @51973 has 10 MA's), (Start: 88 @51964 has 18 MA's), (130, 51898), (152, 51853), (165, 51829), (188, 51793), (190, 51787), (209, 51754), (228, 51700), (229, 51697), (259, 51580), (264, 51559), (287, 51484),

Gene: Poochiewood_65 Start: 45021, Stop: 45479, Start Num: 88
Candidate Starts for Poochiewood_65:
(Start: 88 @45021 has 18 MA's), (132, 45093), (193, 45183), (201, 45195), (213, 45216), (232, 45279), (238, 45306),

Gene: Porcelain_108 Start: 60257, Stop: 60832, Start Num: 66
Candidate Starts for Porcelain_108:
(Start: 66 @60257 has 1 MA's), (Start: 87 @60290 has 27 MA's), (Start: 99 @60308 has 1 MA's), (132, 60365), (175, 60428), (179, 60443), (189, 60461), (213, 60518), (216, 60524), (235, 60584), (257, 60677),

Gene: Porky_109 Start: 62562, Stop: 63008, Start Num: 119
Candidate Starts for Porky_109:
(53, 62454), (Start: 85 @62508 has 34 MA's), (Start: 119 @62562 has 3 MA's), (169, 62643), (171, 62646), (186, 62670), (203, 62703), (224, 62760), (267, 62922),

Gene: Porky_104 Start: 61269, Stop: 61559, Start Num: 127
Candidate Starts for Porky_104:
(Start: 127 @61269 has 121 MA's), (194, 61398), (208, 61422), (228, 61482), (239, 61530),

Gene: Pound_50 Start: 43906, Stop: 44415, Start Num: 101
Candidate Starts for Pound_50:
(45, 43795), (Start: 75 @43864 has 1 MA's), (Start: 87 @43882 has 27 MA's), (Start: 101 @43906 has 3 MA's), (138, 43972), (169, 44026), (188, 44071), (224, 44158), (244, 44236), (247, 44248), (291, 44401),

Gene: Pumpkin_107 Start: 61865, Stop: 62155, Start Num: 127
Candidate Starts for Pumpkin_107:
(Start: 127 @61865 has 121 MA's), (194, 61994), (208, 62018), (228, 62078), (239, 62126),

Gene: Pygmy_47 Start: 33294, Stop: 33785, Start Num: 87
Candidate Starts for Pygmy_47:
(62, 33255), (64, 33258), (Start: 85 @33291 has 34 MA's), (Start: 87 @33294 has 27 MA's), (Start: 99 @33312 has 1 MA's), (Start: 103 @33321 has 5 MA's), (198, 33486), (204, 33495), (209, 33501), (213, 33513), (224, 33549), (238, 33600), (247, 33639),

Gene: Rakim_107 Start: 61934, Stop: 62221, Start Num: 127
Candidate Starts for Rakim_107:
(Start: 127 @61934 has 121 MA's), (194, 62063), (208, 62087), (228, 62147), (239, 62195),

Gene: RedWattleHog_18 Start: 21845, Stop: 22282, Start Num: 90
Candidate Starts for RedWattleHog_18:
(Start: 90 @21845 has 5 MA's), (130, 21908), (149, 21947), (151, 21950), (160, 21968), (238, 22148), (260, 22226), (274, 22271),

Gene: RedWattleHog_85 Start: 77917, Stop: 78504, Start Num: 129
Candidate Starts for RedWattleHog_85:
(Start: 129 @77917 has 2 MA's), (160, 77989), (190, 78037), (193, 78043), (215, 78091), (217, 78100), (218, 78103), (221, 78112), (230, 78142), (234, 78160), (242, 78193), (253, 78238), (263, 78280), (280, 78340), (298, 78484),

Gene: RedWattleHog_22 Start: 25760, Stop: 26308, Start Num: 85
Candidate Starts for RedWattleHog_22:
(71, 25739), (Start: 85 @25760 has 34 MA's), (159, 25880), (237, 26048), (238, 26057), (245, 26087), (247, 26096), (285, 26222),

Gene: RedWattleHog_100 Start: 85618, Stop: 86124, Start Num: 73
Candidate Starts for RedWattleHog_100:
(61, 85600), (Start: 73 @85618 has 1 MA's), (Start: 119 @85687 has 3 MA's), (137, 85723), (138, 85726), (139, 85729), (160, 85768), (210, 85846), (213, 85852), (247, 85981), (268, 86056),

Gene: Rimmer_104 Start: 62324, Stop: 62614, Start Num: 127
Candidate Starts for Rimmer_104:

(Start: 127 @62324 has 121 MA's), (194, 62453), (208, 62477), (228, 62537), (239, 62585),

Gene: RiverMonster_105 Start: 62420, Stop: 62710, Start Num: 127
Candidate Starts for RiverMonster_105:
(Start: 127 @62420 has 121 MA's), (194, 62549), (208, 62573), (228, 62633), (239, 62681),

Gene: Rofo_36 Start: 33056, Stop: 32583, Start Num: 112
Candidate Starts for Rofo_36:
(38, 33194), (Start: 60 @33140 has 1 MA's), (67, 33131), (97, 33083), (Start: 112 @33056 has 19 MA's), (161, 32957), (188, 32915), (189, 32912), (208, 32876), (228, 32819), (236, 32786), (246, 32738),

Gene: Rose5_65 Start: 45033, Stop: 45491, Start Num: 88
Candidate Starts for Rose5_65:
(Start: 88 @45033 has 18 MA's), (132, 45105), (193, 45195), (201, 45207), (213, 45228), (232, 45291), (238, 45318),

Gene: RunningOnE_35 Start: 16150, Stop: 15782, Start Num: 102
Candidate Starts for RunningOnE_35:
(Start: 102 @16150 has 2 MA's), (142, 16075), (208, 15961), (211, 15949), (218, 15931),

Gene: Saguaro_52 Start: 46118, Stop: 45648, Start Num: 84
Candidate Starts for Saguaro_52:
(54, 46169), (Start: 84 @46118 has 1 MA's), (Start: 101 @46097 has 3 MA's), (Start: 119 @46070 has 3 MA's), (130, 46052), (132, 46043), (138, 46031), (166, 45992), (213, 45905), (244, 45791), (257, 45746),

Gene: Saints25_102 Start: 60350, Stop: 60640, Start Num: 127
Candidate Starts for Saints25_102:
(Start: 127 @60350 has 121 MA's), (194, 60479), (208, 60503), (228, 60563), (239, 60611),

Gene: Sassafras_31 Start: 27690, Stop: 28187, Start Num: 77
Candidate Starts for Sassafras_31:
(36, 27588), (Start: 77 @27690 has 7 MA's), (213, 27912), (224, 27948), (268, 28113), (283, 28158),

Gene: Sassay_101 Start: 60770, Stop: 61060, Start Num: 127
Candidate Starts for Sassay_101:
(Start: 127 @60770 has 121 MA's), (194, 60899), (208, 60923), (228, 60983), (239, 61031),

Gene: Schomber_94 Start: 69164, Stop: 69682, Start Num: 90
Candidate Starts for Schomber_94:
(64, 69122), (74, 69137), (Start: 90 @69164 has 5 MA's), (165, 69287), (171, 69296), (188, 69320), (247, 69500),

Gene: ScoobyDoobyDoo_184 Start: 103006, Stop: 103509, Start Num: 126
Candidate Starts for ScoobyDoobyDoo_184:
(98, 102958), (105, 102973), (Start: 112 @102985 has 19 MA's), (117, 102991), (Start: 126 @103006 has 4 MA's), (188, 103123), (213, 103174), (218, 103189), (247, 103300), (258, 103333), (260, 103342), (265, 103357), (276, 103399), (292, 103462), (296, 103489),

Gene: ScoobyDoobyDoo_60 Start: 22027, Stop: 22503, Start Num: 111
Candidate Starts for ScoobyDoobyDoo_60:
(52, 21928), (Start: 111 @22027 has 1 MA's), (215, 22225), (277, 22462),

Gene: Sedona_36 Start: 34162, Stop: 33689, Start Num: 112
Candidate Starts for Sedona_36:
(38, 34300), (Start: 60 @34246 has 1 MA's), (67, 34237), (97, 34189), (Start: 112 @34162 has 19 MA's), (161, 34063), (188, 34021), (189, 34018), (208, 33982), (228, 33925), (236, 33892), (246, 33844),

Gene: Serenabean_69 Start: 43953, Stop: 44279, Start Num: 126
Candidate Starts for Serenabean_69:
(78, 43881), (Start: 110 @43932 has 3 MA's), (Start: 124 @43950 has 2 MA's), (Start: 126 @43953 has 4 MA's), (141, 43995), (143, 43998), (182, 44070), (184, 44073), (204, 44109), (208, 44115), (213, 44130), (228, 44172), (240, 44223), (244, 44241), (252, 44271),

Gene: Shaboozey_39 Start: 35483, Stop: 36025, Start Num: 77
Candidate Starts for Shaboozey_39:
(41, 35396), (Start: 77 @35483 has 7 MA's), (Start: 119 @35546 has 3 MA's), (150, 35612), (163, 35636), (186, 35669), (203, 35702), (213, 35723), (214, 35726), (224, 35759), (244, 35837), (275, 35948), (290, 35996),

Gene: Shaboozey_158 Start: 83054, Stop: 83566, Start Num: 77
Candidate Starts for Shaboozey_158:
(Start: 77 @83054 has 7 MA's), (Start: 79 @83057 has 1 MA's), (Start: 103 @83090 has 5 MA's), (132, 83141), (152, 83177), (203, 83267), (209, 83276), (213, 83288), (224, 83324), (235, 83354), (254, 83435), (281, 83528), (289, 83552),

Gene: ShakeItOph_30 Start: 22617, Stop: 23000, Start Num: 108
Candidate Starts for ShakeItOph_30:
(29, 22437), (Start: 108 @22617 has 5 MA's), (193, 22791), (218, 22851),

Gene: ShamWow_106 Start: 62698, Stop: 62988, Start Num: 127
Candidate Starts for ShamWow_106:
(Start: 127 @62698 has 121 MA's), (194, 62827), (208, 62851), (228, 62911), (239, 62959),

Gene: ShereKhan_104 Start: 63179, Stop: 63469, Start Num: 127
Candidate Starts for ShereKhan_104:
(Start: 127 @63179 has 121 MA's), (194, 63308), (208, 63332), (228, 63392), (239, 63440),

Gene: Shipwreck_47 Start: 33269, Stop: 33760, Start Num: 87
Candidate Starts for Shipwreck_47:
(62, 33230), (64, 33233), (Start: 85 @33266 has 34 MA's), (Start: 87 @33269 has 27 MA's), (Start: 99 @33287 has 1 MA's), (Start: 103 @33296 has 5 MA's), (198, 33461), (204, 33470), (209, 33476), (213, 33488), (224, 33524), (238, 33575), (247, 33614),

Gene: Shlim410_56 Start: 41496, Stop: 42002, Start Num: 88
Candidate Starts for Shlim410_56:
(22, 41271), (24, 41301), (Start: 88 @41496 has 18 MA's), (132, 41571), (143, 41583), (165, 41625), (213, 41712), (228, 41751),

Gene: Simpliphy_104 Start: 61991, Stop: 62281, Start Num: 127
Candidate Starts for Simpliphy_104:
(Start: 127 @61991 has 121 MA's), (194, 62120), (208, 62144), (228, 62204), (239, 62252),

Gene: SirDuracell_106 Start: 61536, Stop: 61823, Start Num: 127

Candidate Starts for SirDuracell_106:
(Start: 127 @61536 has 121 MA's), (194, 61665), (208, 61689), (228, 61749), (239, 61797),

Gene: Sitar_36 Start: 34297, Stop: 33740, Start Num: 60
Candidate Starts for Sitar_36:
(38, 34351), (Start: 60 @34297 has 1 MA's), (97, 34240), (Start: 112 @34213 has 19 MA's), (161, 34114), (188, 34072), (189, 34069), (208, 34033), (228, 33976), (235, 33952), (246, 33895),

Gene: Sleepyhead_60 Start: 39674, Stop: 40021, Start Num: 95
Candidate Starts for Sleepyhead_60:
(Start: 95 @39674 has 1 MA's), (211, 39896), (224, 39935), (243, 40004),

Gene: SophKB_104 Start: 61980, Stop: 62270, Start Num: 127
Candidate Starts for SophKB_104:
(Start: 127 @61980 has 121 MA's), (194, 62109), (208, 62133), (228, 62193), (239, 62241),

Gene: Sotrice96_107 Start: 62444, Stop: 62734, Start Num: 127
Candidate Starts for Sotrice96_107:
(Start: 127 @62444 has 121 MA's), (194, 62573), (208, 62597), (228, 62657), (239, 62705),

Gene: SpeedDemon_1110 Start: 72859, Stop: 73215, Start Num: 103
Candidate Starts for SpeedDemon_1110:
(65, 72799), (Start: 103 @72859 has 5 MA's), (188, 73030), (208, 73066), (241, 73177), (243, 73186),

Gene: Stank_113 Start: 63457, Stop: 63957, Start Num: 85
Candidate Starts for Stank_113:
(53, 63403), (Start: 85 @63457 has 34 MA's), (Start: 119 @63511 has 3 MA's), (169, 63592), (171, 63595), (186, 63619), (203, 63652), (224, 63709), (267, 63871),

Gene: Stank_108 Start: 62218, Stop: 62508, Start Num: 127
Candidate Starts for Stank_108:
(Start: 127 @62218 has 121 MA's), (194, 62347), (208, 62371), (228, 62431), (239, 62479),

Gene: Starcevich_34 Start: 27605, Stop: 27099, Start Num: 83
Candidate Starts for Starcevich_34:
(Start: 83 @27605 has 8 MA's), (Start: 99 @27590 has 1 MA's), (130, 27539), (132, 27530), (154, 27488), (163, 27473), (171, 27461), (172, 27458), (188, 27437), (213, 27398), (224, 27362), (247, 27272), (266, 27206), (275, 27176),

Gene: Stark_106 Start: 62304, Stop: 62594, Start Num: 127
Candidate Starts for Stark_106:
(Start: 127 @62304 has 121 MA's), (194, 62433), (208, 62457), (228, 62517), (239, 62565),

Gene: StellaBean_105 Start: 62601, Stop: 62891, Start Num: 127
Candidate Starts for StellaBean_105:
(Start: 127 @62601 has 121 MA's), (194, 62730), (208, 62754), (228, 62814), (239, 62862),

Gene: Stillion_3 Start: 2875, Stop: 3330, Start Num: 120
Candidate Starts for Stillion_3:
(120, 2875), (149, 2935), (164, 2959), (188, 2995), (208, 3034), (213, 3046),

Gene: Stillion_85 Start: 53972, Stop: 54460, Start Num: 94
Candidate Starts for Stillion_85:

(48, 53909), (94, 53972), (118, 54011), (136, 54047), (188, 54125), (189, 54128), (190, 54131), (202, 54149), (212, 54164), (245, 54281), (247, 54290), (271, 54368),

Gene: StolenFromERC_108 Start: 62143, Stop: 62433, Start Num: 127
Candidate Starts for StolenFromERC_108:
(Start: 127 @62143 has 121 MA's), (194, 62272), (208, 62296), (228, 62356), (239, 62404),

Gene: Stormageddon_82 Start: 77898, Stop: 78485, Start Num: 129
Candidate Starts for Stormageddon_82:
(Start: 129 @77898 has 2 MA's), (160, 77970), (190, 78018), (193, 78024), (215, 78072), (217, 78081), (218, 78084), (221, 78093), (230, 78123), (234, 78141), (242, 78174), (253, 78219), (263, 78261), (280, 78321), (298, 78465),

Gene: Superphikiman_145 Start: 75577, Stop: 76179, Start Num: 82
Candidate Starts for Superphikiman_145:
(Start: 82 @75577 has 12 MA's), (145, 75682), (157, 75703), (158, 75706), (173, 75730), (174, 75733), (176, 75739), (204, 75799), (229, 75868), (233, 75886), (244, 75937), (254, 75973), (282, 76069), (297, 76165),

Gene: Sweetclover_69 Start: 43166, Stop: 43486, Start Num: 122
Candidate Starts for Sweetclover_69:
(Start: 122 @43166 has 1 MA's), (143, 43211), (208, 43328), (240, 43436), (244, 43454), (252, 43478),

Gene: TBrady12_109 Start: 61655, Stop: 61945, Start Num: 127
Candidate Starts for TBrady12_109:
(Start: 127 @61655 has 121 MA's), (194, 61784), (208, 61808), (228, 61868), (239, 61916),

Gene: TBrady12_114 Start: 62894, Stop: 63394, Start Num: 85
Candidate Starts for TBrady12_114:
(53, 62840), (Start: 85 @62894 has 34 MA's), (Start: 119 @62948 has 3 MA's), (169, 63029), (171, 63032), (186, 63056), (203, 63089), (224, 63146), (267, 63308),

Gene: Tangent_36 Start: 32578, Stop: 32105, Start Num: 112
Candidate Starts for Tangent_36:
(38, 32716), (Start: 60 @32662 has 1 MA's), (67, 32653), (97, 32605), (Start: 112 @32578 has 19 MA's), (161, 32479), (188, 32437), (189, 32434), (208, 32398), (228, 32341), (236, 32308), (246, 32260),

Gene: Tarkin_105 Start: 63044, Stop: 63334, Start Num: 127
Candidate Starts for Tarkin_105:
(Start: 127 @63044 has 121 MA's), (194, 63173), (208, 63197), (228, 63257), (239, 63305),

Gene: TeardropMSU_102 Start: 61546, Stop: 61836, Start Num: 127
Candidate Starts for TeardropMSU_102:
(Start: 127 @61546 has 121 MA's), (194, 61675), (208, 61699), (228, 61759), (239, 61807),

Gene: Teaspoon_106 Start: 62203, Stop: 62493, Start Num: 127
Candidate Starts for Teaspoon_106:
(Start: 127 @62203 has 121 MA's), (194, 62332), (208, 62356), (228, 62416), (239, 62464),

Gene: Teaspoon_111 Start: 63442, Stop: 63942, Start Num: 85
Candidate Starts for Teaspoon_111:

(53, 63388), (Start: 85 @63442 has 34 MA's), (Start: 119 @63496 has 3 MA's), (169, 63577), (171, 63580), (186, 63604), (203, 63637), (224, 63694), (267, 63856),

Gene: Terminus_109 Start: 63444, Stop: 63734, Start Num: 127
Candidate Starts for Terminus_109:
(Start: 127 @63444 has 121 MA's), (194, 63573), (208, 63597), (228, 63657), (239, 63705),

Gene: Thibault_132 Start: 76186, Stop: 76788, Start Num: 82
Candidate Starts for Thibault_132:
(Start: 82 @76186 has 12 MA's), (166, 76324), (173, 76336), (192, 76378), (210, 76423), (213, 76429), (227, 76471), (244, 76546), (252, 76576), (297, 76774),

Gene: Thibault_95 Start: 58448, Stop: 58990, Start Num: 87
Candidate Starts for Thibault_95:
(Start: 87 @58448 has 27 MA's), (Start: 99 @58466 has 1 MA's), (175, 58586), (179, 58601), (189, 58619), (206, 58658), (213, 58676), (216, 58682), (235, 58742), (257, 58835), (294, 58976),

Gene: Thimble_108 Start: 61405, Stop: 61695, Start Num: 127
Candidate Starts for Thimble_108:
(Start: 127 @61405 has 121 MA's), (194, 61534), (208, 61558), (228, 61618), (239, 61666),

Gene: ThreeRngTarjay_144 Start: 79812, Stop: 80411, Start Num: 85
Candidate Starts for ThreeRngTarjay_144:
(Start: 85 @79812 has 34 MA's), (145, 79914), (157, 79935), (158, 79938), (192, 80001), (204, 80031), (209, 80040), (220, 80073), (233, 80118), (254, 80205), (272, 80265), (282, 80301), (297, 80397),

Gene: ThreeRngTarjay_109 Start: 64920, Stop: 65462, Start Num: 87
Candidate Starts for ThreeRngTarjay_109:
(28, 64758), (32, 64782), (Start: 66 @64887 has 1 MA's), (Start: 87 @64920 has 27 MA's), (Start: 99 @64938 has 1 MA's), (132, 64995), (175, 65058), (179, 65073), (189, 65091), (213, 65148), (216, 65154), (235, 65214), (257, 65307),

Gene: Thresher_107 Start: 63084, Stop: 63374, Start Num: 127
Candidate Starts for Thresher_107:
(Start: 127 @63084 has 121 MA's), (194, 63213), (208, 63237), (228, 63297), (239, 63345),

Gene: Tomaszewski_101 Start: 61982, Stop: 62272, Start Num: 127
Candidate Starts for Tomaszewski_101:
(Start: 127 @61982 has 121 MA's), (194, 62111), (208, 62135), (228, 62195), (239, 62243),

Gene: Toni_59 Start: 52612, Stop: 52088, Start Num: 81
Candidate Starts for Toni_59:
(44, 52681), (68, 52627), (Start: 81 @52612 has 10 MA's), (Start: 88 @52603 has 18 MA's), (130, 52537), (152, 52492), (165, 52468), (188, 52432), (190, 52426), (209, 52393), (228, 52339), (229, 52336), (259, 52219), (264, 52198), (287, 52123),

Gene: Toto_104 Start: 62698, Stop: 62988, Start Num: 127
Candidate Starts for Toto_104:
(Start: 127 @62698 has 121 MA's), (194, 62827), (208, 62851), (228, 62911), (239, 62959),

Gene: Towmatter_103 Start: 67264, Stop: 67620, Start Num: 102
Candidate Starts for Towmatter_103:

(Start: 102 @67264 has 2 MA's), (Start: 123 @67288 has 1 MA's), (177, 67411), (208, 67471), (241, 67582),

Gene: Traaww1_102 Start: 61247, Stop: 61537, Start Num: 127
Candidate Starts for Traaww1_102:
(Start: 127 @61247 has 121 MA's), (194, 61376), (208, 61400), (228, 61460), (239, 61508),

Gene: Tuco_107 Start: 63605, Stop: 63895, Start Num: 127
Candidate Starts for Tuco_107:
(Start: 127 @63605 has 121 MA's), (194, 63734), (208, 63758), (228, 63818), (239, 63866),

Gene: Twinkle_57 Start: 42555, Stop: 43061, Start Num: 88
Candidate Starts for Twinkle_57:
(22, 42330), (24, 42360), (Start: 88 @42555 has 18 MA's), (132, 42630), (143, 42642), (165, 42684), (213, 42771), (228, 42810),

Gene: Twister6_58 Start: 42736, Stop: 43260, Start Num: 87
Candidate Starts for Twister6_58:
(Start: 87 @42736 has 27 MA's), (Start: 119 @42787 has 3 MA's), (130, 42805), (167, 42883), (209, 42964), (211, 42973), (251, 43114),

Gene: UBSmoodge_128 Start: 91385, Stop: 91951, Start Num: 85
Candidate Starts for UBSmoodge_128:
(Start: 85 @91385 has 34 MA's), (140, 91484), (150, 91508), (171, 91541), (180, 91571), (188, 91583), (204, 91616), (213, 91637), (214, 91640), (245, 91754), (247, 91763), (286, 91889),

Gene: UPIE_65 Start: 44559, Stop: 45017, Start Num: 88
Candidate Starts for UPIE_65:
(Start: 88 @44559 has 18 MA's), (132, 44631), (193, 44721), (201, 44733), (213, 44754), (232, 44817), (238, 44844),

Gene: Ukulele_100 Start: 61803, Stop: 62093, Start Num: 127
Candidate Starts for Ukulele_100:
(Start: 127 @61803 has 121 MA's), (194, 61932), (208, 61956), (228, 62016), (239, 62064),

Gene: Vivi2_38 Start: 33736, Stop: 33263, Start Num: 112
Candidate Starts for Vivi2_38:
(38, 33874), (Start: 60 @33820 has 1 MA's), (67, 33811), (97, 33763), (Start: 112 @33736 has 19 MA's), (161, 33637), (188, 33595), (189, 33592), (208, 33556), (228, 33499), (236, 33466), (246, 33418),

Gene: VroomVroom_30 Start: 22712, Stop: 23095, Start Num: 108
Candidate Starts for VroomVroom_30:
(29, 22532), (Start: 108 @22712 has 5 MA's), (218, 22946),

Gene: Wamburgrxpress_65 Start: 44589, Stop: 45047, Start Num: 88
Candidate Starts for Wamburgrxpress_65:
(Start: 88 @44589 has 18 MA's), (132, 44661), (193, 44751), (201, 44763), (213, 44784), (232, 44847), (238, 44874),

Gene: Wanda_148 Start: 77329, Stop: 77928, Start Num: 85
Candidate Starts for Wanda_148:

(Start: 85 @77329 has 34 MA's), (145, 77431), (157, 77452), (158, 77455), (192, 77518), (204, 77548), (209, 77557), (220, 77590), (233, 77635), (254, 77722), (272, 77782), (282, 77818), (297, 77914),

Gene: Wiggin_113 Start: 62887, Stop: 63387, Start Num: 85
Candidate Starts for Wiggin_113:
(Start: 85 @62887 has 34 MA's), (Start: 119 @62941 has 3 MA's), (169, 63022), (171, 63025), (186, 63049), (203, 63082), (224, 63139), (267, 63301),

Gene: Wiggin_108 Start: 61648, Stop: 61938, Start Num: 127
Candidate Starts for Wiggin_108:
(Start: 127 @61648 has 121 MA's), (194, 61777), (208, 61801), (228, 61861), (239, 61909),

Gene: Willez_101 Start: 60770, Stop: 61060, Start Num: 127
Candidate Starts for Willez_101:
(Start: 127 @60770 has 121 MA's), (194, 60899), (208, 60923), (228, 60983), (239, 61031),

Gene: Xandras_110 Start: 62710, Stop: 63210, Start Num: 85
Candidate Starts for Xandras_110:
(53, 62656), (Start: 85 @62710 has 34 MA's), (Start: 119 @62764 has 3 MA's), (169, 62845), (171, 62848), (186, 62872), (203, 62905), (224, 62962), (267, 63124),

Gene: Xavia_53 Start: 39307, Stop: 39837, Start Num: 88
Candidate Starts for Xavia_53:
(Start: 88 @39307 has 18 MA's), (125, 39364), (130, 39373), (160, 39436), (163, 39439), (186, 39475), (188, 39478), (191, 39487), (193, 39490), (213, 39532), (238, 39619), (284, 39781),

Gene: Xiaokay_103 Start: 61376, Stop: 61900, Start Num: 99
Candidate Starts for Xiaokay_103:
(Start: 87 @61358 has 27 MA's), (Start: 99 @61376 has 1 MA's), (175, 61496), (179, 61511), (189, 61529), (206, 61568), (213, 61586), (216, 61592), (235, 61652), (257, 61745), (294, 61886),

Gene: Xiaokay_158 Start: 87015, Stop: 87527, Start Num: 77
Candidate Starts for Xiaokay_158:
(Start: 77 @87015 has 7 MA's), (Start: 79 @87018 has 1 MA's), (Start: 103 @87051 has 5 MA's), (132, 87102), (152, 87138), (203, 87228), (209, 87237), (213, 87249), (214, 87252), (224, 87285), (235, 87315), (254, 87396), (281, 87489), (289, 87513),

Gene: YassJohnny_103 Start: 60791, Stop: 61081, Start Num: 127
Candidate Starts for YassJohnny_103:
(Start: 127 @60791 has 121 MA's), (194, 60920), (208, 60944), (228, 61004), (239, 61052),

Gene: Yotsuba_69 Start: 47646, Stop: 48014, Start Num: 103
Candidate Starts for Yotsuba_69:
(59, 47577), (92, 47628), (Start: 103 @47646 has 5 MA's), (115, 47667), (Start: 129 @47685 has 2 MA's), (134, 47700), (187, 47811), (197, 47838), (211, 47859), (218, 47877), (237, 47940), (252, 48006),

Gene: Youngblood_109 Start: 62940, Stop: 63230, Start Num: 127
Candidate Starts for Youngblood_109:
(Start: 127 @62940 has 121 MA's), (194, 63069), (208, 63093), (228, 63153), (239, 63201),

Gene: Zelink_143 Start: 80141, Stop: 80740, Start Num: 85
Candidate Starts for Zelink_143:

(Start: 85 @80141 has 34 MA's), (145, 80243), (157, 80264), (158, 80267), (192, 80330), (204, 80360), (209, 80369), (220, 80402), (233, 80447), (254, 80534), (272, 80594), (282, 80630), (297, 80726),

Gene: Zelink_108 Start: 64885, Stop: 65409, Start Num: 99
Candidate Starts for Zelink_108:
(28, 64705), (32, 64729), (Start: 66 @64834 has 1 MA's), (Start: 87 @64867 has 27 MA's), (Start: 99 @64885 has 1 MA's), (132, 64942), (175, 65005), (179, 65020), (189, 65038), (213, 65095), (216, 65101), (235, 65161), (257, 65254),

Gene: xkcd_109 Start: 63125, Stop: 63415, Start Num: 127
Candidate Starts for xkcd_109:
(Start: 127 @63125 has 121 MA's), (194, 63254), (208, 63278), (228, 63338), (239, 63386),