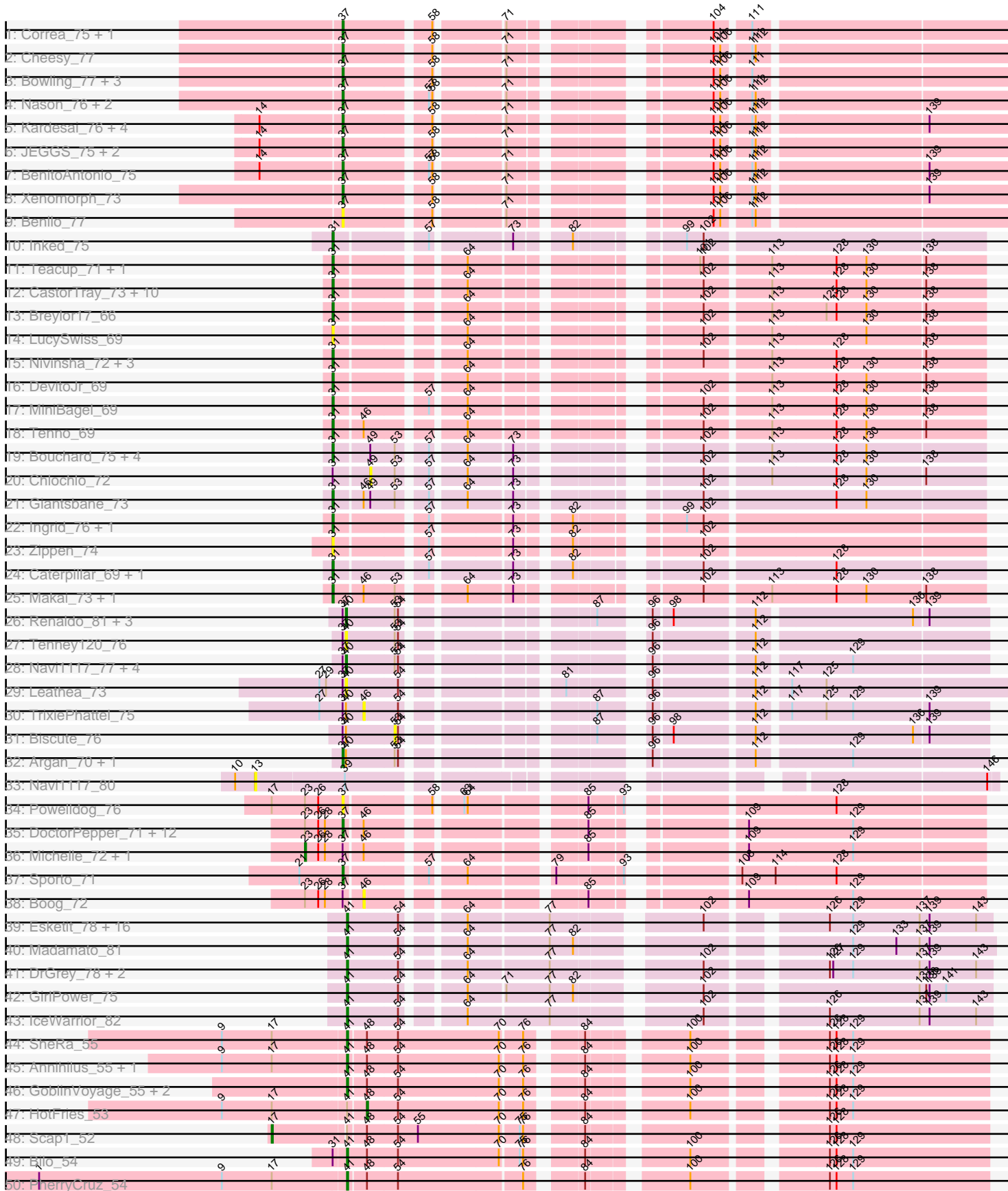
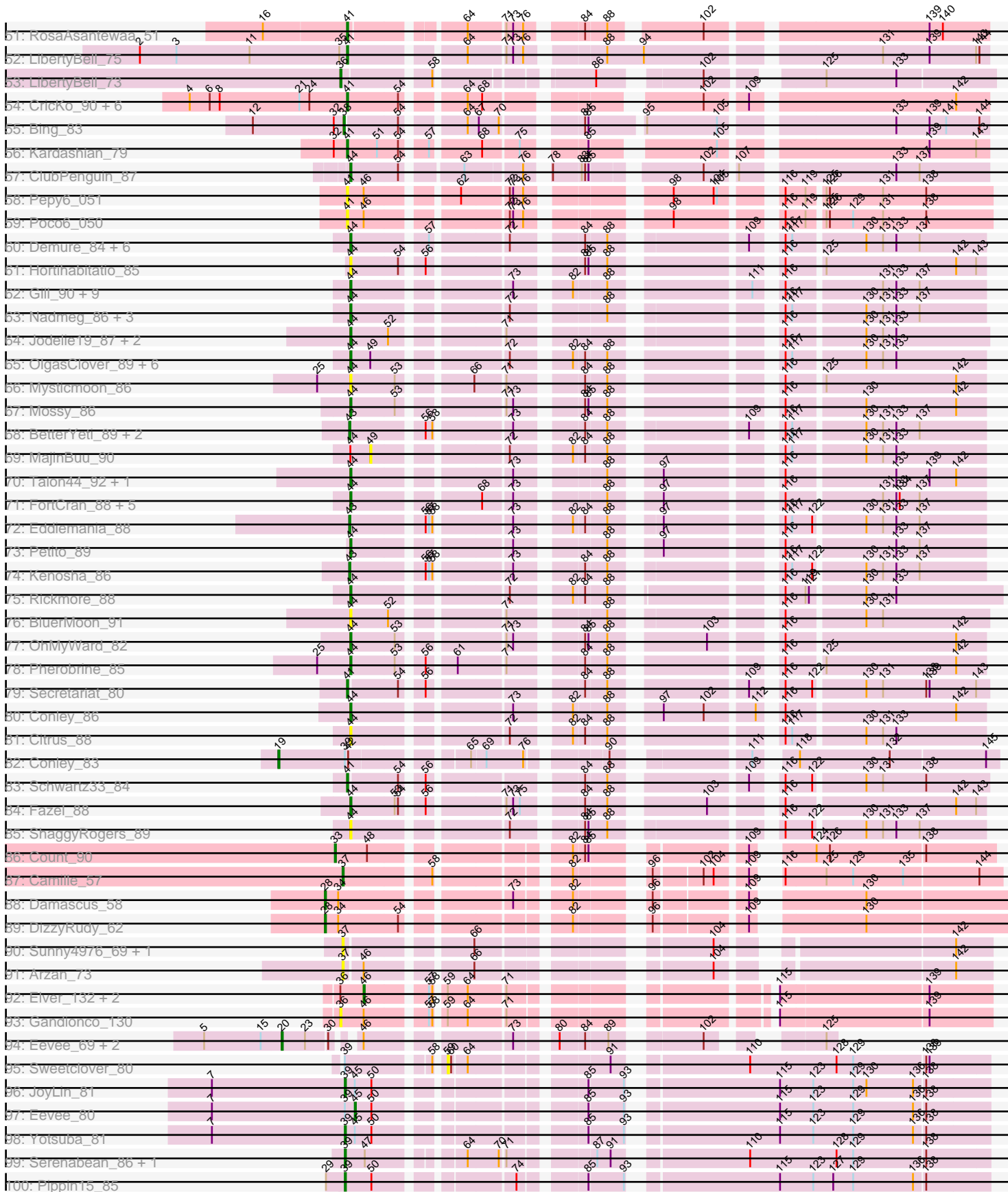


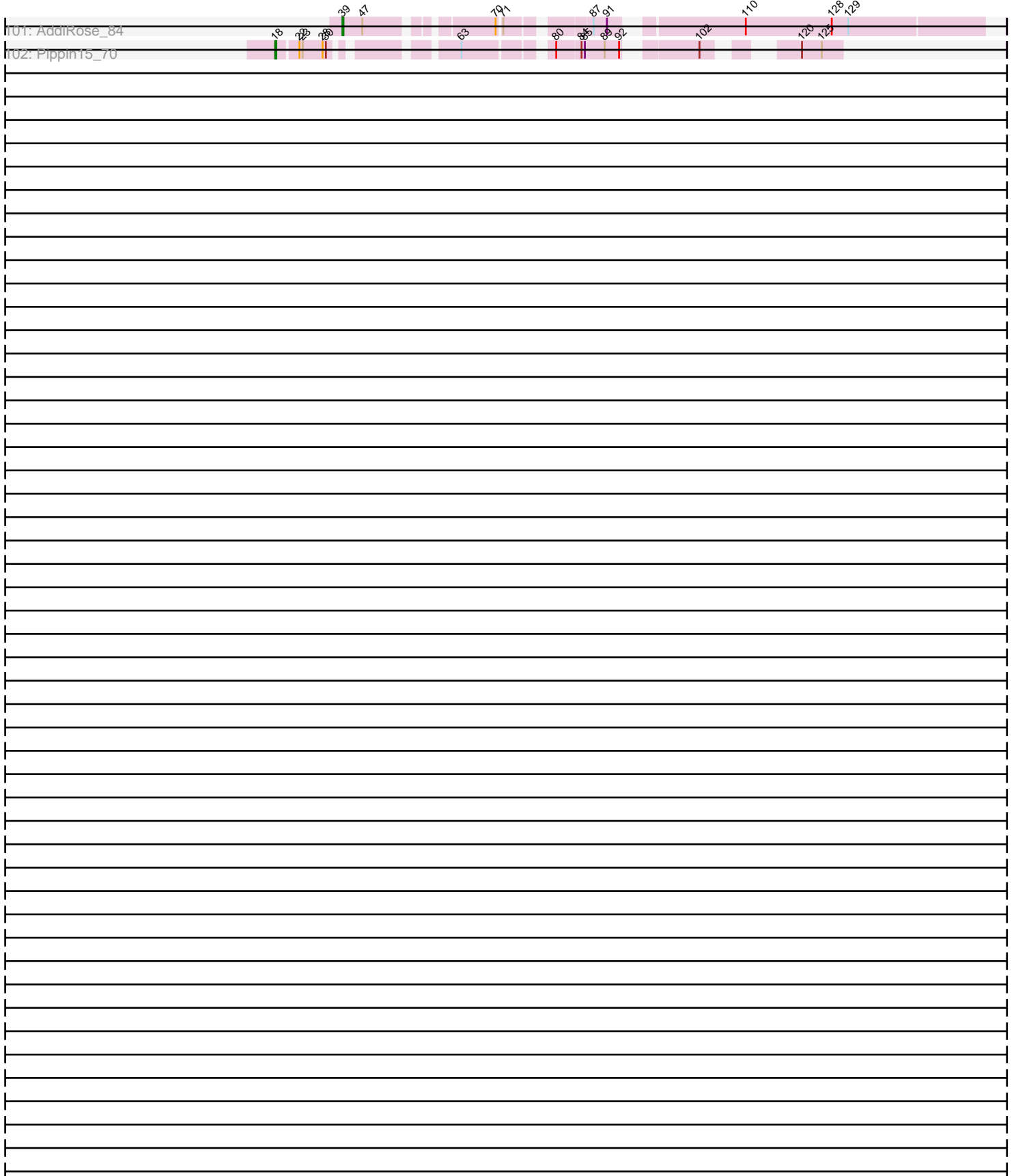
Pham 215820



Pham 215820



Pham 215820



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 215820 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215820 has 223 members, 50 are drafts.

Phages represented in each track:

- Track 1 : Correa_75, Tribby_80
- Track 2 : Cheesy_77
- Track 3 : Bowling_77, Dynamite_76, NapoleonB_77, Hankly_76
- Track 4 : Nason_76, Elsa_76, Arcadia_76
- Track 5 : Kardesai_76, KeaneyLin_72, Mooshroom_77, Circum_78, GoCrazy_73
- Track 6 : JEGGS_75, Heisenberger_75, Mudcat_72
- Track 7 : BenitoAntonio_75
- Track 8 : Xenomorph_73
- Track 9 : Benllo_77
- Track 10 : Inked_75
- Track 11 : Teacup_71, Acai_67
- Track 12 : CastorTray_73, Trustiboi_68, Gordon_67, Tatanka_63, Darby_67, Brunswick_71, ElephantMan_70, Niktson_70, ScienceWizSam_71, Issa_68, CapnMurica_67
- Track 13 : Breylor17_66
- Track 14 : LucySwiss_69
- Track 15 : Nivinsha_72, AreFloNak_73, Synepsis_66, Nightmare_70
- Track 16 : DevitoJr_69
- Track 17 : MiniBagel_69
- Track 18 : Tenno_69
- Track 19 : Bouchard_75, LilHuddy_74, Phaby_75, Shepard_74, Tokki_79
- Track 20 : Chlochlo_72
- Track 21 : Giantsbane_73
- Track 22 : Ingrid_76, Loretta_72
- Track 23 : Zippen_74
- Track 24 : Caterpillar_69, MediumFry_69
- Track 25 : Makai_73, Truckee_71
- Track 26 : Renaldo_81, BarbieDoll_77, Lewando_77, Kinny_77
- Track 27 : Tenney120_76
- Track 28 : Navi1117_77, GantcherGoblin_71, Uzumaki_70, Zeina_76, Phaila_75
- Track 29 : Leathea_73
- Track 30 : TrixiePhattel_75
- Track 31 : Biscute_76
- Track 32 : Argan_70, KevinMinion_72
- Track 33 : Navi1117_80
- Track 34 : Powellldog_76

- Track 35 : DoctorPepper_71, Raunak_73, MrAaronian_72, HerbBucket_70, Djungelskog_71, Linda_72, Sloopyjoe_72, StarLord_72, ProfFrink_72, Salk_72, Egad_72, BronxBay_72, Shiba_71
- Track 36 : Michelle_72, Stayer_72
- Track 37 : Sporto_71
- Track 38 : Boog_72
- Track 39 : Esketit_78, Spectropatronm_81, Rima_83, OlympicHelado_84, Jaylociraptor_82, Meibysrarus_80, TaidaOne_82, HazuAndZazu_79, FidgetOrca_84, Soshi_81, Indigenous_84, TonyStarch_81, Hoshi_83, Maya_82, Namu_84, CherryBlossom_82, TieDye_78
- Track 40 : Madamato_81
- Track 41 : DrGrey_78, FrodoSwaggins_80, Popy_80
- Track 42 : GirlPower_75
- Track 43 : IceWarrior_82
- Track 44 : SheRa_55
- Track 45 : Annihilus_55, Moozy_54
- Track 46 : GoblinVoyage_55, RavenPuff_55, Doxi13_56
- Track 47 : HotFries_53
- Track 48 : Scap1_52
- Track 49 : Bilo_54
- Track 50 : PherryCruz_54
- Track 51 : RosaAsantewaa_51
- Track 52 : LibertyBell_75
- Track 53 : LibertyBell_73
- Track 54 : CricKo_90, Regigigas_90, FromIndy_88, SendItCS_82, Miek_84, Thiqqums_90, Rainydai_87
- Track 55 : Bing_83
- Track 56 : Kardashian_79
- Track 57 : ClubPenguin_87
- Track 58 : Pepy6_051
- Track 59 : Poco6_050
- Track 60 : Demure_84, Untouchable_89, Zeph_90, Hydrus_87, Madvan_86, Arataki_85, Phepper_88
- Track 61 : Hortihabitatio_85
- Track 62 : Gill_90, Magel_91, NoPickles_88, Roney_88, Capybara_87, Kerry_89, Tanis_89, Odesza_88, Captrips_87, Gravy_89
- Track 63 : Nadmeg_86, Vardy_86, Burley_86, Runhaar_85
- Track 64 : Jodelie19_87, Aflac_88, TenaciousP_89
- Track 65 : OlgasClover_89, Figliar_86, Duffington_88, Nithya_87, Chikenjars_88, EndAve_89, AlainaMarie_88
- Track 66 : Mysticmoon_86
- Track 67 : Mossy_86
- Track 68 : BetterYeti_89, Crocheter_87, Gusicorn_90
- Track 69 : MajinBuu_90
- Track 70 : Talon44_92, Perkunas_90
- Track 71 : FortCran_88, JulesRay_89, Avazak_89, Dancer_91, Trufflozitus_93, Artorias_88
- Track 72 : Eddiemania_88
- Track 73 : Petite_89
- Track 74 : Kenosha_86
- Track 75 : Rickmore_88
- Track 76 : BluerMoon_91
- Track 77 : OhMyWard_82

- Track 78 : Pherobrine_85
- Track 79 : Secretariat_80
- Track 80 : Conley_86
- Track 81 : Citrus_88
- Track 82 : Conley_83
- Track 83 : Schwartz33_84
- Track 84 : Fazel_88
- Track 85 : ShaggyRogers_89
- Track 86 : Count_90
- Track 87 : Camille_57
- Track 88 : Damascus_58
- Track 89 : DizzyRudy_62
- Track 90 : Sunny4976_69, Jazzy4900_70
- Track 91 : Arzan_73
- Track 92 : Elver_132, Paella_134, Qui_134
- Track 93 : Gandionco_130
- Track 94 : Eevee_69, JoyLin_69, Yotsuba_69
- Track 95 : Sweetclover_80
- Track 96 : JoyLin_81
- Track 97 : Eevee_80
- Track 98 : Yotsuba_81
- Track 99 : Serenabean_86, Daddyjeff_86
- Track 100 : Pippin15_85
- Track 101 : AddiRose_84
- Track 102 : Pippin15_70

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

The start number called the most often in the published annotations is 41, it was called in 41 of the 173 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Annihilus_55, Bilo_54, CherryBlossom_82, CricKo_90, Doxi13_56, DrGrey_78, Esketit_78, FidgetOrca_84, FrodoSwaggins_80, FromIndy_88, GirlPower_75, GoblinVoyage_55, HazuAndZazu_79, Hoshi_83, IceWarrior_82, Indigenous_84, Jaylociraptor_82, Kardashian_79, LibertyBell_75, Madamoto_81, Maya_82, Meibysrarus_80, Miek_84, Moozy_54, Namu_84, OlympicHelado_84, Pepy6_051, PherryCruz_54, Poco6_050, Popy_80, Rainydai_87, RavenPuff_55, Regigigas_90, Rima_83, RosaAsantewaa_51, Schwartz33_84, Secretariat_80, SendItCS_82, SheRa_55, Soshi_81, Spectropatronm_81, TaidaOne_82, Thiqqums_90, TieDye_78, TonyStarch_81,

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

- HotFries_53, Scap1_52,

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

- Acai_67, AddiRose_84, Aflac_88, AlainaMarie_88, Arataki_85, Arcadia_76, AreFloNak_73, Argan_70, Artorias_88, Arzan_73, Avazak_89, BarbieDoll_77, BenitoAntonio_75, Benllo_77, BetterYeti_89, Bing_83, Biscute_76, BluerMoon_91, Boog_72, Bouchard_75, Bowling_77, Breylor17_66, BronxBay_72, Brunswick_71,

Burley_86, Camille_57, CapnMurica_67, Captrips_87, Cappybara_87, CastorTray_73, Caterpillar_69, Cheesy_77, Chikenjars_88, Chlochlo_72, Circum_78, Citrus_88, ClubPenguin_87, Conley_83, Conley_86, Correa_75, Count_90, Crocheter_87, Daddyjeff_86, Damascus_58, Dancer_91, Darby_67, Demure_84, DevitoJr_69, DizzyRudy_62, Djungelskog_71, DoctorPepper_71, Duffington_88, Dynamite_76, Eddiemania_88, Eevee_69, Eevee_80, Egad_72, ElephantMan_70, Elsa_76, Elver_132, EndAve_89, Fazel_88, Figliar_86, FortCran_88, Gandionco_130, GantcherGoblin_71, Giantsbane_73, Gill_90, GoCrazy_73, Gordon_67, Gravy_89, Gusicorn_90, Hankly_76, Heisenberger_75, HerbBucket_70, Hortihabitatio_85, Hydrus_87, Ingrid_76, Inked_75, Issa_68, JEGGS_75, Jazzy4900_70, Jodelie19_87, JoyLin_69, JoyLin_81, JulesRay_89, Kardesai_76, KeaneyLin_72, Kenosha_86, Kerry_89, KevinMinion_72, Kinny_77, Leatheia_73, Lewando_77, LibertyBell_73, LilHuddy_74, Linda_72, Loretta_72, LucySwiss_69, Madvan_86, Magel_91, MajinBuu_90, Makai_73, MediumFry_69, Michelle_72, MiniBagel_69, Mooshroom_77, Mossy_86, MrAaronian_72, Mudcat_72, Mysticmoon_86, Nadmeg_86, NapoleonB_77, Nason_76, Navi1117_77, Navi1117_80, Nightmare_70, Niktson_70, Nithya_87, Nivinsha_72, NoPickles_88, Odesza_88, OhMyWard_82, OlgasClover_89, Paella_134, Perkunas_90, Petito_89, Phaby_75, Phaila_75, Phepper_88, Pherobrine_85, Pippin15_70, Pippin15_85, Powelldog_76, ProfFrink_72, Qui_134, Raunak_73, Renaldo_81, Rickmore_88, Roney_88, Runhaar_85, Salk_72, ScienceWizSam_71, Serenabean_86, ShaggyRogers_89, Shepard_74, Shiba_71, Sloopyjoe_72, Sporto_71, StarLord_72, Stayer_72, Sunny4976_69, Sweetclover_80, Synepsis_66, Talon44_92, Tanis_89, Tatanka_63, Teacup_71, TenaciousP_89, Tenney120_76, Tenno_69, Tokki_79, Tribby_80, TrixiePhattel_75, Truckee_71, Trufflozitus_93, Trustiboi_68, Untouchable_89, Uzumaki_70, Vardy_86, Xenomorph_73, Yotsuba_69, Yotsuba_81, Zeina_76, Zeph_90, Zippen_74,

Summary by start number:

Start 13:

- Found in 1 of 223 (0.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Navi1117_80 (AU6),

Start 17:

- Found in 7 of 223 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Scap1_52 (BI2),

Start 18:

- Found in 1 of 223 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pippin15_70 (JA),

Start 19:

- Found in 1 of 223 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Conley_83 (DJ),

Start 20:

- Found in 3 of 223 (1.3%) of genes in pham
- Manual Annotations of this start: 3 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eevee_69 (JA), JoyLin_69 (JA), Yotsuba_69 (JA),

Start 23:

- Found in 21 of 223 (9.4%) of genes in pham
- Manual Annotations of this start: 2 of 173
- Called 9.5% of time when present
- Phage (with cluster) where this start called: Michelle_72 (AW), Stayer_72 (AW),

Start 28:

- Found in 19 of 223 (8.5%) of genes in pham
- Manual Annotations of this start: 2 of 173
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Damascus_58 (EL), DizzyRudy_62 (EL),

Start 31:

- Found in 38 of 223 (17.0%) of genes in pham
- Manual Annotations of this start: 29 of 173
- Called 94.7% of time when present
- Phage (with cluster) where this start called: Acai_67 (AU1), AreFloNak_73 (AU1), Bouchard_75 (AU2), Breylor17_66 (AU1), Brunswick_71 (AU1), CapnMurica_67 (AU1), CastorTray_73 (AU1), Caterpillar_69 (AU4), Darby_67 (AU1), DevitoJr_69 (AU1), ElephantMan_70 (AU1), Giantsbane_73 (AU2), Gordon_67 (AU1), Ingrid_76 (AU3), Inked_75 (AU), Issa_68 (AU1), LilHuddy_74 (AU2), Loretta_72 (AU3), LucySwiss_69 (AU1), Makai_73 (AU5), MediumFry_69 (AU4), MiniBagel_69 (AU1), Nightmare_70 (AU1), Niktson_70 (AU1), Nivinsha_72 (AU1), Phaby_75 (AU2), ScienceWizSam_71 (AU1), Shepard_74 (AU2), Synopsis_66 (AU1), Tatanka_63 (AU1), Teacup_71 (AU1), Tenno_69 (AU1), Tokki_79 (AU2), Truckee_71 (AU5), Trustiboi_68 (AU1), Zippen_74 (AU3),

Start 33:

- Found in 1 of 223 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Count_90 (EL),

Start 36:

- Found in 5 of 223 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Gandionco_130 (FK), LibertyBell_73 (BI3),

Start 37:

- Found in 58 of 223 (26.0%) of genes in pham
- Manual Annotations of this start: 33 of 173
- Called 72.4% of time when present

- Phage (with cluster) where this start called: Arcadia_76 (AM), Argan_70 (AU6), Arzan_73 (FI), BenitoAntonio_75 (AM), Benllo_77 (AM), Bowling_77 (AM), BronxBay_72 (AW), Camille_57 (EL), Cheesy_77 (AM), Circum_78 (AM), Correa_75 (AM), Djungelskog_71 (AW), DoctorPepper_71 (AW), Dynamite_76 (AM), Egad_72 (AW), Elsa_76 (AM), GoCrazy_73 (AM), Hankly_76 (AM), Heisenberger_75 (AM), HerbBucket_70 (AW), JEGGS_75 (AM), Jazzy4900_70 (FI), Kardesai_76 (AM), KeaneyLin_72 (AM), KevinMinion_72 (AU6), Linda_72 (AW), Mooshroom_77 (AM), MrAaronian_72 (AW), Mudcat_72 (AM), NapoleonB_77 (AM), Nason_76 (AM), PowellDog_76 (AW), ProfFrink_72 (AW), Raunak_73 (AW), Salk_72 (AW), Shiba_71 (AW), Sloopyjoe_72 (AW), Sporto_71 (AW), StarLord_72 (AW), Sunny4976_69 (FI), Tribby_80 (AM), Xenomorph_73 (AM),

Start 38:

- Found in 1 of 223 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bing_83 (BI5),

Start 39:

- Found in 10 of 223 (4.5%) of genes in pham
- Manual Annotations of this start: 6 of 173
- Called 60.0% of time when present
- Phage (with cluster) where this start called: AddiRose_84 (JA), Daddyjeff_86 (JA), JoyLin_81 (JA), Pippin15_85 (JA), Serenabean_86 (JA), Yotsuba_81 (JA),

Start 40:

- Found in 15 of 223 (6.7%) of genes in pham
- Manual Annotations of this start: 4 of 173
- Called 73.3% of time when present
- Phage (with cluster) where this start called: BarbieDoll_77 (AU6), GantcherGoblin_71 (AU6), Kinny_77 (AU6), LeatheA_73 (AU6), Lewando_77 (AU6), Navi1117_77 (AU6), Phaila_75 (AU6), Renaldo_81 (AU6), Tenney120_76 (AU6), Uzumaki_70 (AU6), Zeina_76 (AU6),

Start 41:

- Found in 47 of 223 (21.1%) of genes in pham
- Manual Annotations of this start: 41 of 173
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Annihilus_55 (BI2), Bilo_54 (BI2), CherryBlossom_82 (BI1), CricKo_90 (BI4), Doxi13_56 (BI2), DrGrey_78 (BI1), Esketit_78 (BI1), FidgetOrca_84 (BI1), FrodoSwaggins_80 (BI1), FromIndy_88 (BI4), GirlPower_75 (BI1), GoblinVoyage_55 (BI2), HazuAndZazu_79 (BI1), Hoshi_83 (BI1), IceWarrior_82 (BI1), Indigenous_84 (BI1), Jaylociraptor_82 (BI1), Kardashian_79 (BI6), LibertyBell_75 (BI3), Madamato_81 (BI1), Maya_82 (BI1), Meibysrarus_80 (BI1), Miek_84 (BI4), Moozy_54 (BI2), NamO_84 (BI1), OlympicHelado_84 (BI1), Popy6_051 (CC), PherryCruz_54 (BI2), Poco6_050 (CC), Popy_80 (BI1), Rainydai_87 (BI4), RavenPuff_55 (BI2), Regigigas_90 (BI4), Rima_83 (BI1), RosaAsantewaa_51 (BI2), Schwartz33_84 (DJ), Secretariat_80 (DJ), SendItCS_82 (BI4), SheRa_55 (BI2), Soshi_81 (BI1), Spectropatronm_81 (BI1), TaidaOne_82 (BI1), Thiqqums_90 (BI4), TieDye_78 (BI1), TonyStarch_81 (BI1),

Start 43:

- Found in 5 of 223 (2.2%) of genes in pham

- Manual Annotations of this start: 3 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BetterYeti_89 (DJ), Crocheter_87 (DJ), Eddiemania_88 (DJ), Gusicorn_90 (DJ), Kenosha_86 (DJ),

Start 44:

- Found in 53 of 223 (23.8%) of genes in pham
- Manual Annotations of this start: 40 of 173
- Called 98.1% of time when present
- Phage (with cluster) where this start called: Aflac_88 (DJ), AlainaMarie_88 (DJ), Arataki_85 (DJ), Artorias_88 (DJ), Avazak_89 (DJ), BluerMoon_91 (DJ), Burley_86 (DJ), Captrips_87 (DJ), Capybara_87 (DJ), Chikenjars_88 (DJ), Citrus_88 (DJ), ClubPenguin_87 (BI7), Conley_86 (DJ), Dancer_91 (DJ), Demure_84 (DJ), Duffington_88 (DJ), EndAve_89 (DJ), Fazel_88 (DJ), Figliar_86 (DJ), FortCran_88 (DJ), Gill_90 (DJ), Gravy_89 (DJ), Hortihabitatio_85 (DJ), Hydrus_87 (DJ), Jodelie19_87 (DJ), JulesRay_89 (DJ), Kerry_89 (DJ), Madvan_86 (DJ), Magel_91 (DJ), Mossy_86 (DJ), Mysticmoon_86 (DJ), Nadmeg_86 (DJ), Nithya_87 (DJ), NoPickles_88 (DJ), Odesza_88 (DJ), OhMyWard_82 (DJ), OlgasClover_89 (DJ), Perkunas_90 (DJ), Petite_89 (DJ), Phepper_88 (DJ), Pherobrine_85 (DJ), Rickmore_88 (DJ), Roney_88 (DJ), Runhaar_85 (DJ), ShaggyRogers_89 (DJ), Talon44_92 (DJ), Tanis_89 (DJ), TenaciousP_89 (DJ), Trufflozitus_93 (DJ), Untouchable_89 (DJ), Vardy_86 (DJ), Zeph_90 (DJ),

Start 45:

- Found in 3 of 223 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Eevee_80 (JA),

Start 46:

- Found in 31 of 223 (13.9%) of genes in pham
- Manual Annotations of this start: 2 of 173
- Called 16.1% of time when present
- Phage (with cluster) where this start called: Boog_72 (AW), Elver_132 (FK), Paella_134 (FK), Qui_134 (FK), TrixiePhattel_75 (AU6),

Start 48:

- Found in 11 of 223 (4.9%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 9.1% of time when present
- Phage (with cluster) where this start called: HotFries_53 (BI2),

Start 49:

- Found in 15 of 223 (6.7%) of genes in pham
- No Manual Annotations of this start.
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Chlochlo_72 (AU2), MajinBuu_90 (DJ),

Start 53:

- Found in 27 of 223 (12.1%) of genes in pham
- No Manual Annotations of this start.
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Biscute_76 (AU6),

Start 59:

- Found in 5 of 223 (2.2%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Sweetclover_80 (JA),

Summary by clusters:

There are 22 clusters represented in this pham: DJ, FI, FK, JA, AU1, AU3, AU2, AU5, AU4, AU6, EL, CC, AM, AU, AW, BI6, BI7, BI4, BI5, BI2, BI3, BI1,

Info for manual annotations of cluster AM:

- Start number 37 was manually annotated 19 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 31 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 31 was manually annotated 17 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 31 was manually annotated 5 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 31 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:

- Start number 31 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 31 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 37 was manually annotated 1 time for cluster AU6.
- Start number 40 was manually annotated 4 times for cluster AU6.

Info for manual annotations of cluster AW:

- Start number 23 was manually annotated 2 times for cluster AW.
- Start number 37 was manually annotated 12 times for cluster AW.

Info for manual annotations of cluster BI1:

- Start number 41 was manually annotated 23 times for cluster BI1.

Info for manual annotations of cluster BI2:

- Start number 17 was manually annotated 1 time for cluster BI2.
- Start number 41 was manually annotated 9 times for cluster BI2.
- Start number 48 was manually annotated 1 time for cluster BI2.

Info for manual annotations of cluster BI3:

- Start number 36 was manually annotated 1 time for cluster BI3.
- Start number 41 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

- Start number 41 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 38 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 41 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:

- Start number 44 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster DJ:

- Start number 19 was manually annotated 1 time for cluster DJ.
- Start number 41 was manually annotated 2 times for cluster DJ.
- Start number 43 was manually annotated 3 times for cluster DJ.
- Start number 44 was manually annotated 39 times for cluster DJ.

Info for manual annotations of cluster EL:

- Start number 28 was manually annotated 2 times for cluster EL.
- Start number 33 was manually annotated 1 time for cluster EL.
- Start number 37 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster FK:

- Start number 46 was manually annotated 2 times for cluster FK.

Info for manual annotations of cluster JA:

- Start number 18 was manually annotated 1 time for cluster JA.
- Start number 20 was manually annotated 3 times for cluster JA.
- Start number 39 was manually annotated 6 times for cluster JA.
- Start number 45 was manually annotated 1 time for cluster JA.

Gene Information:

Gene: Acai_67 Start: 46762, Stop: 47265, Start Num: 31

Candidate Starts for Acai_67:

(Start: 31 @46762 has 29 MA's), (64, 46861), (101, 47020), (102, 47023), (113, 47077), (128, 47134), (130, 47161), (138, 47212),

Gene: AddiRose_84 Start: 50059, Stop: 50565, Start Num: 39

Candidate Starts for AddiRose_84:

(Start: 39 @50059 has 6 MA's), (47, 50077), (70, 50173), (71, 50176), (87, 50239), (91, 50251), (110, 50353), (128, 50431), (129, 50446),

Gene: Aflac_88 Start: 56715, Stop: 57197, Start Num: 44

Candidate Starts for Aflac_88:

(Start: 44 @56715 has 40 MA's), (52, 56748), (71, 56832), (116, 57021), (130, 57087), (131, 57102), (133, 57114),

Gene: AlainaMarie_88 Start: 56739, Stop: 57221, Start Num: 44

Candidate Starts for AlainaMarie_88:

(Start: 44 @56739 has 40 MA's), (49, 56757), (72, 56859), (82, 56901), (84, 56910), (88, 56928), (116, 57048), (117, 57054), (130, 57114), (131, 57129), (133, 57141),

Gene: Annihilus_55 Start: 38912, Stop: 39421, Start Num: 41

Candidate Starts for Annihilus_55:

(9, 38804), (Start: 17 @38849 has 1 MA's), (Start: 41 @38912 has 41 MA's), (Start: 48 @38927 has 1 MA's), (54, 38954), (70, 39044), (76, 39062), (84, 39101), (100, 39176), (126, 39278), (128, 39284), (129, 39299),

Gene: Arataki_85 Start: 55860, Stop: 56339, Start Num: 44

Candidate Starts for Arataki_85:

(Start: 44 @55860 has 40 MA's), (57, 55920), (72, 55980), (84, 56031), (88, 56049), (109, 56148), (116, 56166), (117, 56172), (130, 56232), (131, 56247), (133, 56259), (137, 56280),

Gene: Arcadia_76 Start: 45700, Stop: 46212, Start Num: 37

Candidate Starts for Arcadia_76:

(Start: 37 @45700 has 33 MA's), (57, 45766), (58, 45769), (71, 45823), (104, 45967), (106, 45973), (111, 45994), (112, 45997),

Gene: AreFloNak_73 Start: 46808, Stop: 47311, Start Num: 31

Candidate Starts for AreFloNak_73:

(Start: 31 @46808 has 29 MA's), (64, 46907), (102, 47069), (113, 47123), (128, 47180), (138, 47258),

Gene: Argan_70 Start: 44513, Stop: 45007, Start Num: 37

Candidate Starts for Argan_70:

(Start: 37 @44513 has 33 MA's), (Start: 40 @44516 has 4 MA's), (53, 44558), (54, 44561), (96, 44729), (112, 44810), (129, 44888),

Gene: Artorias_88 Start: 55253, Stop: 55735, Start Num: 44

Candidate Starts for Artorias_88:

(Start: 44 @55253 has 40 MA's), (68, 55352), (73, 55376), (88, 55442), (97, 55475), (116, 55562), (131, 55643), (133, 55655), (134, 55658), (137, 55676),

Gene: Arzan_73 Start: 46217, Stop: 46693, Start Num: 37

Candidate Starts for Arzan_73:

(Start: 37 @46217 has 33 MA's), (Start: 46 @46232 has 2 MA's), (66, 46313), (104, 46481), (142, 46661),

Gene: Avazak_89 Start: 55682, Stop: 56164, Start Num: 44

Candidate Starts for Avazak_89:

(Start: 44 @55682 has 40 MA's), (68, 55781), (73, 55805), (88, 55871), (97, 55904), (116, 55991), (131, 56072), (133, 56084), (134, 56087), (137, 56105),

Gene: BarbieDoll_77 Start: 46222, Stop: 46713, Start Num: 40

Candidate Starts for BarbieDoll_77:

(Start: 37 @46219 has 33 MA's), (Start: 40 @46222 has 4 MA's), (53, 46264), (54, 46267), (87, 46405), (96, 46435), (98, 46450), (112, 46516), (136, 46648), (139, 46660),

Gene: BenitoAntonio_75 Start: 45340, Stop: 45852, Start Num: 37

Candidate Starts for BenitoAntonio_75:

(14, 45268), (Start: 37 @45340 has 33 MA's), (57, 45406), (58, 45409), (71, 45463), (104, 45607), (106, 45613), (111, 45634), (112, 45637), (139, 45781),

Gene: Benllo_77 Start: 46018, Stop: 46530, Start Num: 37

Candidate Starts for Benllo_77:

(Start: 37 @46018 has 33 MA's), (58, 46087), (71, 46141), (104, 46285), (106, 46291), (111, 46312), (112, 46315),

Gene: BetterYeti_89 Start: 55872, Stop: 56351, Start Num: 43

Candidate Starts for BetterYeti_89:

(Start: 43 @55872 has 3 MA's), (56, 55929), (58, 55935), (73, 55995), (84, 56043), (88, 56061), (109, 56160), (116, 56178), (117, 56184), (130, 56244), (131, 56259), (133, 56271), (137, 56292),

Gene: Bilo_54 Start: 39203, Stop: 39715, Start Num: 41

Candidate Starts for Bilo_54:

(Start: 31 @39194 has 29 MA's), (Start: 41 @39203 has 41 MA's), (Start: 48 @39221 has 1 MA's), (54, 39248), (70, 39338), (75, 39353), (76, 39356), (84, 39395), (100, 39470), (126, 39572), (128, 39578), (129, 39593),

Gene: Bing_83 Start: 51639, Stop: 52142, Start Num: 38

Candidate Starts for Bing_83:

(12, 51558), (32, 51630), (Start: 38 @51639 has 1 MA's), (54, 51684), (64, 51729), (67, 51738), (70, 51756), (84, 51813), (85, 51816), (95, 51858), (105, 51921), (133, 52059), (139, 52089), (141, 52104), (144, 52134),

Gene: Biscute_76 Start: 45916, Stop: 46365, Start Num: 53

Candidate Starts for Biscute_76:

(Start: 37 @45871 has 33 MA's), (Start: 40 @45874 has 4 MA's), (53, 45916), (54, 45919), (87, 46057), (96, 46087), (98, 46102), (112, 46168), (136, 46300), (139, 46312),

Gene: BluerMoon_91 Start: 56545, Stop: 57027, Start Num: 44

Candidate Starts for BluerMoon_91:

(Start: 44 @56545 has 40 MA's), (52, 56578), (71, 56662), (88, 56734), (116, 56851), (130, 56917), (131, 56932),

Gene: Boog_72 Start: 44948, Stop: 45430, Start Num: 46

Candidate Starts for Boog_72:

(Start: 23 @44900 has 2 MA's), (26, 44912), (Start: 28 @44918 has 2 MA's), (Start: 37 @44933 has 33 MA's), (Start: 46 @44948 has 2 MA's), (85, 45113), (109, 45221), (129, 45314),

Gene: Bouchard_75 Start: 47398, Stop: 47901, Start Num: 31

Candidate Starts for Bouchard_75:

(Start: 31 @47398 has 29 MA's), (49, 47428), (53, 47449), (57, 47470), (64, 47497), (73, 47533), (102, 47659), (113, 47713), (128, 47770), (130, 47797),

Gene: Bowling_77 Start: 46295, Stop: 46807, Start Num: 37

Candidate Starts for Bowling_77:

(Start: 37 @46295 has 33 MA's), (58, 46364), (71, 46418), (104, 46562), (106, 46568), (111, 46589),

Gene: Breylor17_66 Start: 47201, Stop: 47704, Start Num: 31

Candidate Starts for Breylor17_66:

(Start: 31 @47201 has 29 MA's), (64, 47300), (102, 47462), (113, 47516), (125, 47564), (128, 47573), (130, 47600), (138, 47651),

Gene: BronxBay_72 Start: 45205, Stop: 45702, Start Num: 37

Candidate Starts for BronxBay_72:

(Start: 23 @45172 has 2 MA's), (26, 45184), (Start: 28 @45190 has 2 MA's), (Start: 37 @45205 has 33 MA's), (Start: 46 @45220 has 2 MA's), (85, 45385), (109, 45493), (129, 45586),

Gene: Brunswick_71 Start: 46642, Stop: 47145, Start Num: 31

Candidate Starts for Brunswick_71:

(Start: 31 @46642 has 29 MA's), (64, 46741), (102, 46903), (113, 46957), (128, 47014), (130, 47041), (138, 47092),

Gene: Burley_86 Start: 55548, Stop: 56027, Start Num: 44

Candidate Starts for Burley_86:

(Start: 44 @55548 has 40 MA's), (72, 55668), (88, 55737), (116, 55854), (117, 55860), (130, 55920), (131, 55935), (133, 55947), (137, 55968),

Gene: Camille_57 Start: 40747, Stop: 41235, Start Num: 37

Candidate Starts for Camille_57:

(Start: 37 @40747 has 33 MA's), (58, 40816), (82, 40915), (96, 40963), (102, 41002), (104, 41011), (109, 41035), (116, 41044), (125, 41080), (129, 41104), (135, 41149), (144, 41215),

Gene: CapnMurica_67 Start: 47359, Stop: 47862, Start Num: 31

Candidate Starts for CapnMurica_67:

(Start: 31 @47359 has 29 MA's), (64, 47458), (102, 47620), (113, 47674), (128, 47731), (130, 47758), (138, 47809),

Gene: Captrips_87 Start: 55033, Stop: 55515, Start Num: 44

Candidate Starts for Captrips_87:

(Start: 44 @55033 has 40 MA's), (73, 55156), (82, 55195), (88, 55222), (111, 55327), (116, 55342), (131, 55423), (133, 55435), (137, 55456),

Gene: Capybara_87 Start: 55256, Stop: 55738, Start Num: 44

Candidate Starts for Capybara_87:

(Start: 44 @55256 has 40 MA's), (73, 55379), (82, 55418), (88, 55445), (111, 55550), (116, 55565), (131, 55646), (133, 55658), (137, 55679),

Gene: CastorTray_73 Start: 47393, Stop: 47896, Start Num: 31

Candidate Starts for CastorTray_73:

(Start: 31 @47393 has 29 MA's), (64, 47492), (102, 47654), (113, 47708), (128, 47765), (130, 47792), (138, 47843),

Gene: Caterpillar_69 Start: 46228, Stop: 46731, Start Num: 31

Candidate Starts for Caterpillar_69:

(Start: 31 @46228 has 29 MA's), (57, 46300), (73, 46363), (82, 46402), (102, 46489), (128, 46600),

Gene: Cheesy_77 Start: 45492, Stop: 46004, Start Num: 37

Candidate Starts for Cheesy_77:

(Start: 37 @45492 has 33 MA's), (58, 45561), (71, 45615), (104, 45759), (106, 45765), (111, 45786), (112, 45789),

Gene: CherryBlossom_82 Start: 50872, Stop: 51381, Start Num: 41

Candidate Starts for CherryBlossom_82:

(Start: 41 @50872 has 41 MA's), (54, 50917), (64, 50962), (77, 51031), (102, 51145), (126, 51235), (129, 51256), (137, 51316), (139, 51325), (143, 51367),

Gene: Chikenjars_88 Start: 56967, Stop: 57449, Start Num: 44

Candidate Starts for Chikenjars_88:

(Start: 44 @56967 has 40 MA's), (49, 56985), (72, 57087), (82, 57129), (84, 57138), (88, 57156), (116, 57276), (117, 57282), (130, 57342), (131, 57357), (133, 57369),

Gene: Chlochlo_72 Start: 46955, Stop: 47428, Start Num: 49

Candidate Starts for Chlochlo_72:

(Start: 31 @46925 has 29 MA's), (49, 46955), (53, 46976), (57, 46997), (64, 47024), (73, 47060), (102, 47186), (113, 47240), (128, 47297), (130, 47324), (138, 47375),

Gene: Circum_78 Start: 46108, Stop: 46620, Start Num: 37

Candidate Starts for Circum_78:

(14, 46036), (Start: 37 @46108 has 33 MA's), (58, 46177), (71, 46231), (104, 46375), (106, 46381), (111, 46402), (112, 46405), (139, 46549),

Gene: Citrus_88 Start: 56560, Stop: 57042, Start Num: 44

Candidate Starts for Citrus_88:

(Start: 44 @56560 has 40 MA's), (72, 56680), (82, 56722), (84, 56731), (88, 56749), (116, 56869), (117, 56875), (130, 56935), (131, 56950), (133, 56962),

Gene: ClubPenguin_87 Start: 51570, Stop: 52061, Start Num: 44

Candidate Starts for ClubPenguin_87:

(Start: 44 @51570 has 40 MA's), (54, 51612), (63, 51657), (76, 51702), (78, 51714), (83, 51738), (84, 51741), (85, 51744), (102, 51828), (107, 51852), (133, 51978), (137, 51999),

Gene: Conley_86 Start: 55548, Stop: 56030, Start Num: 44

Candidate Starts for Conley_86:

(Start: 44 @55548 has 40 MA's), (73, 55671), (82, 55710), (88, 55737), (97, 55770), (102, 55806), (112, 55845), (116, 55857), (142, 56004),

Gene: Conley_83 Start: 53384, Stop: 53935, Start Num: 19

Candidate Starts for Conley_83:

(Start: 19 @53384 has 1 MA's), (Start: 39 @53444 has 6 MA's), (42, 53447), (65, 53534), (69, 53546), (76, 53579), (90, 53636), (111, 53735), (118, 53759), (132, 53840), (145, 53924),

Gene: Correa_75 Start: 45066, Stop: 45578, Start Num: 37

Candidate Starts for Correa_75:

(Start: 37 @45066 has 33 MA's), (58, 45135), (71, 45189), (104, 45333), (111, 45360),

Gene: Count_90 Start: 59071, Stop: 59562, Start Num: 33

Candidate Starts for Count_90:

(Start: 33 @59071 has 1 MA's), (Start: 48 @59098 has 1 MA's), (82, 59245), (84, 59254), (85, 59257), (109, 59368), (124, 59404), (126, 59416), (138, 59500),

Gene: CricKo_90 Start: 53073, Stop: 53564, Start Num: 41

Candidate Starts for CricKo_90:

(4, 52932), (6, 52950), (8, 52959), (21, 53031), (24, 53040), (Start: 41 @53073 has 41 MA's), (54, 53118), (64, 53163), (68, 53175), (102, 53331), (109, 53364), (142, 53535),

Gene: Crocheter_87 Start: 55966, Stop: 56445, Start Num: 43

Candidate Starts for Crocheter_87:

(Start: 43 @55966 has 3 MA's), (56, 56023), (58, 56029), (73, 56089), (84, 56137), (88, 56155), (109, 56254), (116, 56272), (117, 56278), (130, 56338), (131, 56353), (133, 56365), (137, 56386),

Gene: Daddyjeff_86 Start: 50407, Stop: 50913, Start Num: 39

Candidate Starts for Daddyjeff_86:

(Start: 39 @50407 has 6 MA's), (47, 50425), (64, 50494), (70, 50521), (71, 50524), (87, 50587), (91, 50599), (110, 50701), (128, 50779), (129, 50794), (138, 50857),

Gene: Damascus_58 Start: 42170, Stop: 42682, Start Num: 28

Candidate Starts for Damascus_58:

(Start: 28 @42170 has 2 MA's), (34, 42182), (73, 42314), (82, 42353), (96, 42401), (109, 42473), (130, 42554),

Gene: Dancer_91 Start: 54990, Stop: 55472, Start Num: 44

Candidate Starts for Dancer_91:

(Start: 44 @54990 has 40 MA's), (68, 55089), (73, 55113), (88, 55179), (97, 55212), (116, 55299), (131, 55380), (133, 55392), (134, 55395), (137, 55413),

Gene: Darby_67 Start: 46386, Stop: 46889, Start Num: 31

Candidate Starts for Darby_67:

(Start: 31 @46386 has 29 MA's), (64, 46485), (102, 46647), (113, 46701), (128, 46758), (130, 46785), (138, 46836),

Gene: Demure_84 Start: 55994, Stop: 56473, Start Num: 44

Candidate Starts for Demure_84:

(Start: 44 @55994 has 40 MA's), (57, 56054), (72, 56114), (84, 56165), (88, 56183), (109, 56282), (116, 56300), (117, 56306), (130, 56366), (131, 56381), (133, 56393), (137, 56414),

Gene: DevitoJr_69 Start: 46771, Stop: 47274, Start Num: 31

Candidate Starts for DevitoJr_69:

(Start: 31 @46771 has 29 MA's), (64, 46870), (113, 47086), (128, 47143), (130, 47170), (138, 47221),

Gene: DizzyRudy_62 Start: 42057, Stop: 42569, Start Num: 28

Candidate Starts for DizzyRudy_62:

(Start: 28 @42057 has 2 MA's), (34, 42069), (54, 42120), (82, 42240), (96, 42288), (109, 42360), (130, 42441),

Gene: Djungelskog_71 Start: 45207, Stop: 45704, Start Num: 37

Candidate Starts for Djungelskog_71:

(Start: 23 @45174 has 2 MA's), (26, 45186), (Start: 28 @45192 has 2 MA's), (Start: 37 @45207 has 33 MA's), (Start: 46 @45222 has 2 MA's), (85, 45387), (109, 45495), (129, 45588),

Gene: DoctorPepper_71 Start: 44909, Stop: 45406, Start Num: 37

Candidate Starts for DoctorPepper_71:

(Start: 23 @44876 has 2 MA's), (26, 44888), (Start: 28 @44894 has 2 MA's), (Start: 37 @44909 has 33 MA's), (Start: 46 @44924 has 2 MA's), (85, 45089), (109, 45197), (129, 45290),

Gene: Doxi13_56 Start: 39042, Stop: 39551, Start Num: 41

Candidate Starts for Doxi13_56:

(Start: 41 @39042 has 41 MA's), (Start: 48 @39057 has 1 MA's), (54, 39084), (70, 39174), (76, 39192), (84, 39231), (100, 39306), (126, 39408), (128, 39414), (129, 39429),

Gene: DrGrey_78 Start: 51385, Stop: 51894, Start Num: 41

Candidate Starts for DrGrey_78:

(Start: 41 @51385 has 41 MA's), (54, 51430), (64, 51475), (77, 51544), (102, 51658), (126, 51748), (127, 51751), (129, 51769), (137, 51829), (139, 51838), (143, 51880),

Gene: Duffington_88 Start: 56767, Stop: 57249, Start Num: 44

Candidate Starts for Duffington_88:

(Start: 44 @56767 has 40 MA's), (49, 56785), (72, 56887), (82, 56929), (84, 56938), (88, 56956), (116, 57076), (117, 57082), (130, 57142), (131, 57157), (133, 57169),

Gene: Dynamite_76 Start: 45552, Stop: 46064, Start Num: 37

Candidate Starts for Dynamite_76:

(Start: 37 @45552 has 33 MA's), (58, 45621), (71, 45675), (104, 45819), (106, 45825), (111, 45846),

Gene: Eddiemania_88 Start: 56862, Stop: 57341, Start Num: 43

Candidate Starts for Eddiemania_88:

(Start: 43 @56862 has 3 MA's), (56, 56919), (57, 56922), (58, 56925), (73, 56985), (82, 57024), (84, 57033), (88, 57051), (97, 57081), (116, 57168), (117, 57174), (122, 57192), (130, 57234), (131, 57249), (133, 57261), (137, 57282),

Gene: Eevee_69 Start: 47508, Stop: 47876, Start Num: 20

Candidate Starts for Eevee_69:

(5, 47439), (15, 47490), (Start: 20 @47508 has 3 MA's), (Start: 23 @47529 has 2 MA's), (30, 47547), (Start: 46 @47562 has 2 MA's), (73, 47673), (80, 47700), (84, 47721), (89, 47739), (102, 47802), (125, 47868),

Gene: Eevee_80 Start: 51716, Stop: 52216, Start Num: 45

Candidate Starts for Eevee_80:

(7, 51587), (Start: 39 @51707 has 6 MA's), (Start: 45 @51716 has 1 MA's), (50, 51731), (85, 51884), (93, 51914), (115, 52031), (123, 52061), (129, 52097), (136, 52151), (138, 52160),

Gene: Egad_72 Start: 45183, Stop: 45680, Start Num: 37

Candidate Starts for Egad_72:

(Start: 23 @45150 has 2 MA's), (26, 45162), (Start: 28 @45168 has 2 MA's), (Start: 37 @45183 has 33 MA's), (Start: 46 @45198 has 2 MA's), (85, 45363), (109, 45471), (129, 45564),

Gene: ElephantMan_70 Start: 47272, Stop: 47775, Start Num: 31

Candidate Starts for ElephantMan_70:

(Start: 31 @47272 has 29 MA's), (64, 47371), (102, 47533), (113, 47587), (128, 47644), (130, 47671), (138, 47722),

Gene: Elsa_76 Start: 45700, Stop: 46212, Start Num: 37

Candidate Starts for Elsa_76:

(Start: 37 @45700 has 33 MA's), (57, 45766), (58, 45769), (71, 45823), (104, 45967), (106, 45973), (111, 45994), (112, 45997),

Gene: Elver_132 Start: 71317, Stop: 71790, Start Num: 46

Candidate Starts for Elver_132:

(Start: 36 @71296 has 1 MA's), (Start: 46 @71317 has 2 MA's), (57, 71365), (58, 71368), (59, 71374), (64, 71392), (71, 71422), (115, 71605), (139, 71734),

Gene: EndAve_89 Start: 56677, Stop: 57159, Start Num: 44

Candidate Starts for EndAve_89:

(Start: 44 @56677 has 40 MA's), (49, 56695), (72, 56797), (82, 56839), (84, 56848), (88, 56866), (116, 56986), (117, 56992), (130, 57052), (131, 57067), (133, 57079),

Gene: Esketit_78 Start: 49973, Stop: 50482, Start Num: 41

Candidate Starts for Esketit_78:

(Start: 41 @49973 has 41 MA's), (54, 50018), (64, 50063), (77, 50132), (102, 50246), (126, 50336), (129, 50357), (137, 50417), (139, 50426), (143, 50468),

Gene: Fazel_88 Start: 55520, Stop: 56002, Start Num: 44

Candidate Starts for Fazel_88:

(Start: 44 @55520 has 40 MA's), (53, 55559), (54, 55562), (56, 55577), (71, 55637), (73, 55643), (75, 55649), (84, 55691), (88, 55709), (103, 55781), (116, 55829), (142, 55976), (143, 55994),

Gene: FidgetOrca_84 Start: 51423, Stop: 51932, Start Num: 41

Candidate Starts for FidgetOrca_84:

(Start: 41 @51423 has 41 MA's), (54, 51468), (64, 51513), (77, 51582), (102, 51696), (126, 51786), (129, 51807), (137, 51867), (139, 51876), (143, 51918),

Gene: Figliar_86 Start: 56571, Stop: 57053, Start Num: 44

Candidate Starts for Figliar_86:

(Start: 44 @56571 has 40 MA's), (49, 56589), (72, 56691), (82, 56733), (84, 56742), (88, 56760), (116, 56880), (117, 56886), (130, 56946), (131, 56961), (133, 56973),

Gene: FortCran_88 Start: 55254, Stop: 55736, Start Num: 44

Candidate Starts for FortCran_88:

(Start: 44 @55254 has 40 MA's), (68, 55353), (73, 55377), (88, 55443), (97, 55476), (116, 55563), (131, 55644), (133, 55656), (134, 55659), (137, 55677),

Gene: FrodoSwaggins_80 Start: 51780, Stop: 52289, Start Num: 41

Candidate Starts for FrodoSwaggins_80:

(Start: 41 @51780 has 41 MA's), (54, 51825), (64, 51870), (77, 51939), (102, 52053), (126, 52143), (127, 52146), (129, 52164), (137, 52224), (139, 52233), (143, 52275),

Gene: FromIndy_88 Start: 52273, Stop: 52764, Start Num: 41

Candidate Starts for FromIndy_88:

(4, 52132), (6, 52150), (8, 52159), (21, 52231), (24, 52240), (Start: 41 @52273 has 41 MA's), (54, 52318), (64, 52363), (68, 52375), (102, 52531), (109, 52564), (142, 52735),

Gene: Gandionco_130 Start: 70114, Stop: 70608, Start Num: 36

Candidate Starts for Gandionco_130:

(Start: 36 @70114 has 1 MA's), (Start: 46 @70135 has 2 MA's), (57, 70183), (58, 70186), (59, 70192), (64, 70210), (71, 70240), (115, 70423), (139, 70552),

Gene: GantcherGoblin_71 Start: 44575, Stop: 45066, Start Num: 40

Candidate Starts for GantcherGoblin_71:

(Start: 37 @44572 has 33 MA's), (Start: 40 @44575 has 4 MA's), (53, 44617), (54, 44620), (96, 44788), (112, 44869), (129, 44947),

Gene: Giantsbane_73 Start: 45925, Stop: 46428, Start Num: 31

Candidate Starts for Giantsbane_73:

(Start: 31 @45925 has 29 MA's), (Start: 46 @45949 has 2 MA's), (49, 45955), (53, 45976), (57, 45997), (64, 46024), (73, 46060), (102, 46186), (128, 46297), (130, 46324),

Gene: Gill_90 Start: 55283, Stop: 55765, Start Num: 44

Candidate Starts for Gill_90:

(Start: 44 @55283 has 40 MA's), (73, 55406), (82, 55445), (88, 55472), (111, 55577), (116, 55592), (131, 55673), (133, 55685), (137, 55706),

Gene: GirlPower_75 Start: 50852, Stop: 51361, Start Num: 41

Candidate Starts for GirlPower_75:

(Start: 41 @50852 has 41 MA's), (54, 50897), (64, 50942), (71, 50972), (77, 51011), (82, 51032), (102, 51125), (137, 51296), (138, 51302), (139, 51305), (141, 51320),

Gene: GoCrazy_73 Start: 44995, Stop: 45507, Start Num: 37

Candidate Starts for GoCrazy_73:

(14, 44923), (Start: 37 @44995 has 33 MA's), (58, 45064), (71, 45118), (104, 45262), (106, 45268), (111, 45289), (112, 45292), (139, 45436),

Gene: GoblinVoyage_55 Start: 38886, Stop: 39395, Start Num: 41

Candidate Starts for GoblinVoyage_55:

(Start: 41 @38886 has 41 MA's), (Start: 48 @38901 has 1 MA's), (54, 38928), (70, 39018), (76, 39036), (84, 39075), (100, 39150), (126, 39252), (128, 39258), (129, 39273),

Gene: Gordon_67 Start: 47259, Stop: 47762, Start Num: 31

Candidate Starts for Gordon_67:

(Start: 31 @47259 has 29 MA's), (64, 47358), (102, 47520), (113, 47574), (128, 47631), (130, 47658), (138, 47709),

Gene: Gravy_89 Start: 54946, Stop: 55428, Start Num: 44

Candidate Starts for Gravy_89:

(Start: 44 @54946 has 40 MA's), (73, 55069), (82, 55108), (88, 55135), (111, 55240), (116, 55255), (131, 55336), (133, 55348), (137, 55369),

Gene: Gusicorn_90 Start: 55873, Stop: 56352, Start Num: 43

Candidate Starts for Gusicorn_90:

(Start: 43 @55873 has 3 MA's), (56, 55930), (58, 55936), (73, 55996), (84, 56044), (88, 56062), (109, 56161), (116, 56179), (117, 56185), (130, 56245), (131, 56260), (133, 56272), (137, 56293),

Gene: Hankly_76 Start: 45190, Stop: 45702, Start Num: 37

Candidate Starts for Hankly_76:

(Start: 37 @45190 has 33 MA's), (58, 45259), (71, 45313), (104, 45457), (106, 45463), (111, 45484),

Gene: HazuAndZazu_79 Start: 51132, Stop: 51641, Start Num: 41

Candidate Starts for HazuAndZazu_79:

(Start: 41 @51132 has 41 MA's), (54, 51177), (64, 51222), (77, 51291), (102, 51405), (126, 51495), (129, 51516), (137, 51576), (139, 51585), (143, 51627),

Gene: Heisenberger_75 Start: 44957, Stop: 45469, Start Num: 37

Candidate Starts for Heisenberger_75:

(14, 44885), (Start: 37 @44957 has 33 MA's), (58, 45026), (71, 45080), (104, 45224), (106, 45230), (111, 45251), (112, 45254),

Gene: HerbBucket_70 Start: 44915, Stop: 45412, Start Num: 37

Candidate Starts for HerbBucket_70:

(Start: 23 @44882 has 2 MA's), (26, 44894), (Start: 28 @44900 has 2 MA's), (Start: 37 @44915 has 33 MA's), (Start: 46 @44930 has 2 MA's), (85, 45095), (109, 45203), (129, 45296),

Gene: Hortihabitatio_85 Start: 55292, Stop: 55774, Start Num: 44

Candidate Starts for Hortihabitatio_85:

(Start: 44 @55292 has 40 MA's), (54, 55334), (56, 55349), (84, 55463), (85, 55466), (88, 55481), (116, 55601), (125, 55631), (142, 55748), (143, 55766),

Gene: Hoshi_83 Start: 51036, Stop: 51545, Start Num: 41

Candidate Starts for Hoshi_83:

(Start: 41 @51036 has 41 MA's), (54, 51081), (64, 51126), (77, 51195), (102, 51309), (126, 51399), (129, 51420), (137, 51480), (139, 51489), (143, 51531),

Gene: HotFries_53 Start: 39084, Stop: 39578, Start Num: 48

Candidate Starts for HotFries_53:

(9, 38961), (Start: 17 @39006 has 1 MA's), (Start: 41 @39069 has 41 MA's), (Start: 48 @39084 has 1 MA's), (54, 39111), (70, 39201), (76, 39219), (84, 39258), (100, 39333), (126, 39435), (128, 39441), (129, 39456),

Gene: Hydrus_87 Start: 56277, Stop: 56756, Start Num: 44

Candidate Starts for Hydrus_87:

(Start: 44 @56277 has 40 MA's), (57, 56337), (72, 56397), (84, 56448), (88, 56466), (109, 56565), (116, 56583), (117, 56589), (130, 56649), (131, 56664), (133, 56676), (137, 56697),

Gene: IceWarrior_82 Start: 50842, Stop: 51351, Start Num: 41

Candidate Starts for IceWarrior_82:

(Start: 41 @50842 has 41 MA's), (54, 50887), (64, 50932), (77, 51001), (102, 51115), (126, 51205), (137, 51286), (139, 51295), (143, 51337),

Gene: Indigenous_84 Start: 51428, Stop: 51937, Start Num: 41

Candidate Starts for Indigenous_84:

(Start: 41 @51428 has 41 MA's), (54, 51473), (64, 51518), (77, 51587), (102, 51701), (126, 51791), (129, 51812), (137, 51872), (139, 51881), (143, 51923),

Gene: Ingrid_76 Start: 47223, Stop: 47726, Start Num: 31

Candidate Starts for Ingrid_76:

(Start: 31 @47223 has 29 MA's), (57, 47295), (73, 47358), (82, 47397), (99, 47469), (102, 47484),

Gene: Inked_75 Start: 47849, Stop: 48352, Start Num: 31

Candidate Starts for Inked_75:

(Start: 31 @47849 has 29 MA's), (57, 47921), (73, 47984), (82, 48023), (99, 48095), (102, 48110),

Gene: Issa_68 Start: 46433, Stop: 46936, Start Num: 31

Candidate Starts for Issa_68:

(Start: 31 @46433 has 29 MA's), (64, 46532), (102, 46694), (113, 46748), (128, 46805), (130, 46832), (138, 46883),

Gene: JEGGS_75 Start: 45036, Stop: 45548, Start Num: 37

Candidate Starts for JEGGS_75:

(14, 44964), (Start: 37 @45036 has 33 MA's), (58, 45105), (71, 45159), (104, 45303), (106, 45309), (111, 45330), (112, 45333),

Gene: Jaylociraptor_82 Start: 51008, Stop: 51517, Start Num: 41

Candidate Starts for Jaylociraptor_82:

(Start: 41 @51008 has 41 MA's), (54, 51053), (64, 51098), (77, 51167), (102, 51281), (126, 51371), (129, 51392), (137, 51452), (139, 51461), (143, 51503),

Gene: Jazzy4900_70 Start: 47081, Stop: 47557, Start Num: 37

Candidate Starts for Jazzy4900_70:

(Start: 37 @47081 has 33 MA's), (66, 47177), (104, 47345), (142, 47525),

Gene: Jodelie19_87 Start: 57758, Stop: 58240, Start Num: 44

Candidate Starts for Jodelie19_87:

(Start: 44 @57758 has 40 MA's), (52, 57791), (71, 57875), (116, 58064), (130, 58130), (131, 58145), (133, 58157),

Gene: JoyLin_81 Start: 52459, Stop: 52968, Start Num: 39

Candidate Starts for JoyLin_81:

(7, 52339), (Start: 39 @52459 has 6 MA's), (Start: 45 @52468 has 1 MA's), (50, 52483), (85, 52636), (93, 52666), (115, 52783), (123, 52813), (129, 52849), (130, 52861), (136, 52903), (138, 52912),

Gene: JoyLin_69 Start: 47628, Stop: 47996, Start Num: 20

Candidate Starts for JoyLin_69:

(5, 47559), (15, 47610), (Start: 20 @47628 has 3 MA's), (Start: 23 @47649 has 2 MA's), (30, 47667), (Start: 46 @47682 has 2 MA's), (73, 47793), (80, 47820), (84, 47841), (89, 47859), (102, 47922), (125, 47988),

Gene: JulesRay_89 Start: 55349, Stop: 55831, Start Num: 44

Candidate Starts for JulesRay_89:

(Start: 44 @55349 has 40 MA's), (68, 55448), (73, 55472), (88, 55538), (97, 55571), (116, 55658), (131, 55739), (133, 55751), (134, 55754), (137, 55772),

Gene: Kardashian_79 Start: 51398, Stop: 51889, Start Num: 41

Candidate Starts for Kardashian_79:

(32, 51386), (Start: 41 @51398 has 41 MA's), (51, 51425), (54, 51443), (57, 51461), (68, 51500), (75, 51530), (85, 51575), (105, 51668), (139, 51836), (143, 51878),

Gene: Kardesai_76 Start: 45309, Stop: 45821, Start Num: 37

Candidate Starts for Kardesai_76:

(14, 45237), (Start: 37 @45309 has 33 MA's), (58, 45378), (71, 45432), (104, 45576), (106, 45582), (111, 45603), (112, 45606), (139, 45750),

Gene: KeaneyLin_72 Start: 44995, Stop: 45507, Start Num: 37

Candidate Starts for KeaneyLin_72:

(14, 44923), (Start: 37 @44995 has 33 MA's), (58, 45064), (71, 45118), (104, 45262), (106, 45268), (111, 45289), (112, 45292), (139, 45436),

Gene: Kenosha_86 Start: 56334, Stop: 56813, Start Num: 43

Candidate Starts for Kenosha_86:

(Start: 43 @56334 has 3 MA's), (56, 56391), (57, 56394), (58, 56397), (73, 56457), (84, 56505), (88, 56523), (116, 56640), (117, 56646), (122, 56664), (130, 56706), (131, 56721), (133, 56733), (137, 56754),

Gene: Kerry_89 Start: 55009, Stop: 55491, Start Num: 44

Candidate Starts for Kerry_89:

(Start: 44 @55009 has 40 MA's), (73, 55132), (82, 55171), (88, 55198), (111, 55303), (116, 55318), (131, 55399), (133, 55411), (137, 55432),

Gene: KevinMinion_72 Start: 45464, Stop: 45958, Start Num: 37

Candidate Starts for KevinMinion_72:

(Start: 37 @45464 has 33 MA's), (Start: 40 @45467 has 4 MA's), (53, 45509), (54, 45512), (96, 45680), (112, 45761), (129, 45839),

Gene: Kinny_77 Start: 46701, Stop: 47192, Start Num: 40

Candidate Starts for Kinny_77:

(Start: 37 @46698 has 33 MA's), (Start: 40 @46701 has 4 MA's), (53, 46743), (54, 46746), (87, 46884), (96, 46914), (98, 46929), (112, 46995), (136, 47127), (139, 47139),

Gene: Leathea_73 Start: 44483, Stop: 44992, Start Num: 40

Candidate Starts for Leathea_73:

(27, 44459), (29, 44465), (Start: 37 @44480 has 33 MA's), (Start: 40 @44483 has 4 MA's), (54, 44528), (81, 44642), (96, 44696), (112, 44777), (117, 44801), (125, 44831),

Gene: Lewando_77 Start: 46439, Stop: 46930, Start Num: 40

Candidate Starts for Lewando_77:

(Start: 37 @46436 has 33 MA's), (Start: 40 @46439 has 4 MA's), (53, 46481), (54, 46484), (87, 46622), (96, 46652), (98, 46667), (112, 46733), (136, 46865), (139, 46877),

Gene: LibertyBell_75 Start: 48093, Stop: 48605, Start Num: 41

Candidate Starts for LibertyBell_75:

(2, 47907), (3, 47940), (11, 48006), (35, 48087), (Start: 41 @48093 has 41 MA's), (64, 48183), (71, 48213), (73, 48219), (76, 48228), (88, 48285), (94, 48318), (131, 48510), (139, 48552), (143, 48594), (144, 48597),

Gene: LibertyBell_73 Start: 45969, Stop: 46457, Start Num: 36

Candidate Starts for LibertyBell_73:

(Start: 36 @45969 has 1 MA's), (58, 46038), (86, 46152), (102, 46227), (125, 46308), (133, 46371),

Gene: LilHuddy_74 Start: 47051, Stop: 47554, Start Num: 31

Candidate Starts for LilHuddy_74:

(Start: 31 @47051 has 29 MA's), (49, 47081), (53, 47102), (57, 47123), (64, 47150), (73, 47186), (102, 47312), (113, 47366), (128, 47423), (130, 47450),

Gene: Linda_72 Start: 45202, Stop: 45699, Start Num: 37

Candidate Starts for Linda_72:

(Start: 23 @45169 has 2 MA's), (26, 45181), (Start: 28 @45187 has 2 MA's), (Start: 37 @45202 has 33 MA's), (Start: 46 @45217 has 2 MA's), (85, 45382), (109, 45490), (129, 45583),

Gene: Loretta_72 Start: 47223, Stop: 47726, Start Num: 31

Candidate Starts for Loretta_72:

(Start: 31 @47223 has 29 MA's), (57, 47295), (73, 47358), (82, 47397), (99, 47469), (102, 47484),

Gene: LucySwiss_69 Start: 46378, Stop: 46881, Start Num: 31

Candidate Starts for LucySwiss_69:

(Start: 31 @46378 has 29 MA's), (64, 46477), (102, 46639), (113, 46693), (130, 46777), (138, 46828),

Gene: Madamato_81 Start: 50680, Stop: 51192, Start Num: 41

Candidate Starts for Madamato_81:

(Start: 41 @50680 has 41 MA's), (54, 50725), (64, 50770), (77, 50839), (82, 50860), (129, 51064), (133, 51103), (137, 51124), (139, 51133),

Gene: Madvan_86 Start: 55589, Stop: 56068, Start Num: 44

Candidate Starts for Madvan_86:

(Start: 44 @55589 has 40 MA's), (57, 55649), (72, 55709), (84, 55760), (88, 55778), (109, 55877), (116, 55895), (117, 55901), (130, 55961), (131, 55976), (133, 55988), (137, 56009),

Gene: Magel_91 Start: 55198, Stop: 55680, Start Num: 44

Candidate Starts for Magel_91:

(Start: 44 @55198 has 40 MA's), (73, 55321), (82, 55360), (88, 55387), (111, 55492), (116, 55507), (131, 55588), (133, 55600), (137, 55621),

Gene: MajinBuu_90 Start: 56967, Stop: 57431, Start Num: 49

Candidate Starts for MajinBuu_90:

(Start: 44 @56949 has 40 MA's), (49, 56967), (72, 57069), (82, 57111), (84, 57120), (88, 57138), (116, 57258), (117, 57264), (130, 57324), (131, 57339), (133, 57351),

Gene: Makai_73 Start: 47336, Stop: 47839, Start Num: 31

Candidate Starts for Makai_73:

(Start: 31 @47336 has 29 MA's), (Start: 46 @47360 has 2 MA's), (53, 47387), (64, 47435), (73, 47471), (102, 47597), (113, 47651), (128, 47708), (130, 47735), (138, 47786),

Gene: Maya_82 Start: 51022, Stop: 51531, Start Num: 41

Candidate Starts for Maya_82:

(Start: 41 @51022 has 41 MA's), (54, 51067), (64, 51112), (77, 51181), (102, 51295), (126, 51385), (129, 51406), (137, 51466), (139, 51475), (143, 51517),

Gene: MediumFry_69 Start: 46566, Stop: 47069, Start Num: 31

Candidate Starts for MediumFry_69:

(Start: 31 @46566 has 29 MA's), (57, 46638), (73, 46701), (82, 46740), (102, 46827), (128, 46938),

Gene: Meibysrarus_80 Start: 50406, Stop: 50915, Start Num: 41

Candidate Starts for Meibysrarus_80:

(Start: 41 @50406 has 41 MA's), (54, 50451), (64, 50496), (77, 50565), (102, 50679), (126, 50769), (129, 50790), (137, 50850), (139, 50859), (143, 50901),

Gene: Michelle_72 Start: 45171, Stop: 45701, Start Num: 23

Candidate Starts for Michelle_72:

(Start: 23 @45171 has 2 MA's), (26, 45183), (Start: 28 @45189 has 2 MA's), (Start: 37 @45204 has 33 MA's), (Start: 46 @45219 has 2 MA's), (85, 45384), (109, 45492), (129, 45585),

Gene: Miek_84 Start: 51455, Stop: 51946, Start Num: 41

Candidate Starts for Miek_84:

(4, 51314), (6, 51332), (8, 51341), (21, 51413), (24, 51422), (Start: 41 @51455 has 41 MA's), (54, 51500), (64, 51545), (68, 51557), (102, 51713), (109, 51746), (142, 51917),

Gene: MiniBagel_69 Start: 47363, Stop: 47866, Start Num: 31

Candidate Starts for MiniBagel_69:

(Start: 31 @47363 has 29 MA's), (57, 47435), (64, 47462), (102, 47624), (113, 47678), (128, 47735), (130, 47762), (138, 47813),

Gene: Mooshroom_77 Start: 45309, Stop: 45821, Start Num: 37

Candidate Starts for Mooshroom_77:

(14, 45237), (Start: 37 @45309 has 33 MA's), (58, 45378), (71, 45432), (104, 45576), (106, 45582), (111, 45603), (112, 45606), (139, 45750),

Gene: Moozy_54 Start: 38896, Stop: 39405, Start Num: 41

Candidate Starts for Moozy_54:

(9, 38788), (Start: 17 @38833 has 1 MA's), (Start: 41 @38896 has 41 MA's), (Start: 48 @38911 has 1 MA's), (54, 38938), (70, 39028), (76, 39046), (84, 39085), (100, 39160), (126, 39262), (128, 39268), (129, 39283),

Gene: Mossy_86 Start: 56611, Stop: 57093, Start Num: 44

Candidate Starts for Mossy_86:

(Start: 44 @56611 has 40 MA's), (53, 56650), (71, 56728), (73, 56734), (84, 56782), (85, 56785), (88, 56800), (116, 56920), (130, 56986), (142, 57067),

Gene: MrAaronian_72 Start: 45204, Stop: 45701, Start Num: 37

Candidate Starts for MrAaronian_72:

(Start: 23 @45171 has 2 MA's), (26, 45183), (Start: 28 @45189 has 2 MA's), (Start: 37 @45204 has 33 MA's), (Start: 46 @45219 has 2 MA's), (85, 45384), (109, 45492), (129, 45585),

Gene: Mudcat_72 Start: 46394, Stop: 46906, Start Num: 37

Candidate Starts for Mudcat_72:

(14, 46322), (Start: 37 @46394 has 33 MA's), (58, 46463), (71, 46517), (104, 46661), (106, 46667), (111, 46688), (112, 46691),

Gene: Mysticmoon_86 Start: 55708, Stop: 56190, Start Num: 44

Candidate Starts for Mysticmoon_86:

(25, 55678), (Start: 44 @55708 has 40 MA's), (53, 55747), (66, 55801), (71, 55825), (84, 55879), (88, 55897), (116, 56017), (125, 56047), (142, 56164),

Gene: Nadmeg_86 Start: 56574, Stop: 57053, Start Num: 44

Candidate Starts for Nadmeg_86:

(Start: 44 @56574 has 40 MA's), (72, 56694), (88, 56763), (116, 56880), (117, 56886), (130, 56946), (131, 56961), (133, 56973), (137, 56994),

Gene: Namo_84 Start: 51477, Stop: 51986, Start Num: 41

Candidate Starts for Namo_84:

(Start: 41 @51477 has 41 MA's), (54, 51522), (64, 51567), (77, 51636), (102, 51750), (126, 51840), (129, 51861), (137, 51921), (139, 51930), (143, 51972),

Gene: NapoleonB_77 Start: 45552, Stop: 46064, Start Num: 37

Candidate Starts for NapoleonB_77:

(Start: 37 @45552 has 33 MA's), (58, 45621), (71, 45675), (104, 45819), (106, 45825), (111, 45846),

Gene: Nason_76 Start: 45700, Stop: 46212, Start Num: 37

Candidate Starts for Nason_76:

(Start: 37 @45700 has 33 MA's), (57, 45766), (58, 45769), (71, 45823), (104, 45967), (106, 45973), (111, 45994), (112, 45997),

Gene: Navi1117_77 Start: 45655, Stop: 46146, Start Num: 40

Candidate Starts for Navi1117_77:

(Start: 37 @45652 has 33 MA's), (Start: 40 @45655 has 4 MA's), (53, 45697), (54, 45700), (96, 45868), (112, 45949), (129, 46027),

Gene: Navi1117_80 Start: 46821, Stop: 47384, Start Num: 13
Candidate Starts for Navi1117_80:
(10, 46803), (13, 46821), (Start: 39 @46899 has 6 MA's), (146, 47376),

Gene: Nightmare_70 Start: 47676, Stop: 48179, Start Num: 31
Candidate Starts for Nightmare_70:
(Start: 31 @47676 has 29 MA's), (64, 47775), (102, 47937), (113, 47991), (128, 48048), (138, 48126),

Gene: Niktson_70 Start: 47272, Stop: 47775, Start Num: 31
Candidate Starts for Niktson_70:
(Start: 31 @47272 has 29 MA's), (64, 47371), (102, 47533), (113, 47587), (128, 47644), (130, 47671),
(138, 47722),

Gene: Nithya_87 Start: 56516, Stop: 56998, Start Num: 44
Candidate Starts for Nithya_87:
(Start: 44 @56516 has 40 MA's), (49, 56534), (72, 56636), (82, 56678), (84, 56687), (88, 56705), (116,
56825), (117, 56831), (130, 56891), (131, 56906), (133, 56918),

Gene: Nivinsha_72 Start: 46808, Stop: 47311, Start Num: 31
Candidate Starts for Nivinsha_72:
(Start: 31 @46808 has 29 MA's), (64, 46907), (102, 47069), (113, 47123), (128, 47180), (138, 47258),

Gene: NoPickles_88 Start: 55105, Stop: 55587, Start Num: 44
Candidate Starts for NoPickles_88:
(Start: 44 @55105 has 40 MA's), (73, 55228), (82, 55267), (88, 55294), (111, 55399), (116, 55414),
(131, 55495), (133, 55507), (137, 55528),

Gene: Odesza_88 Start: 55145, Stop: 55627, Start Num: 44
Candidate Starts for Odesza_88:
(Start: 44 @55145 has 40 MA's), (73, 55268), (82, 55307), (88, 55334), (111, 55439), (116, 55454),
(131, 55535), (133, 55547), (137, 55568),

Gene: OhMyWard_82 Start: 56405, Stop: 56887, Start Num: 44
Candidate Starts for OhMyWard_82:
(Start: 44 @56405 has 40 MA's), (53, 56444), (71, 56522), (73, 56528), (84, 56576), (85, 56579), (88,
56594), (103, 56666), (116, 56714), (142, 56861),

Gene: OlgasClover_89 Start: 57350, Stop: 57832, Start Num: 44
Candidate Starts for OlgasClover_89:
(Start: 44 @57350 has 40 MA's), (49, 57368), (72, 57470), (82, 57512), (84, 57521), (88, 57539), (116,
57659), (117, 57665), (130, 57725), (131, 57740), (133, 57752),

Gene: OlympicHelado_84 Start: 51498, Stop: 52007, Start Num: 41
Candidate Starts for OlympicHelado_84:
(Start: 41 @51498 has 41 MA's), (54, 51543), (64, 51588), (77, 51657), (102, 51771), (126, 51861),
(129, 51882), (137, 51942), (139, 51951), (143, 51993),

Gene: Paella_134 Start: 71880, Stop: 72353, Start Num: 46
Candidate Starts for Paella_134:
(Start: 36 @71859 has 1 MA's), (Start: 46 @71880 has 2 MA's), (57, 71928), (58, 71931), (59, 71937),
(64, 71955), (71, 71985), (115, 72168), (139, 72297),

Gene: Pepy6_051 Start: 72091, Stop: 72582, Start Num: 41

Candidate Starts for Pepy6_051:

(Start: 41 @72091 has 41 MA's), (Start: 46 @72106 has 2 MA's), (62, 72175), (72, 72214), (73, 72217), (76, 72226), (98, 72325), (104, 72361), (105, 72364), (116, 72403), (119, 72421), (125, 72433), (126, 72436), (131, 72484), (138, 72523),

Gene: Perkunas_90 Start: 55043, Stop: 55525, Start Num: 44

Candidate Starts for Perkunas_90:

(Start: 44 @55043 has 40 MA's), (73, 55166), (88, 55232), (97, 55265), (116, 55352), (133, 55445), (139, 55475), (142, 55499),

Gene: Petito_89 Start: 55917, Stop: 56399, Start Num: 44

Candidate Starts for Petito_89:

(Start: 44 @55917 has 40 MA's), (73, 56040), (88, 56106), (97, 56139), (116, 56226), (133, 56319), (137, 56340),

Gene: Phaby_75 Start: 47582, Stop: 48085, Start Num: 31

Candidate Starts for Phaby_75:

(Start: 31 @47582 has 29 MA's), (49, 47612), (53, 47633), (57, 47654), (64, 47681), (73, 47717), (102, 47843), (113, 47897), (128, 47954), (130, 47981),

Gene: Phaila_75 Start: 44697, Stop: 45188, Start Num: 40

Candidate Starts for Phaila_75:

(Start: 37 @44694 has 33 MA's), (Start: 40 @44697 has 4 MA's), (53, 44739), (54, 44742), (96, 44910), (112, 44991), (129, 45069),

Gene: Phepper_88 Start: 56061, Stop: 56540, Start Num: 44

Candidate Starts for Phepper_88:

(Start: 44 @56061 has 40 MA's), (57, 56121), (72, 56181), (84, 56232), (88, 56250), (109, 56349), (116, 56367), (117, 56373), (130, 56433), (131, 56448), (133, 56460), (137, 56481),

Gene: Pherobrine_85 Start: 55751, Stop: 56233, Start Num: 44

Candidate Starts for Pherobrine_85:

(25, 55721), (Start: 44 @55751 has 40 MA's), (53, 55790), (56, 55808), (61, 55829), (71, 55868), (84, 55922), (88, 55940), (116, 56060), (125, 56090), (142, 56207),

Gene: PherryCruz_54 Start: 39085, Stop: 39594, Start Num: 41

Candidate Starts for PherryCruz_54:

(1, 38812), (9, 38977), (Start: 17 @39022 has 1 MA's), (Start: 41 @39085 has 41 MA's), (Start: 48 @39100 has 1 MA's), (54, 39127), (76, 39235), (84, 39274), (100, 39349), (126, 39451), (128, 39457), (129, 39472),

Gene: Pippin15_85 Start: 49798, Stop: 50307, Start Num: 39

Candidate Starts for Pippin15_85:

(29, 49786), (Start: 39 @49798 has 6 MA's), (50, 49822), (74, 49927), (85, 49975), (93, 50005), (115, 50122), (123, 50152), (127, 50170), (129, 50188), (136, 50242), (138, 50251),

Gene: Pippin15_70 Start: 44587, Stop: 44967, Start Num: 18

Candidate Starts for Pippin15_70:

(Start: 18 @44587 has 1 MA's), (22, 44605), (Start: 23 @44608 has 2 MA's), (Start: 28 @44626 has 2 MA's), (30, 44629), (63, 44716), (80, 44782), (84, 44803), (85, 44806), (89, 44821), (92, 44833), (102, 44884), (120, 44932), (125, 44950),

Gene: Poco6_050 Start: 73353, Stop: 73844, Start Num: 41

Candidate Starts for Poco6_050:

(Start: 41 @73353 has 41 MA's), (Start: 46 @73368 has 2 MA's), (72, 73476), (73, 73479), (76, 73488), (98, 73587), (116, 73665), (119, 73683), (125, 73695), (126, 73698), (129, 73719), (131, 73746), (138, 73785),

Gene: Popy_80 Start: 51779, Stop: 52288, Start Num: 41

Candidate Starts for Popy_80:

(Start: 41 @51779 has 41 MA's), (54, 51824), (64, 51869), (77, 51938), (102, 52052), (126, 52142), (127, 52145), (129, 52163), (137, 52223), (139, 52232), (143, 52274),

Gene: Powelldog_76 Start: 45923, Stop: 46420, Start Num: 37

Candidate Starts for Powelldog_76:

(Start: 17 @45860 has 1 MA's), (Start: 23 @45890 has 2 MA's), (26, 45902), (Start: 37 @45923 has 33 MA's), (58, 45989), (63, 46010), (64, 46013), (85, 46103), (93, 46130), (128, 46289),

Gene: ProfFrink_72 Start: 45182, Stop: 45679, Start Num: 37

Candidate Starts for ProfFrink_72:

(Start: 23 @45149 has 2 MA's), (26, 45161), (Start: 28 @45167 has 2 MA's), (Start: 37 @45182 has 33 MA's), (Start: 46 @45197 has 2 MA's), (85, 45362), (109, 45470), (129, 45563),

Gene: Qui_134 Start: 71880, Stop: 72353, Start Num: 46

Candidate Starts for Qui_134:

(Start: 36 @71859 has 1 MA's), (Start: 46 @71880 has 2 MA's), (57, 71928), (58, 71931), (59, 71937), (64, 71955), (71, 71985), (115, 72168), (139, 72297),

Gene: Rainydai_87 Start: 53073, Stop: 53564, Start Num: 41

Candidate Starts for Rainydai_87:

(4, 52932), (6, 52950), (8, 52959), (21, 53031), (24, 53040), (Start: 41 @53073 has 41 MA's), (54, 53118), (64, 53163), (68, 53175), (102, 53331), (109, 53364), (142, 53535),

Gene: Raunak_73 Start: 44844, Stop: 45341, Start Num: 37

Candidate Starts for Raunak_73:

(Start: 23 @44811 has 2 MA's), (26, 44823), (Start: 28 @44829 has 2 MA's), (Start: 37 @44844 has 33 MA's), (Start: 46 @44859 has 2 MA's), (85, 45024), (109, 45132), (129, 45225),

Gene: RavenPuff_55 Start: 39055, Stop: 39564, Start Num: 41

Candidate Starts for RavenPuff_55:

(Start: 41 @39055 has 41 MA's), (Start: 48 @39070 has 1 MA's), (54, 39097), (70, 39187), (76, 39205), (84, 39244), (100, 39319), (126, 39421), (128, 39427), (129, 39442),

Gene: Regigigas_90 Start: 52685, Stop: 53176, Start Num: 41

Candidate Starts for Regigigas_90:

(4, 52544), (6, 52562), (8, 52571), (21, 52643), (24, 52652), (Start: 41 @52685 has 41 MA's), (54, 52730), (64, 52775), (68, 52787), (102, 52943), (109, 52976), (142, 53147),

Gene: Renaldo_81 Start: 46660, Stop: 47151, Start Num: 40

Candidate Starts for Renaldo_81:

(Start: 37 @46657 has 33 MA's), (Start: 40 @46660 has 4 MA's), (53, 46702), (54, 46705), (87, 46843), (96, 46873), (98, 46888), (112, 46954), (136, 47086), (139, 47098),

Gene: Rickmore_88 Start: 55645, Stop: 56139, Start Num: 44

Candidate Starts for Rickmore_88:

(Start: 44 @55645 has 40 MA's), (72, 55765), (82, 55807), (84, 55816), (88, 55834), (116, 55951), (119, 55969), (121, 55972), (130, 56017), (133, 56044),

Gene: Rima_83 Start: 51477, Stop: 51986, Start Num: 41

Candidate Starts for Rima_83:

(Start: 41 @51477 has 41 MA's), (54, 51522), (64, 51567), (77, 51636), (102, 51750), (126, 51840), (129, 51861), (137, 51921), (139, 51930), (143, 51972),

Gene: Roney_88 Start: 55308, Stop: 55790, Start Num: 44

Candidate Starts for Roney_88:

(Start: 44 @55308 has 40 MA's), (73, 55431), (82, 55470), (88, 55497), (111, 55602), (116, 55617), (131, 55698), (133, 55710), (137, 55731),

Gene: RosaAsantewaa_51 Start: 38179, Stop: 38670, Start Num: 41

Candidate Starts for RosaAsantewaa_51:

(16, 38107), (Start: 41 @38179 has 41 MA's), (64, 38266), (71, 38296), (73, 38302), (76, 38311), (84, 38350), (88, 38368), (102, 38437), (139, 38617), (140, 38629),

Gene: Runhaar_85 Start: 55666, Stop: 56145, Start Num: 44

Candidate Starts for Runhaar_85:

(Start: 44 @55666 has 40 MA's), (72, 55786), (88, 55855), (116, 55972), (117, 55978), (130, 56038), (131, 56053), (133, 56065), (137, 56086),

Gene: Salk_72 Start: 45202, Stop: 45699, Start Num: 37

Candidate Starts for Salk_72:

(Start: 23 @45169 has 2 MA's), (26, 45181), (Start: 28 @45187 has 2 MA's), (Start: 37 @45202 has 33 MA's), (Start: 46 @45217 has 2 MA's), (85, 45382), (109, 45490), (129, 45583),

Gene: Scap1_52 Start: 38365, Stop: 38937, Start Num: 17

Candidate Starts for Scap1_52:

(Start: 17 @38365 has 1 MA's), (Start: 41 @38428 has 41 MA's), (Start: 48 @38443 has 1 MA's), (54, 38470), (55, 38488), (70, 38560), (75, 38575), (76, 38578), (84, 38617), (126, 38794), (128, 38800),

Gene: Schwartz33_84 Start: 54940, Stop: 55425, Start Num: 41

Candidate Starts for Schwartz33_84:

(Start: 41 @54940 has 41 MA's), (54, 54982), (56, 54997), (84, 55111), (88, 55129), (109, 55231), (116, 55249), (122, 55273), (130, 55315), (131, 55330), (138, 55369),

Gene: ScienceWizSam_71 Start: 46973, Stop: 47476, Start Num: 31

Candidate Starts for ScienceWizSam_71:

(Start: 31 @46973 has 29 MA's), (64, 47072), (102, 47234), (113, 47288), (128, 47345), (130, 47372), (138, 47423),

Gene: Secretariat_80 Start: 53208, Stop: 53693, Start Num: 41

Candidate Starts for Secretariat_80:

(Start: 41 @53208 has 41 MA's), (54, 53250), (56, 53265), (84, 53379), (88, 53397), (109, 53499), (116, 53517), (122, 53541), (130, 53583), (131, 53598), (138, 53637), (139, 53640), (143, 53682),

Gene: SendItCS_82 Start: 51443, Stop: 51934, Start Num: 41

Candidate Starts for SendItCS_82:

(4, 51302), (6, 51320), (8, 51329), (21, 51401), (24, 51410), (Start: 41 @51443 has 41 MA's), (54, 51488), (64, 51533), (68, 51545), (102, 51701), (109, 51734), (142, 51905),

Gene: Serenabean_86 Start: 50568, Stop: 51074, Start Num: 39

Candidate Starts for Serenabean_86:

(Start: 39 @50568 has 6 MA's), (47, 50586), (64, 50655), (70, 50682), (71, 50685), (87, 50748), (91, 50760), (110, 50862), (128, 50940), (129, 50955), (138, 51018),

Gene: ShaggyRogers_89 Start: 55632, Stop: 56111, Start Num: 44

Candidate Starts for ShaggyRogers_89:

(Start: 44 @55632 has 40 MA's), (72, 55752), (84, 55803), (85, 55806), (88, 55821), (116, 55938), (122, 55962), (130, 56004), (131, 56019), (133, 56031), (137, 56052),

Gene: SheRa_55 Start: 38965, Stop: 39474, Start Num: 41

Candidate Starts for SheRa_55:

(9, 38857), (Start: 17 @38902 has 1 MA's), (Start: 41 @38965 has 41 MA's), (Start: 48 @38980 has 1 MA's), (54, 39007), (70, 39097), (76, 39115), (84, 39154), (100, 39229), (126, 39331), (128, 39337), (129, 39352),

Gene: Shepard_74 Start: 46904, Stop: 47407, Start Num: 31

Candidate Starts for Shepard_74:

(Start: 31 @46904 has 29 MA's), (49, 46934), (53, 46955), (57, 46976), (64, 47003), (73, 47039), (102, 47165), (113, 47219), (128, 47276), (130, 47303),

Gene: Shiba_71 Start: 44860, Stop: 45357, Start Num: 37

Candidate Starts for Shiba_71:

(Start: 23 @44827 has 2 MA's), (26, 44839), (Start: 28 @44845 has 2 MA's), (Start: 37 @44860 has 33 MA's), (Start: 46 @44875 has 2 MA's), (85, 45040), (109, 45148), (129, 45241),

Gene: Sloopyjoe_72 Start: 45206, Stop: 45703, Start Num: 37

Candidate Starts for Sloopyjoe_72:

(Start: 23 @45173 has 2 MA's), (26, 45185), (Start: 28 @45191 has 2 MA's), (Start: 37 @45206 has 33 MA's), (Start: 46 @45221 has 2 MA's), (85, 45386), (109, 45494), (129, 45587),

Gene: Soshi_81 Start: 51620, Stop: 52129, Start Num: 41

Candidate Starts for Soshi_81:

(Start: 41 @51620 has 41 MA's), (54, 51665), (64, 51710), (77, 51779), (102, 51893), (126, 51983), (129, 52004), (137, 52064), (139, 52073), (143, 52115),

Gene: Spectropatronm_81 Start: 51016, Stop: 51525, Start Num: 41

Candidate Starts for Spectropatronm_81:

(Start: 41 @51016 has 41 MA's), (54, 51061), (64, 51106), (77, 51175), (102, 51289), (126, 51379), (129, 51400), (137, 51460), (139, 51469), (143, 51511),

Gene: Sporto_71 Start: 46287, Stop: 46784, Start Num: 37

Candidate Starts for Sporto_71:

(21, 46248), (Start: 37 @46287 has 33 MA's), (57, 46350), (64, 46377), (79, 46440), (93, 46494), (108, 46569), (114, 46599), (128, 46653),

Gene: StarLord_72 Start: 45199, Stop: 45696, Start Num: 37

Candidate Starts for StarLord_72:

(Start: 23 @45166 has 2 MA's), (26, 45178), (Start: 28 @45184 has 2 MA's), (Start: 37 @45199 has 33 MA's), (Start: 46 @45214 has 2 MA's), (85, 45379), (109, 45487), (129, 45580),

Gene: Stayer_72 Start: 45169, Stop: 45699, Start Num: 23

Candidate Starts for Stayer_72:

(Start: 23 @45169 has 2 MA's), (26, 45181), (Start: 28 @45187 has 2 MA's), (Start: 37 @45202 has 33 MA's), (Start: 46 @45217 has 2 MA's), (85, 45382), (109, 45490), (129, 45583),

Gene: Sunny4976_69 Start: 47081, Stop: 47557, Start Num: 37
Candidate Starts for Sunny4976_69:
(Start: 37 @47081 has 33 MA's), (66, 47177), (104, 47345), (142, 47525),

Gene: Sweetclover_80 Start: 49348, Stop: 49782, Start Num: 59
Candidate Starts for Sweetclover_80:
(Start: 39 @49276 has 6 MA's), (58, 49342), (59, 49348), (60, 49351), (64, 49363), (91, 49468), (110, 49570), (128, 49648), (129, 49663), (138, 49726), (139, 49729),

Gene: Synopsis_66 Start: 46738, Stop: 47241, Start Num: 31
Candidate Starts for Synopsis_66:
(Start: 31 @46738 has 29 MA's), (64, 46837), (102, 46999), (113, 47053), (128, 47110), (138, 47188),

Gene: TaidaOne_82 Start: 51492, Stop: 52001, Start Num: 41
Candidate Starts for TaidaOne_82:
(Start: 41 @51492 has 41 MA's), (54, 51537), (64, 51582), (77, 51651), (102, 51765), (126, 51855), (129, 51876), (137, 51936), (139, 51945), (143, 51987),

Gene: Talon44_92 Start: 55653, Stop: 56135, Start Num: 44
Candidate Starts for Talon44_92:
(Start: 44 @55653 has 40 MA's), (73, 55776), (88, 55842), (97, 55875), (116, 55962), (133, 56055), (139, 56085), (142, 56109),

Gene: Tanis_89 Start: 55128, Stop: 55610, Start Num: 44
Candidate Starts for Tanis_89:
(Start: 44 @55128 has 40 MA's), (73, 55251), (82, 55290), (88, 55317), (111, 55422), (116, 55437), (131, 55518), (133, 55530), (137, 55551),

Gene: Tatanka_63 Start: 46880, Stop: 47383, Start Num: 31
Candidate Starts for Tatanka_63:
(Start: 31 @46880 has 29 MA's), (64, 46979), (102, 47141), (113, 47195), (128, 47252), (130, 47279), (138, 47330),

Gene: Teacup_71 Start: 47312, Stop: 47815, Start Num: 31
Candidate Starts for Teacup_71:
(Start: 31 @47312 has 29 MA's), (64, 47411), (101, 47570), (102, 47573), (113, 47627), (128, 47684), (130, 47711), (138, 47762),

Gene: TenaciousP_89 Start: 57721, Stop: 58203, Start Num: 44
Candidate Starts for TenaciousP_89:
(Start: 44 @57721 has 40 MA's), (52, 57754), (71, 57838), (116, 58027), (130, 58093), (131, 58108), (133, 58120),

Gene: Tenney120_76 Start: 45235, Stop: 45726, Start Num: 40
Candidate Starts for Tenney120_76:
(Start: 37 @45232 has 33 MA's), (Start: 40 @45235 has 4 MA's), (53, 45277), (54, 45280), (96, 45448), (112, 45529),

Gene: Tenno_69 Start: 47396, Stop: 47899, Start Num: 31
Candidate Starts for Tenno_69:

(Start: 31 @47396 has 29 MA's), (Start: 46 @47420 has 2 MA's), (64, 47495), (102, 47657), (113, 47711), (128, 47768), (130, 47795), (138, 47846),

Gene: Thiqqums_90 Start: 53073, Stop: 53564, Start Num: 41

Candidate Starts for Thiqqums_90:

(4, 52932), (6, 52950), (8, 52959), (21, 53031), (24, 53040), (Start: 41 @53073 has 41 MA's), (54, 53118), (64, 53163), (68, 53175), (102, 53331), (109, 53364), (142, 53535),

Gene: TieDye_78 Start: 50340, Stop: 50849, Start Num: 41

Candidate Starts for TieDye_78:

(Start: 41 @50340 has 41 MA's), (54, 50385), (64, 50430), (77, 50499), (102, 50613), (126, 50703), (129, 50724), (137, 50784), (139, 50793), (143, 50835),

Gene: Tokki_79 Start: 47450, Stop: 47953, Start Num: 31

Candidate Starts for Tokki_79:

(Start: 31 @47450 has 29 MA's), (49, 47480), (53, 47501), (57, 47522), (64, 47549), (73, 47585), (102, 47711), (113, 47765), (128, 47822), (130, 47849),

Gene: TonyStarch_81 Start: 50778, Stop: 51287, Start Num: 41

Candidate Starts for TonyStarch_81:

(Start: 41 @50778 has 41 MA's), (54, 50823), (64, 50868), (77, 50937), (102, 51051), (126, 51141), (129, 51162), (137, 51222), (139, 51231), (143, 51273),

Gene: Tribby_80 Start: 46452, Stop: 46964, Start Num: 37

Candidate Starts for Tribby_80:

(Start: 37 @46452 has 33 MA's), (58, 46521), (71, 46575), (104, 46719), (111, 46746),

Gene: TrixiePhattel_75 Start: 44885, Stop: 45361, Start Num: 46

Candidate Starts for TrixiePhattel_75:

(27, 44846), (Start: 37 @44867 has 33 MA's), (Start: 40 @44870 has 4 MA's), (Start: 46 @44885 has 2 MA's), (54, 44915), (87, 45053), (96, 45083), (112, 45164), (117, 45188), (125, 45218), (129, 45242), (139, 45308),

Gene: Truckee_71 Start: 47121, Stop: 47624, Start Num: 31

Candidate Starts for Truckee_71:

(Start: 31 @47121 has 29 MA's), (Start: 46 @47145 has 2 MA's), (53, 47172), (64, 47220), (73, 47256), (102, 47382), (113, 47436), (128, 47493), (130, 47520), (138, 47571),

Gene: Trufflozitus_93 Start: 55606, Stop: 56088, Start Num: 44

Candidate Starts for Trufflozitus_93:

(Start: 44 @55606 has 40 MA's), (68, 55705), (73, 55729), (88, 55795), (97, 55828), (116, 55915), (131, 55996), (133, 56008), (134, 56011), (137, 56029),

Gene: Trustiboi_68 Start: 46995, Stop: 47498, Start Num: 31

Candidate Starts for Trustiboi_68:

(Start: 31 @46995 has 29 MA's), (64, 47094), (102, 47256), (113, 47310), (128, 47367), (130, 47394), (138, 47445),

Gene: Untouchable_89 Start: 57058, Stop: 57537, Start Num: 44

Candidate Starts for Untouchable_89:

(Start: 44 @57058 has 40 MA's), (57, 57118), (72, 57178), (84, 57229), (88, 57247), (109, 57346), (116, 57364), (117, 57370), (130, 57430), (131, 57445), (133, 57457), (137, 57478),

Gene: Uzumaki_70 Start: 44675, Stop: 45166, Start Num: 40

Candidate Starts for Uzumaki_70:

(Start: 37 @44672 has 33 MA's), (Start: 40 @44675 has 4 MA's), (53, 44717), (54, 44720), (96, 44888), (112, 44969), (129, 45047),

Gene: Vardy_86 Start: 55581, Stop: 56060, Start Num: 44

Candidate Starts for Vardy_86:

(Start: 44 @55581 has 40 MA's), (72, 55701), (88, 55770), (116, 55887), (117, 55893), (130, 55953), (131, 55968), (133, 55980), (137, 56001),

Gene: Xenomorph_73 Start: 45979, Stop: 46491, Start Num: 37

Candidate Starts for Xenomorph_73:

(Start: 37 @45979 has 33 MA's), (58, 46048), (71, 46102), (104, 46246), (106, 46252), (111, 46273), (112, 46276), (139, 46420),

Gene: Yotsuba_81 Start: 52477, Stop: 52986, Start Num: 39

Candidate Starts for Yotsuba_81:

(7, 52357), (Start: 39 @52477 has 6 MA's), (Start: 45 @52486 has 1 MA's), (50, 52501), (85, 52654), (93, 52684), (115, 52801), (123, 52831), (129, 52867), (136, 52921), (138, 52930),

Gene: Yotsuba_69 Start: 47646, Stop: 48014, Start Num: 20

Candidate Starts for Yotsuba_69:

(5, 47577), (15, 47628), (Start: 20 @47646 has 3 MA's), (Start: 23 @47667 has 2 MA's), (30, 47685), (Start: 46 @47700 has 2 MA's), (73, 47811), (80, 47838), (84, 47859), (89, 47877), (102, 47940), (125, 48006),

Gene: Zeina_76 Start: 45531, Stop: 46022, Start Num: 40

Candidate Starts for Zeina_76:

(Start: 37 @45528 has 33 MA's), (Start: 40 @45531 has 4 MA's), (53, 45573), (54, 45576), (96, 45744), (112, 45825), (129, 45903),

Gene: Zeph_90 Start: 56862, Stop: 57341, Start Num: 44

Candidate Starts for Zeph_90:

(Start: 44 @56862 has 40 MA's), (57, 56922), (72, 56982), (84, 57033), (88, 57051), (109, 57150), (116, 57168), (117, 57174), (130, 57234), (131, 57249), (133, 57261), (137, 57282),

Gene: Zippen_74 Start: 47714, Stop: 48217, Start Num: 31

Candidate Starts for Zippen_74:

(Start: 31 @47714 has 29 MA's), (57, 47786), (73, 47849), (82, 47888), (102, 47975),