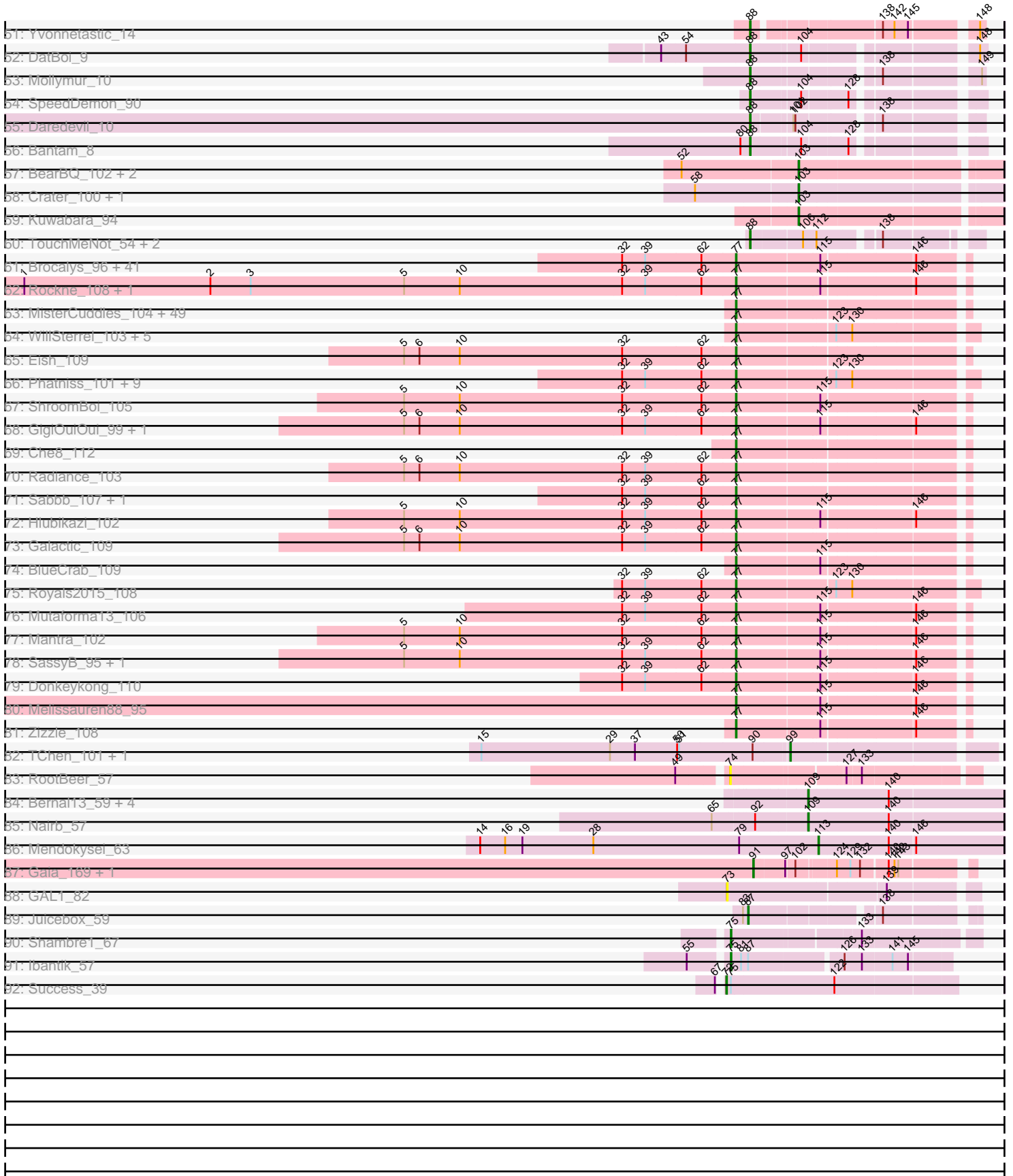


Pham 157541



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 157541 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157541 has 261 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Misomonster_3
- Track 2 : Sparky_95
- Track 3 : Farewell_97
- Track 4 : MalagasyRose_85
- Track 5 : Nergal_81
- Track 6 : Provolone_4, ElGato_5
- Track 7 : Alsaber_3
- Track 8 : Conan_6
- Track 9 : Celery_4
- Track 10 : Verse_2
- Track 11 : Culver_13, PhinkBoden_15, Abscondus_14, Cucurbita_13, WilliamBoone_12, ClubL_14, Bachita_15, Dusty_13
- Track 12 : Lozinak_14, Toniann_14, Norvs_14, Smoothie_14, Engineer_14, Aphelion_14, Miskis_16
- Track 13 : BrutonGaster_7
- Track 14 : OneUp_9
- Track 15 : Mayweather_74, Elinal_76, Vine_74
- Track 16 : SweatNTears_71
- Track 17 : Button_71
- Track 18 : Yummy_71
- Track 19 : Quasar_71
- Track 20 : Agatha_71, Axym_69, Burnsey_70
- Track 21 : Lauer_66
- Track 22 : Yakult_74
- Track 23 : Fribs8_67, Nibbles_67, Azira_67
- Track 24 : Survivors_69
- Track 25 : GiKK_75
- Track 26 : SummitAcademy_71
- Track 27 : Emalyn_67, Amok_68
- Track 28 : Orla_75
- Track 29 : Margaret_75
- Track 30 : Buttrmlkdreams_71, Horseradish_71
- Track 31 : Jamzy_76
- Track 32 : Dre3_68
- Track 33 : Pons_74
- Track 34 : Troje_71
- Track 35 : Nodigi_74

- Track 36 : Wrigley_81, Posh_79, Pytheas_83, Jablanski_82
- Track 37 : LonelyBoi_78
- Track 38 : Cashline_76
- Track 39 : EMSquaredA_80, Floral_80, Pollux_82
- Track 40 : Bradissa_76
- Track 41 : EnalisNailo_76
- Track 42 : Angelique_76
- Track 43 : BritBrat_98
- Track 44 : WelcomeAyanna_83, Trumpet_79, Zameen_79, Maridalia_83, Bunnybear_78, Antonio_78, Manasvini_81, Tayonia_79, Eudoria_79, Kita_80, ThankyouJordi_83, Suscepit_79, Polly_76, Neobush_81
- Track 45 : Agueybana_85, Zirinka_79, AlumE_82, BoyNamedSue_82, Bialota_79
- Track 46 : Nymphadora_84, TimTam_84, Bosnia_82, Eviarto_84, Herod_84, BatStarr_83
- Track 47 : Madeline_76
- Track 48 : Hyzer_101
- Track 49 : RavenCo17_74
- Track 50 : Cardigan_14, JonJames_13
- Track 51 : Yvonnetastic_14
- Track 52 : DatBoi_9
- Track 53 : Mollymur_10
- Track 54 : SpeedDemon_90
- Track 55 : Daredevil_10
- Track 56 : Bantam_8
- Track 57 : BearBQ_102, MortyNRick_99, Birdsong_96
- Track 58 : Crater_100, Apricot_101
- Track 59 : Kuwabara_94
- Track 60 : TouchMeNot_54, Arianna_54, Poushou_54
- Track 61 : Brocalys_96, CaptainTrips_107, PhesterPhotato_108, MinionDave_103, Gorge_103, Cabrinians_101, DLane_105, Gandolph_104, MilanaBonita_98, DillTech15_111, Filuzino_105, GUmbe_104, ShowerHandel_103, SuperGrey_103, Ms6_107, Ardmore_88, Rita_104, Philus_108, StAnnes_110, Pippy_103, KingMidas_105, Florinda_117, Hamulus_105, FreddyB_113, SiSi_99, Tweety_109, James_108, Whouxphf_108, Phalconet_106, Batiatus_105, Krakatau_97, Veteran_94, NormanBulbieJr_102, Wee_109, Bipolar_106, Emma_109, Moonbeam_107, Kenuha5_96, Scottish_105, Taj_110, EleanorGeorge_108, Akhila_99
- Track 62 : Rockne_108, PMC_104
- Track 63 : MisterCuddles_104, Ruby_100, VRedHorse_105, Estave1_112, Karhdo_100, Mattes_105, Clifton_96, BodEinwohner17_116, Llama_111, PHappiness_104, BobaPhett_108, Wachhund_101, RedBird_105, Seabastian_111, Crumble_98, ShiLan_107, Nimbo_96, Byougenkin_101, OldBen_101, Sassafras_106, JoeyJr_107, Inventum_102, MadMen_109, Lizziana_105, Leperchaun_106, Priscilla_105, Deb65_96, DRBy19_104, Jarcob_107, Kersh_107, Phasih_100, ByChance_95, OfUltron_111, Polka14_108, RitaG_103, SwagPiggett_106, Ibhubesi_103, Daenerys_102, Eradicator_95, Sparkdehlily_111, Modragons_107, TDanisky_112, Hades_102, Girr_103, AlpineSix_102, Spoonbill_104, Geralt_97, KristaRAM_113, Ochi17_110, Martik_103
- Track 64 : WillSterrel_103, Mahavrat_98, IrishSherpFalk_105, Maravista_102, Phanphagia_109, Shauna1_106
- Track 65 : Eish_109
- Track 66 : Phatniss_101, Chuckly_102, Dante_104, Llij_99, Burwell21_99, Minnie_99, Zerg_103, Sandalphon_103, Bubbles123_100, Whatsapiecost_99

- Track 67 : ShroomBoi_105
- Track 68 : GigiOuiOui_99, LunaBlu_111
- Track 69 : Che8_112
- Track 70 : Radiance_103
- Track 71 : Sabbb_107, Pacc40_101
- Track 72 : Hlubikazi_102
- Track 73 : Galactic_109
- Track 74 : BlueCrab_109
- Track 75 : Royals2015_108
- Track 76 : Mutaforma13_106
- Track 77 : Mantra_102
- Track 78 : SassyB_95, PopTart_95
- Track 79 : Donkeykong_110
- Track 80 : Melissauren88_95
- Track 81 : Zizzle_108
- Track 82 : TChen_101, Renaud18_112
- Track 83 : RootBeer_57
- Track 84 : Bernal13_59, Ibrahim_59, ZenTime222_65, RonRayGun_59, Whitty_58
- Track 85 : Nairb_57
- Track 86 : Mendokysei_63
- Track 87 : Gaia_169, Nebkiss_165
- Track 88 : GAL1_82
- Track 89 : Juicebox_59
- Track 90 : Shambre1_67
- Track 91 : Ibantik_57
- Track 92 : Success_39

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

The start number called the most often in the published annotations is 77, it was called in 123 of the 243 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Akhila_99, AlpineSix_102, Ardmore_88, Batiatus_105, Bipolar_106, BlueCrab_109, BobaPhett_108, BodEinwohner17_116, Brocalys_96, Bubbles123_100, Burwell21_99, ByChance_95, Byougenkin_101, Cabrinians_101, CaptainTrips_107, Che8_112, Chuckly_102, Clifton_96, Crumble_98, DLane_105, DRBy19_104, Daenerys_102, Dante_104, Deb65_96, DillTech15_111, Donkeykong_110, Eish_109, EleanorGeorge_108, Emma_109, Eradicator_95, Estave1_112, Filuzino_105, Florinda_117, FreddyB_113, GUmbie_104, Galactic_109, Gandalph_104, Geralt_97, GigiOuiOui_99, Girr_103, Gorge_103, Hades_102, Hamulus_105, Hlubikazi_102, Ibhuesi_103, Inventum_102, IrishSherpFalk_105, James_108, Jarcob_107, JoeyJr_107, Karhdo_100, Kenuha5_96, Kersh_107, KingMidas_105, Krakatau_97, KristaRAM_113, Leperchaun_106, Lizziana_105, Llama_111, Llij_99, LunaBlu_111, MadMen_109, Mahavrat_98, Mantra_102, Maravista_102, Martik_103, Mattes_105, Melissauren88_95, MilanaBonita_98, MinionDave_103, Minnie_99, MisterCuddles_104, Modragons_107, Moonbeam_107, Ms6_107, Mutaforma13_106, Nimbo_96, NormanBulbieJr_102, Ochi17_110, OfUltron_111, OldBen_101, PHappiness_104, PMC_104, Pacc40_101, Phalconet_106, Phanphagia_109, Phasih_100, Phatniss_101, PhesterPotato_108, Philus_108, Pippy_103,

Polka14_108, PopTart_95, Priscilla_105, Radiance_103, RedBird_105, RitaG_103, Rita_104, Rockne_108, Royals2015_108, Ruby_100, Sabbb_107, Sandalphon_103, Sassafras_106, SassyB_95, Scottish_105, Seabastian_111, Shauna1_106, ShiLan_107, ShowerHandel_103, ShroomBoi_105, SiSi_99, Sparkdehlily_111, Spoonbill_104, StAnnes_110, SuperGrey_103, SwagPiggett_106, TDanisky_112, Taj_110, Tweety_109, VRedHorse_105, Veteran_94, Wachhund_101, Wee_109, Whatsapiecost_99, Whouxphf_108, WillSterrel_103, Zerg_103, Zizzle_108,

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

-

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

- Abscondus_14, Agatha_71, Agueybana_85, Alsaber_3, AlumE_82, Amok_68, Angelique_76, Antonio_78, Aphelion_14, Apricot_101, Arianna_54, Axym_69, Azira_67, Bachita_15, Bantam_8, BatStarr_83, BearBQ_102, Bernal13_59, Bialota_79, Birdsong_96, Bosnia_82, BoyNamedSue_82, Bradissa_76, BritBrat_98, BrutonGaster_7, Bunnybear_78, Burnsey_70, Button_71, Buttrmlkdreams_71, Cardigan_14, Cashline_76, Celery_4, ClubL_14, Conan_6, Crater_100, Cucurbita_13, Culver_13, Daredevil_10, DatBoi_9, Dre3_68, Dusty_13, EMSquaredA_80, ElGato_5, Elinal_76, Emalyn_67, EnalisNailo_76, Engineer_14, Eudoria_79, Eviarto_84, Farewell_97, Floral_80, Fribs8_67, GAL1_82, Gaia_169, GiKK_75, Herod_84, Horseradish_71, Hyzer_101, Ibantik_57, Ibrahim_59, Jablanski_82, Jamzy_76, JonJames_13, Juicebox_59, Kita_80, Kuwabara_94, Lauer_66, LonelyBoi_78, Lozinak_14, Madeline_76, MalagasyRose_85, Manasvini_81, Margaret_75, Maridalia_83, Mayweather_74, Mendokyse_63, Miskis_16, Misomonster_3, Mollymur_10, MortyNRick_99, Nairb_57, Nebkiss_165, Neobush_81, Nergal_81, Nibbles_67, Nodigi_74, Norvs_14, Nymphadora_84, OneUp_9, Orla_75, PhinkBoden_15, Pollux_82, Polly_76, Pons_74, Posh_79, Poushou_54, Provolone_4, Pytheas_83, Quasar_71, RavenCo17_74, Renaud18_112, RonRayGun_59, RootBeer_57, Shambre1_67, Smoothie_14, Sparky_95, SpeedDemon_90, Success_39, SummitAcademy_71, Survivors_69, Suscepit_79, SweatNTears_71, TChen_101, Tayonia_79, ThankyouJordi_83, TimTam_84, Toniann_14, TouchMeNot_54, Troje_71, Trumpet_79, Verse_2, Vine_74, WelcomeAyanna_83, Whitty_58, WilliamBoone_12, Wrigley_81, Yakult_74, Yummy_71, Yvonnetastic_14, Zameen_79, ZenTime222_65, Zirinka_79,

Summary by start number:

Start 72:

- Found in 1 of 261 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Success_39 (singleton),

Start 73:

- Found in 1 of 261 (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: GAL1_82 (singleton),

Start 74:

- Found in 27 of 261 (10.3%) of genes in pham
- Manual Annotations of this start: 1 of 243

- Called 7.4% of time when present
- Phage (with cluster) where this start called: GiKK_75 (CT), RootBeer_57 (FA),

Start 75:

- Found in 3 of 261 (1.1%) of genes in pham
- Manual Annotations of this start: 2 of 243
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Ibantik_57 (singleton), Shambre1_67 (singleton),

Start 76:

- Found in 5 of 261 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 243
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Quasar_71 (CT),

Start 77:

- Found in 129 of 261 (49.4%) of genes in pham
- Manual Annotations of this start: 123 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akhila_99 (F1), AlpineSix_102 (F1), Ardmore_88 (F1), Batiatus_105 (F1), Bipolar_106 (F1), BlueCrab_109 (F1), BobaPhett_108 (F1), BodEinwohner17_116 (F1), Brocalys_96 (F1), Bubbles123_100 (F1), Burwell21_99 (F1), ByChance_95 (F1), Byougenkin_101 (F1), Cabrinians_101 (F1), CaptainTrips_107 (F1), Che8_112 (F1), Chuckly_102 (F1), Clifton_96 (F1), Crumble_98 (F1), DLane_105 (F1), DRBy19_104 (F1), Daenerys_102 (F1), Dante_104 (F1), Deb65_96 (F1), DillTech15_111 (F1), Donkeykong_110 (F1), Eish_109 (F1), EleanorGeorge_108 (F1), Emma_109 (F1), Eradicator_95 (F1), Estave1_112 (F1), Filuzino_105 (F1), Florinda_117 (F1), FreddyB_113 (F1), GUMbie_104 (F1), Galactic_109 (F1), Gandolph_104 (F1), Geralt_97 (F1), GigiOuiOui_99 (F1), Girr_103 (F1), Gorge_103 (F1), Hades_102 (F1), Hamulus_105 (F1), Hlubikazi_102 (F1), Ibhubes1_103 (F1), Inventum_102 (F1), IrishSherpFalk_105 (F1), James_108 (F1), Jarcob_107 (F1), JoeyJr_107 (F1), Karhdo_100 (F1), Kenuha5_96 (F1), Kersh_107 (F1), KingMidas_105 (F1), Krakatau_97 (F1), KristaRAM_113 (F1), Leperchaun_106 (F1), Lizziana_105 (F1), Llama_111 (F1), Llij_99 (F1), LunaBlu_111 (F1), MadMen_109 (F1), Mahavrat_98 (F1), Mantra_102 (F1), Maravista_102 (F1), Martik_103 (F1), Mattes_105 (F1), Melissauren88_95 (F1), MilanaBonita_98 (F1), MinionDave_103 (F1), Minnie_99 (F1), MisterCuddles_104 (F1), Modragons_107 (F1), Moonbeam_107 (F1), Ms6_107 (F1), Mutaforma13_106 (F1), Nimbo_96 (F1), NormanBulbieJr_102 (F1), Ochi17_110 (F1), OfUltron_111 (F1), OldBen_101 (F1), PHappiness_104 (F1), PMC_104 (F1), Pacc40_101 (F1), Phalconet_106 (F1), Phanphagia_109 (F1), Phasih_100 (F1), Phatniss_101 (F1), PhesterPhotato_108 (F1), Philus_108 (F1), Pippy_103 (F1), Polka14_108 (F1), PopTart_95 (F1), Priscilla_105 (F1), Radiance_103 (F1), RedBird_105 (F1), RitaG_103 (F1), Rita_104 (F1), Rockne_108 (F1), Royals2015_108 (F1), Ruby_100 (F1), Sabbb_107 (F1), Sandalphon_103 (F1), Sassafras_106 (F1), SassyB_95 (F1), Scottish_105 (F1), Seabastian_111 (F1), Shauna1_106 (F1), ShiLan_107 (F1), ShowerHandel_103 (F1), ShroomBoi_105 (F1), SiSi_99 (F1), Sparkdehilly_111 (F1), Spoonbill_104 (F1), StAnnes_110 (F1), SuperGrey_103 (F1), SwagPiggett_106 (F1), TDanisky_112 (F1), Taj_110 (F1), Tweety_109 (F1), VRedHorse_105 (F1), Veteran_94 (F1), Wachhund_101 (F1), Wee_109 (F1), Whatsapiecost_99 (F1), Whouxphf_108 (F1), WillSterrel_103 (F1), Zerg_103 (F1), Zizzle_108 (F1),

Start 78:

- Found in 6 of 261 (2.3%) of genes in pham
- Manual Annotations of this start: 5 of 243
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Elinal_76 (CT), Mayweather_74 (CT), Pons_74 (CT), SummitAcademy_71 (CT), Vine_74 (CT),

Start 85:

- Found in 5 of 261 (1.9%) of genes in pham
- Manual Annotations of this start: 5 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azira_67 (CT), Dre3_68 (CT), Fribs8_67 (CT), Nibbles_67 (CT), Survivors_69 (CT),

Start 86:

- Found in 37 of 261 (14.2%) of genes in pham
- Manual Annotations of this start: 27 of 243
- Called 75.7% of time when present
- Phage (with cluster) where this start called: Agueybana_85 (CZ1), AlumE_82 (CZ1), Antonio_78 (CZ1), BatStarr_83 (CZ1), Bialota_79 (CZ1), Bosnia_82 (CZ1), BoyNamedSue_82 (CZ1), Bunnybear_78 (CZ), Eudoria_79 (CZ1), Eviarto_84 (CZ1), Herod_84 (CZ1), Hyzer_101 (CZ1), Kita_80 (CZ1), Madeline_76 (CZ1), Manasvini_81 (CZ1), Maridalia_83 (CZ1), Neobush_81 (CZ1), Nymphadora_84 (CZ1), Polly_76 (CZ1), RavenCo17_74 (CZ8), Suscepit_79 (CZ1), Tayonia_79 (CZ1), ThankyouJordi_83 (CZ1), TimTam_84 (CZ1), Trumpet_79 (CZ1), WelcomeAyanna_83 (CZ1), Zameen_79 (CZ1), Zirinka_79 (CZ1),

Start 87:

- Found in 9 of 261 (3.4%) of genes in pham
- Manual Annotations of this start: 3 of 243
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Buttrmilkdreams_71 (CT), Horseradish_71 (CT), Juicebox_59 (singleton),

Start 88:

- Found in 46 of 261 (17.6%) of genes in pham
- Manual Annotations of this start: 37 of 243
- Called 89.1% of time when present
- Phage (with cluster) where this start called: Abscondus_14 (CQ), Agatha_71 (CT), Amok_68 (CT), Aphelion_14 (CQ1), Arianna_54 (EO), Axym_69 (CT), Bachita_15 (CQ1), Bantam_8 (DL), BrutonGaster_7 (CQ2), Burnsey_70 (CT), Button_71 (CT), Cardigan_14 (DD), ClubL_14 (CQ1), Cucurbita_13 (CQ1), Culver_13 (CQ1), Daredevil_10 (DL), DatBoi_9 (DL), Dusty_13 (CQ), Emalyn_67 (CT), Engineer_14 (CQ1), Jamzy_76 (CT), JonJames_13 (DD), Lozinak_14 (CQ1), Margaret_75 (CT), Miskis_16 (CQ), Mollymur_10 (DL), Nodigi_74 (CT), Norvs_14 (CQ), OneUp_9 (CQ2), Orla_75 (CT), PhinkBoden_15 (CQ1), Poushou_54 (EO), Smoothie_14 (CQ1), SpeedDemon_90 (DL), SweatNTears_71 (CT), Toniann_14 (CQ1), TouchMeNot_54 (EO), Troje_71 (CT), WilliamBoone_12 (CQ1), Yakult_74 (CT), Yvonnestic_14 (DD),

Start 91:

- Found in 7 of 261 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 243

- Called 28.6% of time when present
- Phage (with cluster) where this start called: Gaia_169 (X), Nebkiss_165 (X),

Start 92:

- Found in 11 of 261 (4.2%) of genes in pham
- Manual Annotations of this start: 3 of 243
- Called 27.3% of time when present
- Phage (with cluster) where this start called: MalagasyRose_85 (AG), Misomonster_3 (A3), Nergal_81 (AG),

Start 93:

- Found in 6 of 261 (2.3%) of genes in pham
- Manual Annotations of this start: 3 of 243
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Alsaber_3 (BD3), Celery_4 (BD3), ElGato_5 (BD3), Provolone_4 (BD3), Verse_2 (BD3),

Start 97:

- Found in 7 of 261 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 243
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Yummy_71 (CT),

Start 98:

- Found in 15 of 261 (5.7%) of genes in pham
- Manual Annotations of this start: 14 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_76 (CY1), Bradissa_76 (CY1), BritBrat_98 (CY2), Cashline_76 (CY), EMsquaredA_80 (CY1), EnalisNailo_76 (CY1), Farewell_97 (AF), Floral_80 (CY1), Jablanski_82 (CY), LonelyBoi_78 (CY), Pollux_82 (CY1), Posh_79 (CY), Pytheas_83 (CY), Sparky_95 (AF), Wrigley_81 (CY),

Start 99:

- Found in 2 of 261 (0.8%) of genes in pham
- Manual Annotations of this start: 2 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Renaud18_112 (F4), TChen_101 (F4),

Start 100:

- Found in 4 of 261 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 243
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Lauer_66 (CT),

Start 103:

- Found in 6 of 261 (2.3%) of genes in pham
- Manual Annotations of this start: 5 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_101 (DN3), BearBQ_102 (DN), Birdsong_96 (DN), Crater_100 (DN3), Kuwabara_94 (DN4), MortyNRick_99 (DN),

Start 107:

- Found in 7 of 261 (2.7%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Conan_6 (BD3),

Start 109:

- Found in 6 of 261 (2.3%) of genes in pham
- Manual Annotations of this start: 6 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bernal13_59 (T), Ibrahim_59 (T), Nairb_57 (T), RonRayGun_59 (T), Whitty_58 (T), ZenTime222_65 (T),

Start 113:

- Found in 1 of 261 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 243
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mendokysei_63 (T),

Summary by clusters:

There are 26 clusters represented in this pham: DN, singleton, DD, CZ1, CZ8, FA, DL, DN4, A3, DN3, CQ2, CQ1, CY2, CY1, BD3, AG, AF, CZ, CY, T, EO, X, CQ, CT, F1, F4,

Info for manual annotations of cluster A3:

- Start number 92 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster AF:

- Start number 98 was manually annotated 1 time for cluster AF.

Info for manual annotations of cluster AG:

- Start number 92 was manually annotated 2 times for cluster AG.

Info for manual annotations of cluster BD3:

- Start number 93 was manually annotated 3 times for cluster BD3.

Info for manual annotations of cluster CQ:

- Start number 88 was manually annotated 1 time for cluster CQ.

Info for manual annotations of cluster CQ1:

- Start number 88 was manually annotated 11 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 88 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CT:

- Start number 74 was manually annotated 1 time for cluster CT.
- Start number 76 was manually annotated 1 time for cluster CT.
- Start number 78 was manually annotated 5 times for cluster CT.
- Start number 85 was manually annotated 5 times for cluster CT.
- Start number 87 was manually annotated 2 times for cluster CT.
- Start number 88 was manually annotated 13 times for cluster CT.
- Start number 97 was manually annotated 1 time for cluster CT.

- Start number 100 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster CY:

- Start number 98 was manually annotated 6 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 98 was manually annotated 6 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 98 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:

- Start number 86 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 86 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ8:

- Start number 86 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DD:

- Start number 88 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 88 was manually annotated 5 times for cluster DL.

Info for manual annotations of cluster DN:

- Start number 103 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN3:

- Start number 103 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 103 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster EO:

- Start number 88 was manually annotated 3 times for cluster EO.

Info for manual annotations of cluster F1:

- Start number 77 was manually annotated 123 times for cluster F1.

Info for manual annotations of cluster F4:

- Start number 99 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster T:

- Start number 109 was manually annotated 6 times for cluster T.
- Start number 113 was manually annotated 1 time for cluster T.

Info for manual annotations of cluster X:

- Start number 91 was manually annotated 2 times for cluster X.

Gene Information:

Gene: Abscondus_14 Start: 3104, Stop: 3412, Start Num: 88

Candidate Starts for Abscondus_14:

(Start: 74 @3074 has 1 MA's), (Start: 88 @3104 has 37 MA's), (147, 3368),

Gene: Agatha_71 Start: 46233, Stop: 46523, Start Num: 88

Candidate Starts for Agatha_71:

(Start: 76 @46212 has 1 MA's), (Start: 88 @46233 has 37 MA's), (118, 46332),

Gene: Agueybana_85 Start: 52421, Stop: 52756, Start Num: 86

Candidate Starts for Agueybana_85:

(22, 52148), (Start: 86 @52421 has 27 MA's),

Gene: Akhila_99 Start: 55783, Stop: 56109, Start Num: 77

Candidate Starts for Akhila_99:

(32, 55609), (39, 55645), (62, 55732), (Start: 77 @55783 has 123 MA's), (115, 55906), (146, 56041),

Gene: AlpineSix_102 Start: 56250, Stop: 56576, Start Num: 77

Candidate Starts for AlpineSix_102:

(Start: 77 @56250 has 123 MA's),

Gene: Alsaber_3 Start: 970, Stop: 1284, Start Num: 93

Candidate Starts for Alsaber_3:

(Start: 92 @964 has 3 MA's), (Start: 93 @970 has 3 MA's), (107, 1039), (131, 1114), (138, 1147),

Gene: AlumE_82 Start: 52312, Stop: 52647, Start Num: 86

Candidate Starts for AlumE_82:

(22, 52039), (Start: 86 @52312 has 27 MA's),

Gene: Amok_68 Start: 44983, Stop: 45258, Start Num: 88

Candidate Starts for Amok_68:

(Start: 87 @44980 has 3 MA's), (Start: 88 @44983 has 37 MA's), (125, 45088),

Gene: Angelique_76 Start: 50625, Stop: 50915, Start Num: 98

Candidate Starts for Angelique_76:

(7, 50097), (11, 50157), (13, 50160), (17, 50208), (24, 50289), (26, 50322), (31, 50376), (34, 50388), (68, 50526), (Start: 98 @50625 has 14 MA's),

Gene: Antonio_78 Start: 49950, Stop: 50285, Start Num: 86

Candidate Starts for Antonio_78:

(22, 49677), (Start: 86 @49950 has 27 MA's),

Gene: Aphelion_14 Start: 3268, Stop: 3576, Start Num: 88

Candidate Starts for Aphelion_14:

(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: Apricot_101 Start: 51816, Stop: 52109, Start Num: 103

Candidate Starts for Apricot_101:

(58, 51666), (Start: 103 @51816 has 5 MA's),

Gene: Ardmore_88 Start: 51672, Stop: 51998, Start Num: 77

Candidate Starts for Ardmore_88:

(32, 51498), (39, 51534), (62, 51621), (Start: 77 @51672 has 123 MA's), (115, 51795), (146, 51930),

Gene: Arianna_54 Start: 40153, Stop: 40458, Start Num: 88

Candidate Starts for Arianna_54:

(Start: 88 @40153 has 37 MA's), (106, 40228), (112, 40249), (138, 40330),

Gene: Axym_69 Start: 46163, Stop: 46453, Start Num: 88

Candidate Starts for Axym_69:

(Start: 76 @46142 has 1 MA's), (Start: 88 @46163 has 37 MA's), (118, 46262),

Gene: Azira_67 Start: 45015, Stop: 45332, Start Num: 85

Candidate Starts for Azira_67:

(Start: 85 @45015 has 5 MA's), (129, 45153), (145, 45222),

Gene: Bachita_15 Start: 3780, Stop: 4088, Start Num: 88

Candidate Starts for Bachita_15:

(Start: 74 @3750 has 1 MA's), (Start: 88 @3780 has 37 MA's), (147, 4044),

Gene: Bantam_8 Start: 4561, Stop: 4869, Start Num: 88

Candidate Starts for Bantam_8:

(80, 4546), (Start: 88 @4561 has 37 MA's), (104, 4633), (128, 4699),

Gene: BatStarr_83 Start: 53046, Stop: 53381, Start Num: 86

Candidate Starts for BatStarr_83:

(22, 52773), (Start: 86 @53046 has 27 MA's), (134, 53232),

Gene: Batiatus_105 Start: 57269, Stop: 57595, Start Num: 77

Candidate Starts for Batiatus_105:

(32, 57095), (39, 57131), (62, 57218), (Start: 77 @57269 has 123 MA's), (115, 57392), (146, 57527),

Gene: BearBQ_102 Start: 54695, Stop: 54988, Start Num: 103

Candidate Starts for BearBQ_102:

(52, 54524), (Start: 103 @54695 has 5 MA's),

Gene: Bernal13_59 Start: 40895, Stop: 41194, Start Num: 109

Candidate Starts for Bernal13_59:

(Start: 109 @40895 has 6 MA's), (140, 41018),

Gene: Bialota_79 Start: 51706, Stop: 52038, Start Num: 86

Candidate Starts for Bialota_79:

(22, 51433), (Start: 86 @51706 has 27 MA's),

Gene: Bipolar_106 Start: 58515, Stop: 58841, Start Num: 77

Candidate Starts for Bipolar_106:

(32, 58341), (39, 58377), (62, 58464), (Start: 77 @58515 has 123 MA's), (115, 58638), (146, 58773),

Gene: Birdsong_96 Start: 52683, Stop: 52976, Start Num: 103

Candidate Starts for Birdsong_96:

(52, 52512), (Start: 103 @52683 has 5 MA's),

Gene: BlueCrab_109 Start: 58669, Stop: 58995, Start Num: 77

Candidate Starts for BlueCrab_109:

(Start: 77 @58669 has 123 MA's), (115, 58792),

Gene: BobaPhett_108 Start: 59318, Stop: 59644, Start Num: 77

Candidate Starts for BobaPhett_108:

(Start: 77 @59318 has 123 MA's),

Gene: BodEinwohner17_116 Start: 59725, Stop: 60051, Start Num: 77

Candidate Starts for BodEinwohner17_116:

(Start: 77 @59725 has 123 MA's),

Gene: Bosnia_82 Start: 54160, Stop: 54495, Start Num: 86

Candidate Starts for Bosnia_82:

(22, 53887), (Start: 86 @54160 has 27 MA's), (134, 54346),

Gene: BoyNamedSue_82 Start: 52312, Stop: 52647, Start Num: 86

Candidate Starts for BoyNamedSue_82:

(22, 52039), (Start: 86 @52312 has 27 MA's),

Gene: Bradissa_76 Start: 51528, Stop: 51818, Start Num: 98

Candidate Starts for Bradissa_76:

(Start: 98 @51528 has 14 MA's),

Gene: BritBrat_98 Start: 55168, Stop: 55455, Start Num: 98

Candidate Starts for BritBrat_98:

(60, 55045), (Start: 86 @55111 has 27 MA's), (89, 55117), (Start: 98 @55168 has 14 MA's),

Gene: Brocalys_96 Start: 54283, Stop: 54609, Start Num: 77

Candidate Starts for Brocalys_96:

(32, 54109), (39, 54145), (62, 54232), (Start: 77 @54283 has 123 MA's), (115, 54406), (146, 54541),

Gene: BrutonGaster_7 Start: 1661, Stop: 1969, Start Num: 88

Candidate Starts for BrutonGaster_7:

(46, 1544), (66, 1613), (Start: 88 @1661 has 37 MA's), (138, 1835), (144, 1871), (147, 1925), (148, 1961),

Gene: Bubbles123_100 Start: 56967, Stop: 57311, Start Num: 77

Candidate Starts for Bubbles123_100:

(32, 56793), (39, 56829), (62, 56916), (Start: 77 @56967 has 123 MA's), (123, 57111), (130, 57135),

Gene: Bunnybear_78 Start: 50882, Stop: 51217, Start Num: 86

Candidate Starts for Bunnybear_78:

(22, 50609), (Start: 86 @50882 has 27 MA's),

Gene: Burnsey_70 Start: 45875, Stop: 46165, Start Num: 88

Candidate Starts for Burnsey_70:

(Start: 76 @45854 has 1 MA's), (Start: 88 @45875 has 37 MA's), (118, 45974),

Gene: Burwell21_99 Start: 56858, Stop: 57202, Start Num: 77

Candidate Starts for Burwell21_99:

(32, 56684), (39, 56720), (62, 56807), (Start: 77 @56858 has 123 MA's), (123, 57002), (130, 57026),

Gene: Button_71 Start: 45762, Stop: 46070, Start Num: 88

Candidate Starts for Button_71:

(62, 45687), (Start: 74 @45732 has 1 MA's), (84, 45753), (Start: 88 @45762 has 37 MA's), (96, 45807), (108, 45846), (121, 45876), (129, 45909), (142, 45960),

Gene: Buttrmlkdreams_71 Start: 45701, Stop: 45979, Start Num: 87

Candidate Starts for Buttrmlkdreams_71:

(Start: 87 @45701 has 3 MA's), (Start: 88 @45704 has 37 MA's), (95, 45746), (Start: 97 @45758 has 1 MA's), (102, 45770), (129, 45821), (137, 45848), (138, 45851),

Gene: ByChance_95 Start: 52655, Stop: 52981, Start Num: 77

Candidate Starts for ByChance_95:

(Start: 77 @52655 has 123 MA's),

Gene: Byougenkin_101 Start: 54217, Stop: 54543, Start Num: 77

Candidate Starts for Byougenkin_101:

(Start: 77 @54217 has 123 MA's),

Gene: Cabrinians_101 Start: 56202, Stop: 56528, Start Num: 77

Candidate Starts for Cabrinians_101:

(32, 56028), (39, 56064), (62, 56151), (Start: 77 @56202 has 123 MA's), (115, 56325), (146, 56460),

Gene: CaptainTrips_107 Start: 56860, Stop: 57186, Start Num: 77

Candidate Starts for CaptainTrips_107:

(32, 56686), (39, 56722), (62, 56809), (Start: 77 @56860 has 123 MA's), (115, 56983), (146, 57118),

Gene: Cardigan_14 Start: 3818, Stop: 4126, Start Num: 88

Candidate Starts for Cardigan_14:

(Start: 88 @3818 has 37 MA's), (138, 3992), (142, 4010), (145, 4031),

Gene: Cashline_76 Start: 52028, Stop: 52315, Start Num: 98

Candidate Starts for Cashline_76:

(30, 51776), (60, 51905), (Start: 86 @51971 has 27 MA's), (89, 51977), (Start: 92 @51983 has 3 MA's), (Start: 98 @52028 has 14 MA's), (110, 52058),

Gene: Celery_4 Start: 962, Stop: 1276, Start Num: 93

Candidate Starts for Celery_4:

(41, 803), (42, 812), (53, 854), (56, 860), (Start: 92 @956 has 3 MA's), (Start: 93 @962 has 3 MA's), (107, 1031), (131, 1106), (138, 1139),

Gene: Che8_112 Start: 58974, Stop: 59300, Start Num: 77

Candidate Starts for Che8_112:

(Start: 77 @58974 has 123 MA's),

Gene: Chuckly_102 Start: 53949, Stop: 54293, Start Num: 77

Candidate Starts for Chuckly_102:

(32, 53775), (39, 53811), (62, 53898), (Start: 77 @53949 has 123 MA's), (123, 54093), (130, 54117),

Gene: Clifton_96 Start: 55258, Stop: 55584, Start Num: 77

Candidate Starts for Clifton_96:

(Start: 77 @55258 has 123 MA's),

Gene: ClubL_14 Start: 3280, Stop: 3588, Start Num: 88

Candidate Starts for ClubL_14:

(Start: 74 @3250 has 1 MA's), (Start: 88 @3280 has 37 MA's), (147, 3544),

Gene: Conan_6 Start: 1044, Stop: 1289, Start Num: 107

Candidate Starts for Conan_6:

(40, 822), (47, 855), (53, 861), (56, 867), (Start: 92 @969 has 3 MA's), (Start: 93 @975 has 3 MA's), (107, 1044), (131, 1119), (138, 1152),

Gene: Crater_100 Start: 52160, Stop: 52453, Start Num: 103

Candidate Starts for Crater_100:

(58, 52010), (Start: 103 @52160 has 5 MA's),

Gene: Crumble_98 Start: 52956, Stop: 53282, Start Num: 77

Candidate Starts for Crumble_98:

(Start: 77 @52956 has 123 MA's),

Gene: Cucurbita_13 Start: 3280, Stop: 3588, Start Num: 88

Candidate Starts for Cucurbita_13:

(Start: 74 @3250 has 1 MA's), (Start: 88 @3280 has 37 MA's), (147, 3544),

Gene: Culver_13 Start: 3104, Stop: 3412, Start Num: 88

Candidate Starts for Culver_13:

(Start: 74 @3074 has 1 MA's), (Start: 88 @3104 has 37 MA's), (147, 3368),

Gene: DLane_105 Start: 58431, Stop: 58757, Start Num: 77

Candidate Starts for DLane_105:

(32, 58257), (39, 58293), (62, 58380), (Start: 77 @58431 has 123 MA's), (115, 58554), (146, 58689),

Gene: DRBy19_104 Start: 57899, Stop: 58225, Start Num: 77

Candidate Starts for DRBy19_104:

(Start: 77 @57899 has 123 MA's),

Gene: Daenerys_102 Start: 57545, Stop: 57871, Start Num: 77

Candidate Starts for Daenerys_102:

(Start: 77 @57545 has 123 MA's),

Gene: Dante_104 Start: 58406, Stop: 58750, Start Num: 77

Candidate Starts for Dante_104:

(32, 58232), (39, 58268), (62, 58355), (Start: 77 @58406 has 123 MA's), (123, 58550), (130, 58574),

Gene: Daredevil_10 Start: 3047, Stop: 3349, Start Num: 88

Candidate Starts for Daredevil_10:

(Start: 88 @3047 has 37 MA's), (101, 3104), (102, 3107), (138, 3215),

Gene: DatBoi_9 Start: 5103, Stop: 5411, Start Num: 88

Candidate Starts for DatBoi_9:

(43, 4968), (54, 5004), (Start: 88 @5103 has 37 MA's), (104, 5175), (148, 5400),

Gene: Deb65_96 Start: 55269, Stop: 55595, Start Num: 77

Candidate Starts for Deb65_96:

(Start: 77 @55269 has 123 MA's),

Gene: DillTech15_111 Start: 57330, Stop: 57656, Start Num: 77

Candidate Starts for DillTech15_111:

(32, 57156), (39, 57192), (62, 57279), (Start: 77 @57330 has 123 MA's), (115, 57453), (146, 57588),

Gene: Donkeykong_110 Start: 59010, Stop: 59336, Start Num: 77
Candidate Starts for Donkeykong_110:
(32, 58836), (39, 58872), (62, 58959), (Start: 77 @59010 has 123 MA's), (115, 59133), (146, 59268),

Gene: Dre3_68 Start: 45474, Stop: 45806, Start Num: 85
Candidate Starts for Dre3_68:
(Start: 76 @45456 has 1 MA's), (Start: 85 @45474 has 5 MA's),

Gene: Dusty_13 Start: 3104, Stop: 3412, Start Num: 88
Candidate Starts for Dusty_13:
(Start: 74 @3074 has 1 MA's), (Start: 88 @3104 has 37 MA's), (147, 3368),

Gene: EMSquaredA_80 Start: 50168, Stop: 50458, Start Num: 98
Candidate Starts for EMSquaredA_80:
(8, 49655), (20, 49805), (21, 49814), (23, 49841), (25, 49859), (27, 49883), (31, 49922), (34, 49934),
(36, 49937), (68, 50072), (Start: 98 @50168 has 14 MA's),

Gene: Eish_109 Start: 57682, Stop: 58008, Start Num: 77
Candidate Starts for Eish_109:
(5, 57169), (6, 57193), (10, 57256), (32, 57508), (62, 57631), (Start: 77 @57682 has 123 MA's),

Gene: ElGato_5 Start: 978, Stop: 1292, Start Num: 93
Candidate Starts for ElGato_5:
(40, 825), (47, 858), (53, 864), (56, 870), (Start: 92 @972 has 3 MA's), (Start: 93 @978 has 3 MA's),
(107, 1047), (131, 1122), (138, 1155),

Gene: EleanorGeorge_108 Start: 59015, Stop: 59341, Start Num: 77
Candidate Starts for EleanorGeorge_108:
(32, 58841), (39, 58877), (62, 58964), (Start: 77 @59015 has 123 MA's), (115, 59138), (146, 59273),

Gene: Elinal_76 Start: 48006, Stop: 48332, Start Num: 78
Candidate Starts for Elinal_76:
(Start: 74 @47994 has 1 MA's), (Start: 78 @48006 has 5 MA's), (Start: 91 @48030 has 2 MA's), (Start:
100 @48084 has 1 MA's), (112, 48111), (145, 48231),

Gene: Emalyn_67 Start: 43687, Stop: 43962, Start Num: 88
Candidate Starts for Emalyn_67:
(Start: 87 @43684 has 3 MA's), (Start: 88 @43687 has 37 MA's), (125, 43792),

Gene: Emma_109 Start: 55950, Stop: 56276, Start Num: 77
Candidate Starts for Emma_109:
(32, 55776), (39, 55812), (62, 55899), (Start: 77 @55950 has 123 MA's), (115, 56073), (146, 56208),

Gene: EnalisNailo_76 Start: 50668, Stop: 50958, Start Num: 98
Candidate Starts for EnalisNailo_76:
(24, 50335), (31, 50422), (34, 50434), (36, 50437), (68, 50572), (Start: 98 @50668 has 14 MA's),

Gene: Engineer_14 Start: 3268, Stop: 3576, Start Num: 88
Candidate Starts for Engineer_14:
(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: Eradicator_95 Start: 55231, Stop: 55557, Start Num: 77

Candidate Starts for Eradicator_95:
(Start: 77 @55231 has 123 MA's),

Gene: Estave1_112 Start: 60259, Stop: 60585, Start Num: 77
Candidate Starts for Estave1_112:
(Start: 77 @60259 has 123 MA's),

Gene: Eudoria_79 Start: 49950, Stop: 50285, Start Num: 86
Candidate Starts for Eudoria_79:
(22, 49677), (Start: 86 @49950 has 27 MA's),

Gene: Eviarto_84 Start: 53021, Stop: 53356, Start Num: 86
Candidate Starts for Eviarto_84:
(22, 52748), (Start: 86 @53021 has 27 MA's), (134, 53207),

Gene: Farewell_97 Start: 61361, Stop: 61663, Start Num: 98
Candidate Starts for Farewell_97:
(38, 61136), (61, 61232), (70, 61265), (Start: 86 @61301 has 27 MA's), (89, 61307), (Start: 98 @61361 has 14 MA's), (110, 61394), (150, 61652),

Gene: Filuzino_105 Start: 58837, Stop: 59163, Start Num: 77
Candidate Starts for Filuzino_105:
(32, 58663), (39, 58699), (62, 58786), (Start: 77 @58837 has 123 MA's), (115, 58960), (146, 59095),

Gene: Floral_80 Start: 52125, Stop: 52415, Start Num: 98
Candidate Starts for Floral_80:
(8, 51612), (20, 51762), (21, 51771), (23, 51798), (25, 51816), (27, 51840), (31, 51879), (34, 51891), (36, 51894), (68, 52029), (Start: 98 @52125 has 14 MA's),

Gene: Florinda_117 Start: 58948, Stop: 59274, Start Num: 77
Candidate Starts for Florinda_117:
(32, 58774), (39, 58810), (62, 58897), (Start: 77 @58948 has 123 MA's), (115, 59071), (146, 59206),

Gene: FreddyB_113 Start: 57850, Stop: 58176, Start Num: 77
Candidate Starts for FreddyB_113:
(32, 57676), (39, 57712), (62, 57799), (Start: 77 @57850 has 123 MA's), (115, 57973), (146, 58108),

Gene: Fribs8_67 Start: 45643, Stop: 45981, Start Num: 85
Candidate Starts for Fribs8_67:
(Start: 85 @45643 has 5 MA's), (129, 45781), (145, 45850),

Gene: GAL1_82 Start: 49576, Stop: 49935, Start Num: 73
Candidate Starts for GAL1_82:
(73, 49576), (139, 49810),

Gene: GUmbie_104 Start: 56919, Stop: 57245, Start Num: 77
Candidate Starts for GUmbie_104:
(32, 56745), (39, 56781), (62, 56868), (Start: 77 @56919 has 123 MA's), (115, 57042), (146, 57177),

Gene: Gaia_169 Start: 83930, Stop: 84226, Start Num: 91
Candidate Starts for Gaia_169:
(Start: 91 @83930 has 2 MA's), (Start: 97 @83975 has 1 MA's), (102, 83987), (124, 84041), (129, 84062), (132, 84077), (140, 84116), (142, 84125), (143, 84131),

Gene: Galactic_109 Start: 57393, Stop: 57719, Start Num: 77

Candidate Starts for Galactic_109:

(5, 56880), (6, 56904), (10, 56967), (32, 57219), (39, 57255), (62, 57342), (Start: 77 @57393 has 123 MA's),

Gene: Gandalph_104 Start: 54506, Stop: 54832, Start Num: 77

Candidate Starts for Gandalph_104:

(32, 54332), (39, 54368), (62, 54455), (Start: 77 @54506 has 123 MA's), (115, 54629), (146, 54764),

Gene: Geralt_97 Start: 55267, Stop: 55593, Start Num: 77

Candidate Starts for Geralt_97:

(Start: 77 @55267 has 123 MA's),

Gene: GiKK_75 Start: 47115, Stop: 47441, Start Num: 74

Candidate Starts for GiKK_75:

(62, 47070), (Start: 74 @47115 has 1 MA's), (84, 47136), (Start: 88 @47145 has 37 MA's), (96, 47190), (108, 47229), (114, 47244), (128, 47277), (135, 47304), (141, 47328), (142, 47331),

Gene: GigiOuiOui_99 Start: 55921, Stop: 56247, Start Num: 77

Candidate Starts for GigiOuiOui_99:

(5, 55408), (6, 55432), (10, 55495), (32, 55747), (39, 55783), (62, 55870), (Start: 77 @55921 has 123 MA's), (115, 56044), (146, 56179),

Gene: Girr_103 Start: 57256, Stop: 57582, Start Num: 77

Candidate Starts for Girr_103:

(Start: 77 @57256 has 123 MA's),

Gene: Gorge_103 Start: 57487, Stop: 57813, Start Num: 77

Candidate Starts for Gorge_103:

(32, 57313), (39, 57349), (62, 57436), (Start: 77 @57487 has 123 MA's), (115, 57610), (146, 57745),

Gene: Hades_102 Start: 54518, Stop: 54844, Start Num: 77

Candidate Starts for Hades_102:

(Start: 77 @54518 has 123 MA's),

Gene: Hamulus_105 Start: 56687, Stop: 57013, Start Num: 77

Candidate Starts for Hamulus_105:

(32, 56513), (39, 56549), (62, 56636), (Start: 77 @56687 has 123 MA's), (115, 56810), (146, 56945),

Gene: Herod_84 Start: 53440, Stop: 53775, Start Num: 86

Candidate Starts for Herod_84:

(22, 53167), (Start: 86 @53440 has 27 MA's), (134, 53626),

Gene: Hlubikazi_102 Start: 55002, Stop: 55328, Start Num: 77

Candidate Starts for Hlubikazi_102:

(5, 54489), (10, 54576), (32, 54828), (39, 54864), (62, 54951), (Start: 77 @55002 has 123 MA's), (115, 55125), (146, 55260),

Gene: Horseradish_71 Start: 45465, Stop: 45743, Start Num: 87

Candidate Starts for Horseradish_71:

(Start: 87 @45465 has 3 MA's), (Start: 88 @45468 has 37 MA's), (95, 45510), (Start: 97 @45522 has 1 MA's), (102, 45534), (129, 45585), (137, 45612), (138, 45615),

Gene: Hyzer_101 Start: 60183, Stop: 60518, Start Num: 86
Candidate Starts for Hyzer_101:
(63, 60138), (Start: 86 @60183 has 27 MA's),

Gene: Ibantik_57 Start: 25161, Stop: 25478, Start Num: 75
Candidate Starts for Ibantik_57:
(55, 25107), (Start: 75 @25161 has 2 MA's), (81, 25176), (Start: 87 @25185 has 3 MA's), (126, 25320), (133, 25347), (141, 25392), (145, 25416),

Gene: Ibhubesi_103 Start: 55132, Stop: 55458, Start Num: 77
Candidate Starts for Ibhubesi_103:
(Start: 77 @55132 has 123 MA's),

Gene: Ibrahim_59 Start: 41099, Stop: 41398, Start Num: 109
Candidate Starts for Ibrahim_59:
(Start: 109 @41099 has 6 MA's), (140, 41222),

Gene: Inventum_102 Start: 56555, Stop: 56881, Start Num: 77
Candidate Starts for Inventum_102:
(Start: 77 @56555 has 123 MA's),

Gene: IrishSherpFalk_105 Start: 57329, Stop: 57673, Start Num: 77
Candidate Starts for IrishSherpFalk_105:
(Start: 77 @57329 has 123 MA's), (123, 57473), (130, 57497),

Gene: Jablanski_82 Start: 53171, Stop: 53461, Start Num: 98
Candidate Starts for Jablanski_82:
(Start: 86 @53114 has 27 MA's), (89, 53120), (Start: 98 @53171 has 14 MA's),

Gene: James_108 Start: 59148, Stop: 59474, Start Num: 77
Candidate Starts for James_108:
(32, 58974), (39, 59010), (62, 59097), (Start: 77 @59148 has 123 MA's), (115, 59271), (146, 59406),

Gene: Jamzy_76 Start: 46875, Stop: 47171, Start Num: 88
Candidate Starts for Jamzy_76:
(62, 46800), (Start: 74 @46845 has 1 MA's), (84, 46866), (Start: 88 @46875 has 37 MA's), (96, 46920), (108, 46959), (114, 46974), (128, 47007), (135, 47034), (141, 47058), (142, 47061),

Gene: Jarcob_107 Start: 58468, Stop: 58794, Start Num: 77
Candidate Starts for Jarcob_107:
(Start: 77 @58468 has 123 MA's),

Gene: JoeyJr_107 Start: 58463, Stop: 58789, Start Num: 77
Candidate Starts for JoeyJr_107:
(Start: 77 @58463 has 123 MA's),

Gene: JonJames_13 Start: 3969, Stop: 4277, Start Num: 88
Candidate Starts for JonJames_13:
(Start: 88 @3969 has 37 MA's), (138, 4143), (142, 4161), (145, 4182),

Gene: Juicebox_59 Start: 41044, Stop: 41346, Start Num: 87
Candidate Starts for Juicebox_59:

(83, 41038), (Start: 87 @41044 has 3 MA's), (138, 41221),

Gene: Karhdo_100 Start: 54911, Stop: 55237, Start Num: 77

Candidate Starts for Karhdo_100:

(Start: 77 @54911 has 123 MA's),

Gene: Kenuha5_96 Start: 56035, Stop: 56361, Start Num: 77

Candidate Starts for Kenuha5_96:

(32, 55861), (39, 55897), (62, 55984), (Start: 77 @56035 has 123 MA's), (115, 56158), (146, 56293),

Gene: Kersh_107 Start: 59723, Stop: 60049, Start Num: 77

Candidate Starts for Kersh_107:

(Start: 77 @59723 has 123 MA's),

Gene: KingMidas_105 Start: 56917, Stop: 57243, Start Num: 77

Candidate Starts for KingMidas_105:

(32, 56743), (39, 56779), (62, 56866), (Start: 77 @56917 has 123 MA's), (115, 57040), (146, 57175),

Gene: Kita_80 Start: 49959, Stop: 50294, Start Num: 86

Candidate Starts for Kita_80:

(22, 49686), (Start: 86 @49959 has 27 MA's),

Gene: Krakatau_97 Start: 52590, Stop: 52916, Start Num: 77

Candidate Starts for Krakatau_97:

(32, 52416), (39, 52452), (62, 52539), (Start: 77 @52590 has 123 MA's), (115, 52713), (146, 52848),

Gene: KristaRAM_113 Start: 58232, Stop: 58558, Start Num: 77

Candidate Starts for KristaRAM_113:

(Start: 77 @58232 has 123 MA's),

Gene: Kuwabara_94 Start: 53726, Stop: 54019, Start Num: 103

Candidate Starts for Kuwabara_94:

(Start: 103 @53726 has 5 MA's),

Gene: Lauer_66 Start: 47856, Stop: 48119, Start Num: 100

Candidate Starts for Lauer_66:

(Start: 74 @47766 has 1 MA's), (Start: 78 @47778 has 5 MA's), (Start: 91 @47802 has 2 MA's), (Start: 100 @47856 has 1 MA's), (111, 47889), (145, 48015),

Gene: Leperchaun_106 Start: 57697, Stop: 58023, Start Num: 77

Candidate Starts for Leperchaun_106:

(Start: 77 @57697 has 123 MA's),

Gene: Lizziana_105 Start: 57926, Stop: 58252, Start Num: 77

Candidate Starts for Lizziana_105:

(Start: 77 @57926 has 123 MA's),

Gene: Llama_111 Start: 58003, Stop: 58329, Start Num: 77

Candidate Starts for Llama_111:

(Start: 77 @58003 has 123 MA's),

Gene: Llij_99 Start: 55622, Stop: 55966, Start Num: 77

Candidate Starts for Llij_99:

(32, 55448), (39, 55484), (62, 55571), (Start: 77 @55622 has 123 MA's), (123, 55766), (130, 55790),

Gene: LonelyBoi_78 Start: 53256, Stop: 53543, Start Num: 98

Candidate Starts for LonelyBoi_78:

(4, 52596), (9, 52755), (12, 52785), (60, 53133), (Start: 86 @53199 has 27 MA's), (89, 53205), (Start: 98 @53256 has 14 MA's),

Gene: Lozinak_14 Start: 3268, Stop: 3576, Start Num: 88

Candidate Starts for Lozinak_14:

(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: LunaBlu_111 Start: 58815, Stop: 59141, Start Num: 77

Candidate Starts for LunaBlu_111:

(5, 58302), (6, 58326), (10, 58389), (32, 58641), (39, 58677), (62, 58764), (Start: 77 @58815 has 123 MA's), (115, 58938), (146, 59073),

Gene: MadMen_109 Start: 57291, Stop: 57617, Start Num: 77

Candidate Starts for MadMen_109:

(Start: 77 @57291 has 123 MA's),

Gene: Madeline_76 Start: 51284, Stop: 51616, Start Num: 86

Candidate Starts for Madeline_76:

(18, 50948), (22, 51011), (Start: 86 @51284 has 27 MA's),

Gene: Mahavrat_98 Start: 54698, Stop: 55042, Start Num: 77

Candidate Starts for Mahavrat_98:

(Start: 77 @54698 has 123 MA's), (123, 54842), (130, 54866),

Gene: MalagasyRose_85 Start: 53161, Stop: 53499, Start Num: 92

Candidate Starts for MalagasyRose_85:

(44, 53017), (45, 53020), (57, 53065), (69, 53101), (82, 53140), (Start: 92 @53161 has 3 MA's), (120, 53260), (136, 53341),

Gene: Manasvini_81 Start: 49974, Stop: 50309, Start Num: 86

Candidate Starts for Manasvini_81:

(22, 49701), (Start: 86 @49974 has 27 MA's),

Gene: Mantra_102 Start: 56533, Stop: 56859, Start Num: 77

Candidate Starts for Mantra_102:

(5, 56020), (10, 56107), (32, 56359), (62, 56482), (Start: 77 @56533 has 123 MA's), (115, 56656), (146, 56791),

Gene: Maravista_102 Start: 58887, Stop: 59231, Start Num: 77

Candidate Starts for Maravista_102:

(Start: 77 @58887 has 123 MA's), (123, 59031), (130, 59055),

Gene: Margaret_75 Start: 46622, Stop: 46930, Start Num: 88

Candidate Starts for Margaret_75:

(48, 46505), (59, 46538), (62, 46547), (Start: 74 @46592 has 1 MA's), (84, 46613), (Start: 88 @46622 has 37 MA's), (96, 46667), (108, 46706), (114, 46721), (119, 46730), (121, 46736), (129, 46769),

Gene: Maridalia_83 Start: 51242, Stop: 51577, Start Num: 86

Candidate Starts for Maridalia_83:

(22, 50969), (Start: 86 @51242 has 27 MA's),

Gene: Martik_103 Start: 58387, Stop: 58713, Start Num: 77

Candidate Starts for Martik_103:

(Start: 77 @58387 has 123 MA's),

Gene: Mattes_105 Start: 57605, Stop: 57931, Start Num: 77

Candidate Starts for Mattes_105:

(Start: 77 @57605 has 123 MA's),

Gene: Mayweather_74 Start: 48037, Stop: 48378, Start Num: 78

Candidate Starts for Mayweather_74:

(Start: 74 @48025 has 1 MA's), (Start: 78 @48037 has 5 MA's), (Start: 91 @48061 has 2 MA's), (Start: 100 @48115 has 1 MA's), (112, 48154), (145, 48274),

Gene: Melissauren88_95 Start: 53888, Stop: 54214, Start Num: 77

Candidate Starts for Melissauren88_95:

(Start: 77 @53888 has 123 MA's), (115, 54011), (146, 54146),

Gene: Mendokysei_63 Start: 42026, Stop: 42310, Start Num: 113

Candidate Starts for Mendokysei_63:

(14, 41501), (16, 41540), (19, 41567), (28, 41678), (79, 41906), (Start: 113 @42026 has 1 MA's), (140, 42134), (146, 42173),

Gene: MilanaBonita_98 Start: 55783, Stop: 56109, Start Num: 77

Candidate Starts for MilanaBonita_98:

(32, 55609), (39, 55645), (62, 55732), (Start: 77 @55783 has 123 MA's), (115, 55906), (146, 56041),

Gene: MinionDave_103 Start: 57559, Stop: 57885, Start Num: 77

Candidate Starts for MinionDave_103:

(32, 57385), (39, 57421), (62, 57508), (Start: 77 @57559 has 123 MA's), (115, 57682), (146, 57817),

Gene: Minnie_99 Start: 58017, Stop: 58361, Start Num: 77

Candidate Starts for Minnie_99:

(32, 57843), (39, 57879), (62, 57966), (Start: 77 @58017 has 123 MA's), (123, 58161), (130, 58185),

Gene: Miskis_16 Start: 3268, Stop: 3576, Start Num: 88

Candidate Starts for Miskis_16:

(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: Misomonster_3 Start: 518, Stop: 838, Start Num: 92

Candidate Starts for Misomonster_3:

(Start: 92 @518 has 3 MA's), (94, 527), (107, 593),

Gene: MisterCuddles_104 Start: 57256, Stop: 57582, Start Num: 77

Candidate Starts for MisterCuddles_104:

(Start: 77 @57256 has 123 MA's),

Gene: Modragons_107 Start: 57991, Stop: 58317, Start Num: 77

Candidate Starts for Modragons_107:

(Start: 77 @57991 has 123 MA's),

Gene: Mollymur_10 Start: 5419, Stop: 5724, Start Num: 88

Candidate Starts for Mollymur_10:

(Start: 88 @5419 has 37 MA's), (138, 5590), (149, 5719),

Gene: Moonbeam_107 Start: 57515, Stop: 57841, Start Num: 77

Candidate Starts for Moonbeam_107:

(32, 57341), (39, 57377), (62, 57464), (Start: 77 @57515 has 123 MA's), (115, 57638), (146, 57773),

Gene: MortyNRick_99 Start: 53600, Stop: 53893, Start Num: 103

Candidate Starts for MortyNRick_99:

(52, 53429), (Start: 103 @53600 has 5 MA's),

Gene: Ms6_107 Start: 53778, Stop: 54104, Start Num: 77

Candidate Starts for Ms6_107:

(32, 53604), (39, 53640), (62, 53727), (Start: 77 @53778 has 123 MA's), (115, 53901), (146, 54036),

Gene: Mutaforma13_106 Start: 57233, Stop: 57559, Start Num: 77

Candidate Starts for Mutaforma13_106:

(32, 57059), (39, 57095), (62, 57182), (Start: 77 @57233 has 123 MA's), (115, 57356), (146, 57491),

Gene: Nairb_57 Start: 40896, Stop: 41195, Start Num: 109

Candidate Starts for Nairb_57:

(65, 40761), (Start: 92 @40821 has 3 MA's), (Start: 109 @40896 has 6 MA's), (140, 41019),

Gene: Nebkiss_165 Start: 79421, Stop: 79717, Start Num: 91

Candidate Starts for Nebkiss_165:

(Start: 91 @79421 has 2 MA's), (Start: 97 @79466 has 1 MA's), (102, 79478), (124, 79532), (129, 79553), (132, 79568), (140, 79607), (142, 79616), (143, 79622),

Gene: Neobush_81 Start: 50518, Stop: 50853, Start Num: 86

Candidate Starts for Neobush_81:

(22, 50245), (Start: 86 @50518 has 27 MA's),

Gene: Nergal_81 Start: 54725, Stop: 55063, Start Num: 92

Candidate Starts for Nergal_81:

(Start: 92 @54725 has 3 MA's), (116, 54815), (120, 54824), (136, 54905),

Gene: Nibbles_67 Start: 45280, Stop: 45597, Start Num: 85

Candidate Starts for Nibbles_67:

(Start: 85 @45280 has 5 MA's), (129, 45418), (145, 45487),

Gene: Nimbo_96 Start: 55269, Stop: 55595, Start Num: 77

Candidate Starts for Nimbo_96:

(Start: 77 @55269 has 123 MA's),

Gene: Nodigi_74 Start: 46877, Stop: 47185, Start Num: 88

Candidate Starts for Nodigi_74:

(71, 46838), (84, 46868), (Start: 88 @46877 has 37 MA's), (96, 46922), (108, 46961), (114, 46976), (119, 46985), (129, 47024), (135, 47048), (138, 47057),

Gene: NormanBulbieJr_102 Start: 57635, Stop: 57961, Start Num: 77

Candidate Starts for NormanBulbieJr_102:

(32, 57461), (39, 57497), (62, 57584), (Start: 77 @57635 has 123 MA's), (115, 57758), (146, 57893),

Gene: Norvs_14 Start: 3268, Stop: 3576, Start Num: 88
Candidate Starts for Norvs_14:
(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: Nymphadora_84 Start: 53045, Stop: 53380, Start Num: 86
Candidate Starts for Nymphadora_84:
(22, 52772), (Start: 86 @53045 has 27 MA's), (134, 53231),

Gene: Ochi17_110 Start: 57598, Stop: 57924, Start Num: 77
Candidate Starts for Ochi17_110:
(Start: 77 @57598 has 123 MA's),

Gene: OfUltron_111 Start: 58147, Stop: 58473, Start Num: 77
Candidate Starts for OfUltron_111:
(Start: 77 @58147 has 123 MA's),

Gene: OldBen_101 Start: 56661, Stop: 56987, Start Num: 77
Candidate Starts for OldBen_101:
(Start: 77 @56661 has 123 MA's),

Gene: OneUp_9 Start: 2116, Stop: 2424, Start Num: 88
Candidate Starts for OneUp_9:
(65, 2056), (Start: 88 @2116 has 37 MA's), (138, 2290), (144, 2326),

Gene: Orla_75 Start: 47026, Stop: 47334, Start Num: 88
Candidate Starts for Orla_75:
(84, 47017), (Start: 88 @47026 has 37 MA's), (96, 47071), (108, 47110), (114, 47125), (119, 47134),
(129, 47173), (135, 47197), (138, 47206),

Gene: PHappiness_104 Start: 57490, Stop: 57816, Start Num: 77
Candidate Starts for PHappiness_104:
(Start: 77 @57490 has 123 MA's),

Gene: PMC_104 Start: 56224, Stop: 56550, Start Num: 77
Candidate Starts for PMC_104:
(1, 55117), (2, 55408), (3, 55471), (5, 55711), (10, 55798), (32, 56050), (39, 56086), (62, 56173),
(Start: 77 @56224 has 123 MA's), (115, 56347), (146, 56482),

Gene: Pacc40_101 Start: 58086, Stop: 58412, Start Num: 77
Candidate Starts for Pacc40_101:
(32, 57912), (39, 57948), (62, 58035), (Start: 77 @58086 has 123 MA's),

Gene: Phalconet_106 Start: 57180, Stop: 57506, Start Num: 77
Candidate Starts for Phalconet_106:
(32, 57006), (39, 57042), (62, 57129), (Start: 77 @57180 has 123 MA's), (115, 57303), (146, 57438),

Gene: Phanphagia_109 Start: 58459, Stop: 58803, Start Num: 77
Candidate Starts for Phanphagia_109:
(Start: 77 @58459 has 123 MA's), (123, 58603), (130, 58627),

Gene: Phasih_100 Start: 55657, Stop: 55983, Start Num: 77
Candidate Starts for Phasih_100:
(Start: 77 @55657 has 123 MA's),

Gene: Phatniss_101 Start: 56036, Stop: 56380, Start Num: 77

Candidate Starts for Phatniss_101:

(32, 55862), (39, 55898), (62, 55985), (Start: 77 @56036 has 123 MA's), (123, 56180), (130, 56204),

Gene: PhesterPhotato_108 Start: 57154, Stop: 57480, Start Num: 77

Candidate Starts for PhesterPhotato_108:

(32, 56980), (39, 57016), (62, 57103), (Start: 77 @57154 has 123 MA's), (115, 57277), (146, 57412),

Gene: Philus_108 Start: 58766, Stop: 59092, Start Num: 77

Candidate Starts for Philus_108:

(32, 58592), (39, 58628), (62, 58715), (Start: 77 @58766 has 123 MA's), (115, 58889), (146, 59024),

Gene: PhinkBoden_15 Start: 3766, Stop: 4074, Start Num: 88

Candidate Starts for PhinkBoden_15:

(Start: 74 @3736 has 1 MA's), (Start: 88 @3766 has 37 MA's), (147, 4030),

Gene: Pippy_103 Start: 56195, Stop: 56521, Start Num: 77

Candidate Starts for Pippy_103:

(32, 56021), (39, 56057), (62, 56144), (Start: 77 @56195 has 123 MA's), (115, 56318), (146, 56453),

Gene: Polka14_108 Start: 58259, Stop: 58585, Start Num: 77

Candidate Starts for Polka14_108:

(Start: 77 @58259 has 123 MA's),

Gene: Pollux_82 Start: 52125, Stop: 52415, Start Num: 98

Candidate Starts for Pollux_82:

(8, 51612), (20, 51762), (21, 51771), (23, 51798), (25, 51816), (27, 51840), (31, 51879), (34, 51891), (36, 51894), (68, 52029), (Start: 98 @52125 has 14 MA's),

Gene: Polly_76 Start: 49393, Stop: 49728, Start Num: 86

Candidate Starts for Polly_76:

(22, 49120), (Start: 86 @49393 has 27 MA's),

Gene: Pons_74 Start: 47664, Stop: 47978, Start Num: 78

Candidate Starts for Pons_74:

(Start: 74 @47652 has 1 MA's), (Start: 78 @47664 has 5 MA's), (117, 47763), (141, 47850),

Gene: PopTart_95 Start: 54627, Stop: 54953, Start Num: 77

Candidate Starts for PopTart_95:

(5, 54114), (10, 54201), (32, 54453), (39, 54489), (62, 54576), (Start: 77 @54627 has 123 MA's), (115, 54750), (146, 54885),

Gene: Posh_79 Start: 51944, Stop: 52234, Start Num: 98

Candidate Starts for Posh_79:

(Start: 86 @51887 has 27 MA's), (89, 51893), (Start: 98 @51944 has 14 MA's),

Gene: Poushou_54 Start: 39982, Stop: 40287, Start Num: 88

Candidate Starts for Poushou_54:

(Start: 88 @39982 has 37 MA's), (106, 40057), (112, 40078), (138, 40159),

Gene: Priscilla_105 Start: 57733, Stop: 58059, Start Num: 77

Candidate Starts for Priscilla_105:

(Start: 77 @57733 has 123 MA's),

Gene: Provolone_4 Start: 978, Stop: 1292, Start Num: 93

Candidate Starts for Provolone_4:

(40, 825), (47, 858), (53, 864), (56, 870), (Start: 92 @972 has 3 MA's), (Start: 93 @978 has 3 MA's), (107, 1047), (131, 1122), (138, 1155),

Gene: Pytheas_83 Start: 53170, Stop: 53460, Start Num: 98

Candidate Starts for Pytheas_83:

(Start: 86 @53113 has 27 MA's), (89, 53119), (Start: 98 @53170 has 14 MA's),

Gene: Quasar_71 Start: 46628, Stop: 46939, Start Num: 76

Candidate Starts for Quasar_71:

(Start: 76 @46628 has 1 MA's), (Start: 88 @46649 has 37 MA's), (118, 46748),

Gene: Radiance_103 Start: 56827, Stop: 57153, Start Num: 77

Candidate Starts for Radiance_103:

(5, 56314), (6, 56338), (10, 56401), (32, 56653), (39, 56689), (62, 56776), (Start: 77 @56827 has 123 MA's),

Gene: RavenCo17_74 Start: 49279, Stop: 49611, Start Num: 86

Candidate Starts for RavenCo17_74:

(Start: 86 @49279 has 27 MA's), (123, 49411),

Gene: RedBird_105 Start: 58237, Stop: 58563, Start Num: 77

Candidate Starts for RedBird_105:

(Start: 77 @58237 has 123 MA's),

Gene: Renaud18_112 Start: 57550, Stop: 57837, Start Num: 99

Candidate Starts for Renaud18_112:

(15, 57079), (29, 57280), (37, 57319), (50, 57385), (51, 57388), (90, 57499), (Start: 99 @57550 has 2 MA's),

Gene: Rita_104 Start: 58303, Stop: 58629, Start Num: 77

Candidate Starts for Rita_104:

(32, 58129), (39, 58165), (62, 58252), (Start: 77 @58303 has 123 MA's), (115, 58426), (146, 58561),

Gene: RitaG_103 Start: 57292, Stop: 57618, Start Num: 77

Candidate Starts for RitaG_103:

(Start: 77 @57292 has 123 MA's),

Gene: Rockne_108 Start: 56236, Stop: 56562, Start Num: 77

Candidate Starts for Rockne_108:

(1, 55129), (2, 55420), (3, 55483), (5, 55723), (10, 55810), (32, 56062), (39, 56098), (62, 56185), (Start: 77 @56236 has 123 MA's), (115, 56359), (146, 56494),

Gene: RonRayGun_59 Start: 41099, Stop: 41398, Start Num: 109

Candidate Starts for RonRayGun_59:

(Start: 109 @41099 has 6 MA's), (140, 41222),

Gene: RootBeer_57 Start: 38956, Stop: 39309, Start Num: 74

Candidate Starts for RootBeer_57:

(49, 38890), (Start: 74 @38956 has 1 MA's), (127, 39118), (133, 39139),

Gene: Royals2015_108 Start: 56107, Stop: 56451, Start Num: 77
Candidate Starts for Royals2015_108:
(32, 55933), (39, 55969), (62, 56056), (Start: 77 @56107 has 123 MA's), (123, 56251), (130, 56275),

Gene: Ruby_100 Start: 57258, Stop: 57584, Start Num: 77
Candidate Starts for Ruby_100:
(Start: 77 @57258 has 123 MA's),

Gene: Sabbb_107 Start: 55263, Stop: 55589, Start Num: 77
Candidate Starts for Sabbb_107:
(32, 55089), (39, 55125), (62, 55212), (Start: 77 @55263 has 123 MA's),

Gene: Sandalphon_103 Start: 58290, Stop: 58634, Start Num: 77
Candidate Starts for Sandalphon_103:
(32, 58116), (39, 58152), (62, 58239), (Start: 77 @58290 has 123 MA's), (123, 58434), (130, 58458),

Gene: Sassafras_106 Start: 56554, Stop: 56880, Start Num: 77
Candidate Starts for Sassafras_106:
(Start: 77 @56554 has 123 MA's),

Gene: SassyB_95 Start: 54627, Stop: 54953, Start Num: 77
Candidate Starts for SassyB_95:
(5, 54114), (10, 54201), (32, 54453), (39, 54489), (62, 54576), (Start: 77 @54627 has 123 MA's), (115, 54750), (146, 54885),

Gene: Scottish_105 Start: 56356, Stop: 56682, Start Num: 77
Candidate Starts for Scottish_105:
(32, 56182), (39, 56218), (62, 56305), (Start: 77 @56356 has 123 MA's), (115, 56479), (146, 56614),

Gene: Seabastian_111 Start: 58148, Stop: 58474, Start Num: 77
Candidate Starts for Seabastian_111:
(Start: 77 @58148 has 123 MA's),

Gene: Shambre1_67 Start: 41812, Stop: 42165, Start Num: 75
Candidate Starts for Shambre1_67:
(Start: 75 @41812 has 2 MA's), (133, 41995),

Gene: Shauna1_106 Start: 58075, Stop: 58419, Start Num: 77
Candidate Starts for Shauna1_106:
(Start: 77 @58075 has 123 MA's), (123, 58219), (130, 58243),

Gene: ShiLan_107 Start: 59324, Stop: 59650, Start Num: 77
Candidate Starts for ShiLan_107:
(Start: 77 @59324 has 123 MA's),

Gene: ShowerHandel_103 Start: 57093, Stop: 57419, Start Num: 77
Candidate Starts for ShowerHandel_103:
(32, 56919), (39, 56955), (62, 57042), (Start: 77 @57093 has 123 MA's), (115, 57216), (146, 57351),

Gene: ShroomBoi_105 Start: 57753, Stop: 58079, Start Num: 77
Candidate Starts for ShroomBoi_105:
(5, 57240), (10, 57327), (32, 57579), (62, 57702), (Start: 77 @57753 has 123 MA's), (115, 57876),

Gene: SiSi_99 Start: 55811, Stop: 56137, Start Num: 77

Candidate Starts for SiSi_99:

(32, 55637), (39, 55673), (62, 55760), (Start: 77 @55811 has 123 MA's), (115, 55934), (146, 56069),

Gene: Smoothie_14 Start: 3268, Stop: 3576, Start Num: 88

Candidate Starts for Smoothie_14:

(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: Sparkdehlily_111 Start: 55806, Stop: 56132, Start Num: 77

Candidate Starts for Sparkdehlily_111:

(Start: 77 @55806 has 123 MA's),

Gene: Sparky_95 Start: 62955, Stop: 63257, Start Num: 98

Candidate Starts for Sparky_95:

(38, 62730), (61, 62826), (64, 62841), (70, 62859), (Start: 86 @62895 has 27 MA's), (89, 62901), (Start: 98 @62955 has 14 MA's), (110, 62988), (150, 63246),

Gene: SpeedDemon_90 Start: 4494, Stop: 4802, Start Num: 88

Candidate Starts for SpeedDemon_90:

(Start: 88 @4494 has 37 MA's), (104, 4566), (128, 4632),

Gene: Spoonbill_104 Start: 55237, Stop: 55563, Start Num: 77

Candidate Starts for Spoonbill_104:

(Start: 77 @55237 has 123 MA's),

Gene: StAnnes_110 Start: 58889, Stop: 59215, Start Num: 77

Candidate Starts for StAnnes_110:

(32, 58715), (39, 58751), (62, 58838), (Start: 77 @58889 has 123 MA's), (115, 59012), (146, 59147),

Gene: Success_39 Start: 23746, Stop: 24093, Start Num: 72

Candidate Starts for Success_39:

(67, 23743), (Start: 72 @23746 has 1 MA's), (Start: 75 @23752 has 2 MA's), (122, 23911),

Gene: SummitAcademy_71 Start: 47007, Stop: 47324, Start Num: 78

Candidate Starts for SummitAcademy_71:

(Start: 74 @46995 has 1 MA's), (Start: 78 @47007 has 5 MA's), (Start: 91 @47031 has 2 MA's), (105, 47100), (145, 47217),

Gene: SuperGrey_103 Start: 58875, Stop: 59201, Start Num: 77

Candidate Starts for SuperGrey_103:

(32, 58701), (39, 58737), (62, 58824), (Start: 77 @58875 has 123 MA's), (115, 58998), (146, 59133),

Gene: Survivors_69 Start: 45115, Stop: 45432, Start Num: 85

Candidate Starts for Survivors_69:

(Start: 85 @45115 has 5 MA's), (129, 45253), (145, 45322),

Gene: Suscepit_79 Start: 49951, Stop: 50286, Start Num: 86

Candidate Starts for Suscepit_79:

(22, 49678), (Start: 86 @49951 has 27 MA's),

Gene: SwagPiggett_106 Start: 58433, Stop: 58759, Start Num: 77

Candidate Starts for SwagPiggett_106:

(Start: 77 @58433 has 123 MA's),

Gene: SweatNTears_71 Start: 45622, Stop: 45897, Start Num: 88

Candidate Starts for SweatNTears_71:

(Start: 87 @45619 has 3 MA's), (Start: 88 @45622 has 37 MA's), (95, 45664), (Start: 97 @45676 has 1 MA's), (102, 45688), (137, 45766), (138, 45769),

Gene: TChen_101 Start: 57213, Stop: 57500, Start Num: 99

Candidate Starts for TChen_101:

(15, 56742), (29, 56943), (37, 56982), (50, 57048), (51, 57051), (90, 57162), (Start: 99 @57213 has 2 MA's),

Gene: TDanisky_112 Start: 55806, Stop: 56132, Start Num: 77

Candidate Starts for TDanisky_112:

(Start: 77 @55806 has 123 MA's),

Gene: Taj_110 Start: 58080, Stop: 58430, Start Num: 77

Candidate Starts for Taj_110:

(32, 57906), (39, 57942), (62, 58029), (Start: 77 @58080 has 123 MA's), (115, 58203), (146, 58338),

Gene: Tayonia_79 Start: 49950, Stop: 50285, Start Num: 86

Candidate Starts for Tayonia_79:

(22, 49677), (Start: 86 @49950 has 27 MA's),

Gene: ThankyouJordi_83 Start: 53067, Stop: 53414, Start Num: 86

Candidate Starts for ThankyouJordi_83:

(22, 52794), (Start: 86 @53067 has 27 MA's),

Gene: TimTam_84 Start: 53045, Stop: 53380, Start Num: 86

Candidate Starts for TimTam_84:

(22, 52772), (Start: 86 @53045 has 27 MA's), (134, 53231),

Gene: Toniann_14 Start: 3268, Stop: 3576, Start Num: 88

Candidate Starts for Toniann_14:

(Start: 74 @3238 has 1 MA's), (Start: 88 @3268 has 37 MA's), (142, 3460), (147, 3532),

Gene: TouchMeNot_54 Start: 40155, Stop: 40460, Start Num: 88

Candidate Starts for TouchMeNot_54:

(Start: 88 @40155 has 37 MA's), (106, 40230), (112, 40251), (138, 40332),

Gene: Troje_71 Start: 45614, Stop: 45889, Start Num: 88

Candidate Starts for Troje_71:

(Start: 87 @45611 has 3 MA's), (Start: 88 @45614 has 37 MA's), (95, 45656), (Start: 97 @45668 has 1 MA's), (102, 45680), (128, 45728), (129, 45731), (137, 45758), (138, 45761), (142, 45779),

Gene: Trumpet_79 Start: 49951, Stop: 50286, Start Num: 86

Candidate Starts for Trumpet_79:

(22, 49678), (Start: 86 @49951 has 27 MA's),

Gene: Tweety_109 Start: 58225, Stop: 58551, Start Num: 77

Candidate Starts for Tweety_109:

(32, 58051), (39, 58087), (62, 58174), (Start: 77 @58225 has 123 MA's), (115, 58348), (146, 58483),

Gene: VRedHorse_105 Start: 54331, Stop: 54657, Start Num: 77
Candidate Starts for VRedHorse_105:
(Start: 77 @54331 has 123 MA's),

Gene: Verse_2 Start: 955, Stop: 1269, Start Num: 93
Candidate Starts for Verse_2:
(33, 751), (35, 754), (58, 856), (Start: 92 @949 has 3 MA's), (Start: 93 @955 has 3 MA's), (107, 1024),
(131, 1099), (138, 1132),

Gene: Veteran_94 Start: 55679, Stop: 56005, Start Num: 77
Candidate Starts for Veteran_94:
(32, 55505), (39, 55541), (62, 55628), (Start: 77 @55679 has 123 MA's), (115, 55802), (146, 55937),

Gene: Vine_74 Start: 47747, Stop: 48088, Start Num: 78
Candidate Starts for Vine_74:
(Start: 74 @47735 has 1 MA's), (Start: 78 @47747 has 5 MA's), (Start: 91 @47771 has 2 MA's), (Start:
100 @47825 has 1 MA's), (112, 47864), (145, 47984),

Gene: Wachhund_101 Start: 54046, Stop: 54372, Start Num: 77
Candidate Starts for Wachhund_101:
(Start: 77 @54046 has 123 MA's),

Gene: Wee_109 Start: 58763, Stop: 59089, Start Num: 77
Candidate Starts for Wee_109:
(32, 58589), (39, 58625), (62, 58712), (Start: 77 @58763 has 123 MA's), (115, 58886), (146, 59021),

Gene: WelcomeAyanna_83 Start: 53214, Stop: 53561, Start Num: 86
Candidate Starts for WelcomeAyanna_83:
(22, 52941), (Start: 86 @53214 has 27 MA's),

Gene: Whatsapiecost_99 Start: 52358, Stop: 52702, Start Num: 77
Candidate Starts for Whatsapiecost_99:
(32, 52184), (39, 52220), (62, 52307), (Start: 77 @52358 has 123 MA's), (123, 52502), (130, 52526),

Gene: Whitty_58 Start: 40896, Stop: 41195, Start Num: 109
Candidate Starts for Whitty_58:
(Start: 109 @40896 has 6 MA's), (140, 41019),

Gene: Whouxphf_108 Start: 58625, Stop: 58951, Start Num: 77
Candidate Starts for Whouxphf_108:
(32, 58451), (39, 58487), (62, 58574), (Start: 77 @58625 has 123 MA's), (115, 58748), (146, 58883),

Gene: WillSterrel_103 Start: 57362, Stop: 57706, Start Num: 77
Candidate Starts for WillSterrel_103:
(Start: 77 @57362 has 123 MA's), (123, 57506), (130, 57530),

Gene: WilliamBoone_12 Start: 2893, Stop: 3201, Start Num: 88
Candidate Starts for WilliamBoone_12:
(Start: 74 @2863 has 1 MA's), (Start: 88 @2893 has 37 MA's), (147, 3157),

Gene: Wrigley_81 Start: 51527, Stop: 51817, Start Num: 98
Candidate Starts for Wrigley_81:
(Start: 86 @51470 has 27 MA's), (89, 51476), (Start: 98 @51527 has 14 MA's),

Gene: Yakult_74 Start: 46869, Stop: 47177, Start Num: 88

Candidate Starts for Yakult_74:

(62, 46794), (Start: 74 @46839 has 1 MA's), (84, 46860), (Start: 88 @46869 has 37 MA's), (96, 46914), (108, 46953), (119, 46977), (121, 46983), (129, 47016),

Gene: Yummy_71 Start: 45636, Stop: 45857, Start Num: 97

Candidate Starts for Yummy_71:

(Start: 87 @45579 has 3 MA's), (Start: 88 @45582 has 37 MA's), (95, 45624), (Start: 97 @45636 has 1 MA's), (102, 45648), (129, 45699), (137, 45726), (138, 45729),

Gene: Yvonnetastic_14 Start: 3602, Stop: 3910, Start Num: 88

Candidate Starts for Yvonnetastic_14:

(Start: 88 @3602 has 37 MA's), (138, 3776), (142, 3794), (145, 3815), (148, 3902),

Gene: Zameen_79 Start: 49950, Stop: 50285, Start Num: 86

Candidate Starts for Zameen_79:

(22, 49677), (Start: 86 @49950 has 27 MA's),

Gene: ZenTime222_65 Start: 41847, Stop: 42146, Start Num: 109

Candidate Starts for ZenTime222_65:

(Start: 109 @41847 has 6 MA's), (140, 41970),

Gene: Zerg_103 Start: 56837, Stop: 57181, Start Num: 77

Candidate Starts for Zerg_103:

(32, 56663), (39, 56699), (62, 56786), (Start: 77 @56837 has 123 MA's), (123, 56981), (130, 57005),

Gene: Zirinka_79 Start: 51694, Stop: 52026, Start Num: 86

Candidate Starts for Zirinka_79:

(22, 51421), (Start: 86 @51694 has 27 MA's),

Gene: Zizzle_108 Start: 58913, Stop: 59239, Start Num: 77

Candidate Starts for Zizzle_108:

(Start: 77 @58913 has 123 MA's), (115, 59036), (146, 59171),