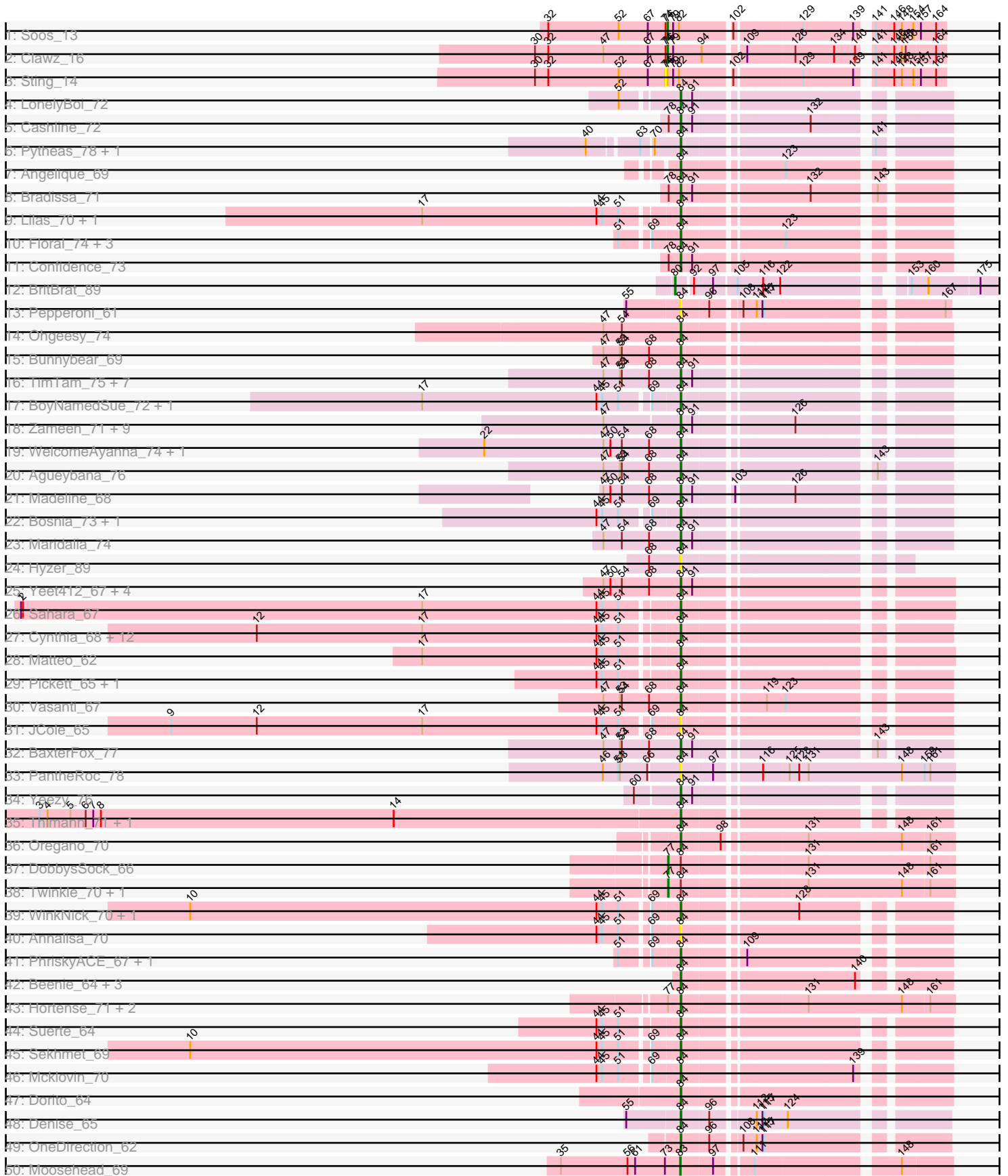
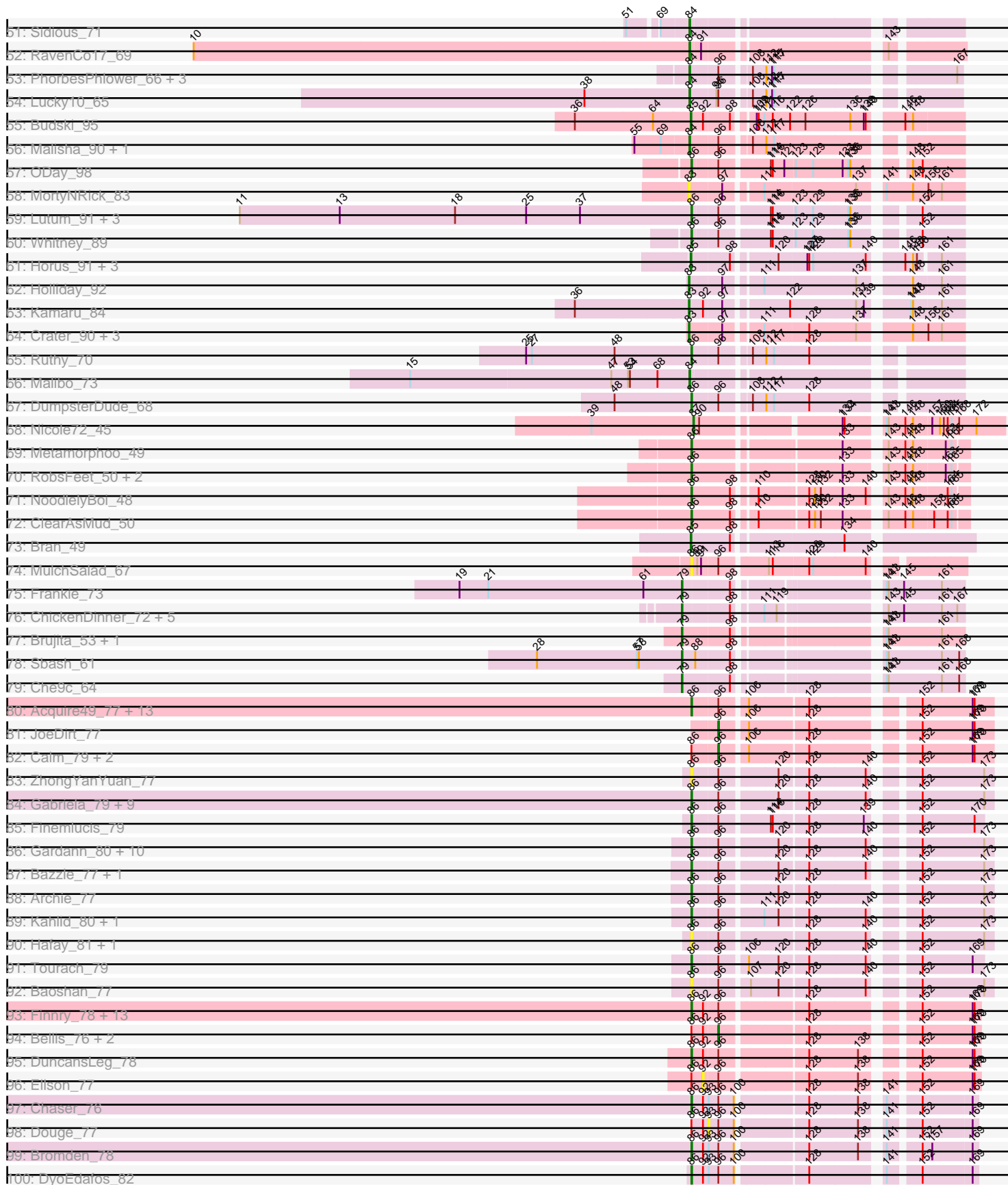


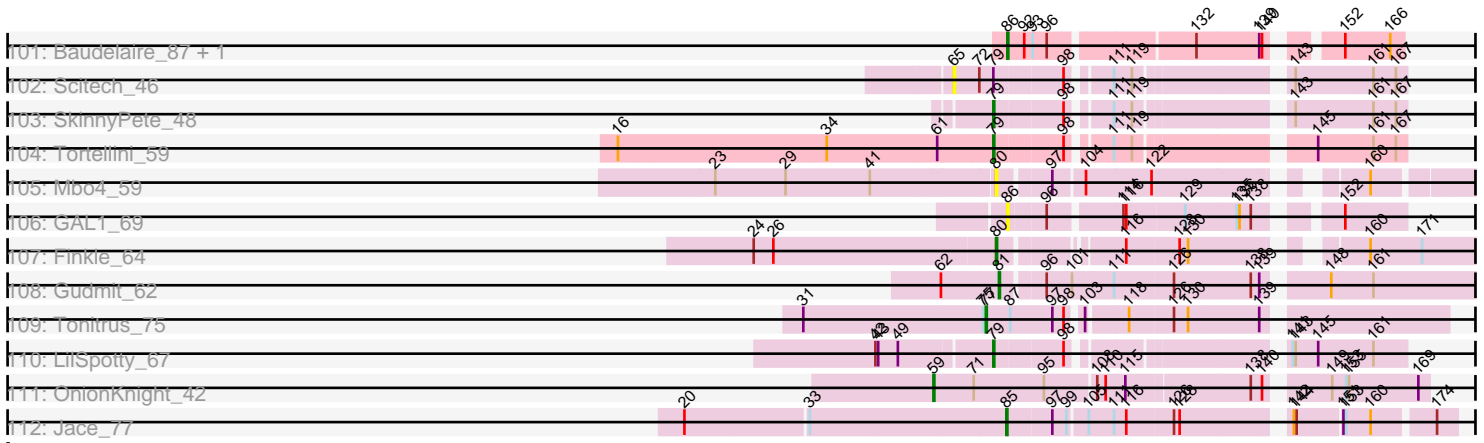
Pham 171179



Pham 171179



Pham 171179



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 171179 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171179 has 236 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Soos_13
- Track 2 : Clawz_16
- Track 3 : Sting_14
- Track 4 : LonelyBoi_72
- Track 5 : Cashline_72
- Track 6 : Pytheas_78, Jablanski_77
- Track 7 : Angelique_69
- Track 8 : Bradissa_71
- Track 9 : Lilas_70, EnalisNailo_69
- Track 10 : Floral_74, EMSquaredA_73, Pollux_76, Marteena_72
- Track 11 : Confidence_73
- Track 12 : BritBrat_89
- Track 13 : Pepperoni_61
- Track 14 : Ohgeesy_74
- Track 15 : Bunnybear_69
- Track 16 : TimTam_75, Zirinka_69, Herod_75, Eviarto_75, BatStarr_74, Hugley_73, Nymphadora_75, Bialota_69
- Track 17 : BoyNamedSue_72, AlumE_72
- Track 18 : Zameen_71, Trumpet_71, Eudoria_71, Neobush_73, Antonio_70, Kita_72, Polly_68, Manasvini_73, Suscepit_71, Tayonia_71
- Track 19 : WelcomeAyanna_74, ThankyouJordi_74
- Track 20 : Agueybana_76
- Track 21 : Madeline_68
- Track 22 : Bosnia_73, BeeGee_76
- Track 23 : Maridalia_74
- Track 24 : Hyzer_89
- Track 25 : Yeet412_67, Attis_68, SoilAssassin_68, LordFarquaad_71, Nettuno_66
- Track 26 : Sahara_67
- Track 27 : Cynthia_68, Bjaness7_65, Sproutie_68, Whiteclaw_68, Ebert_71, Clap_68, Mocha12_68, Haley23_68, TuertoX_68, GemG_68, Gizermo_68, Savage_68, Lamberg_64
- Track 28 : Matteo_62
- Track 29 : Pickett_65, EdnaMode_67
- Track 30 : Vasanti_67
- Track 31 : JCole_65
- Track 32 : BaxterFox_77
- Track 33 : PantheRoc_78

- Track 34 : Yeezy_76
- Track 35 : Thimann_71, Easley_68
- Track 36 : Oregano_70
- Track 37 : DobbysSock_66
- Track 38 : Twinkle_70, Shlim410_69
- Track 39 : WinkNick_70, Dolores_70
- Track 40 : Annalisa_70
- Track 41 : PhriskyACE_67, Powerball_68
- Track 42 : Beenie_64, Clark_69, Samman98_71, MichaelScott_71
- Track 43 : Hortense_71, Howe_71, Adora_68
- Track 44 : Suerte_64
- Track 45 : Sekhmet_69
- Track 46 : Mcklovin_70
- Track 47 : Dorito_64
- Track 48 : Denise_65
- Track 49 : OneDirection_62
- Track 50 : Moosehead_69
- Track 51 : Sidious_71
- Track 52 : RavenCo17_69
- Track 53 : PhorbPhlower_66, Kuwabara_86, Lton_65, Morkie_68
- Track 54 : Lucky10_65
- Track 55 : Budski_95
- Track 56 : Malisha_90, Faith5x5_63
- Track 57 : ODay_98
- Track 58 : MortyNRick_83
- Track 59 : Lutum_91, BENtherdunthat_90, Phabuloso_97, Getalong_93
- Track 60 : Whitney_89
- Track 61 : Horus_91, Leroy_90, Frickyeah_97, Periwinkle_99
- Track 62 : Holliday_92
- Track 63 : Kamaru_84
- Track 64 : Crater_90, Ecliptus_97, Apricot_90, Phistory_88
- Track 65 : Ruthy_70
- Track 66 : Malibo_73
- Track 67 : DumpsterDude_68
- Track 68 : Nicole72_45
- Track 69 : Metamorphoo_49
- Track 70 : RobsFeet_50, Tyumbra_47, Fireman_49
- Track 71 : NoodlelyBoi_48
- Track 72 : ClearAsMud_50
- Track 73 : Bran_49
- Track 74 : MulchSalad_67
- Track 75 : Frankie_73
- Track 76 : ChickenDinner_72, DocMcStuffins_69, Misha28_68, Awesomesauce_70, Piper2020_71, TootsiePop_68
- Track 77 : Brujita_53, Island3_53
- Track 78 : Sbash_61
- Track 79 : Che9c_64
- Track 80 : Acquire49_77, UPIE_76, Appletree2_76, AvadaKedavra_77, DirkDirk_74, Tyson_78, Rose5_77, Enceladus_74, LeBron_76, Halena_75, CicholasNage_74, Wamburgxpress_77, Zaria_78, Wyatt2_78
- Track 81 : JoeDirt_77
- Track 82 : Calm_79, Silverleaf_77, MAckerman_74
- Track 83 : ZhongYanYuan_77

- Track 84 : Gabriela_79, Faith1_80, DrSeegs_80, BigCheese_80, Winky_80, Itos_79, Miley16_80, BobsGarage_80, Breezona_80, Netyap_81
- Track 85 : Finemlucis_79
- Track 86 : Gardann_80, GuuelaD_78, Zakai_81, Nicholasp3_80, Loadrie_79, LilDestine_79, Lewan_81, Crossroads_80, Rumpelstiltskin_77, Vetrix_79, MkaliMitinis3_81
- Track 87 : Bazzle_77, Wigglewiggles_79
- Track 88 : Archie_77
- Track 89 : Kahlid_80, Wilder_81
- Track 90 : Hafay_81, Claus_80
- Track 91 : Tourach_79
- Track 92 : Baoshan_77
- Track 93 : Finnry_78, Moostard_76, Clautastrophe_76, Lolly9_77, MiniMac_82, Whirlwind_79, Krypton555_79, Kingsolomon_76, MiniLon_82, Lumos_79, Samty_77, Nicholas_76, Jubie_77, Snenia_77
- Track 94 : Bellis_76, MsGreen_78, Jobypre_79
- Track 95 : DuncansLeg_78
- Track 96 : Ellson_77
- Track 97 : Chaser_76
- Track 98 : Douge_77
- Track 99 : Bromden_78
- Track 100 : DyoEdafos_82
- Track 101 : Baudelaire_87, Aegeus_87
- Track 102 : Scitech_46
- Track 103 : SkinnyPete_48
- Track 104 : Tortellini_59
- Track 105 : Mbo4_59
- Track 106 : GAL1_69
- Track 107 : Finkle_64
- Track 108 : Gudmit_62
- Track 109 : Tonitrus_75
- Track 110 : LilSpotty_67
- Track 111 : OnionKnight_42
- Track 112 : Jace_77

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

The start number called the most often in the published annotations is 84, it was called in 95 of the 211 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora_68, Agueybana_76, AlumE_72, Angelique_69, Annalisa_70, Antonio_70, Attis_68, BatStarr_74, BaxterFox_77, BeeGee_76, Beenie_64, Bialota_69, Bjaness7_65, Bosnia_73, BoyNamedSue_72, Bradissa_71, Bunnybear_69, Cashline_72, Clap_68, Clark_69, Confidence_73, Cynthia_68, Denise_65, Dolores_70, Dorito_64, EMSquaredA_73, Easley_68, Ebert_71, EdnaMode_67, EnalisNailo_69, Eudoria_71, Eviarto_75, Faith5x5_63, Floral_74, GemG_68, Gizermo_68, Haley23_68, Herod_75, Hortense_71, Howe_71, Hugley_73, Hyzer_89, JCole_65, Jablanski_77, Kita_72, Kuwabara_86, Lamberg_64, Lilas_70, LonelyBoi_72, LordFarquaaad_71, Lton_65, Lucky10_65, Madeline_68, Malibo_73,

Malisha_90, Manasvini_73, Maridalia_74, Marteena_72, Matteo_62, Mcklovin_70, MichaelScott_71, Mocha12_68, Morkie_68, Neobush_73, Nettuno_66, Nymphadora_75, Ohgeesy_74, OneDirection_62, Oregano_70, PantheRoc_78, Pepperoni_61, PhorbesPhlower_66, PhriskyACE_67, Pickett_65, Pollux_76, Polly_68, Powerball_68, Pytheas_78, RavenCo17_69, Sahara_67, Samman98_71, Savage_68, Sekhmet_69, Sidious_71, SoilAssassin_68, Sproutie_68, Suerte_64, Suscepit_71, Tayonia_71, ThankyouJordi_74, Thimann_71, TimTam_75, Trumpet_71, TuertoX_68, Vasanti_67, WelcomeAyanna_74, Whiteclaw_68, WinkNick_70, Yeet412_67, Yeezy_76, Zameen_71, Zirinka_69,

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

- DobbysSock_66, Shlim410_69, Twinkle_70,

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

- Acquire49_77, Aegeus_87, Appletree2_76, Apricot_90, Archie_77, AvadaKedavra_77, Awesomesauce_70, BENtherdunthat_90, Baoshan_77, Baudelaire_87, Bazzle_77, Bellis_76, BigCheese_80, BobsGarage_80, Bran_49, Breezona_80, BritBrat_89, Bromden_78, Brujita_53, Budski_95, Calm_79, Chaser_76, Che9c_64, ChickenDinner_72, CicholasNage_74, Claus_80, Clautastrophe_76, Clawz_16, ClearAsMud_50, Crater_90, Crossroads_80, DirkDirk_74, DocMcStuffins_69, Douge_77, DrSeegs_80, DumpsterDude_68, DuncansLeg_78, DyoEdafos_82, Ecliptus_97, Ellson_77, Enceladus_74, Faith1_80, Finemlucis_79, Finkle_64, Finnry_78, Fireman_49, Frankie_73, Frickyeah_97, GAL1_69, Gabriela_79, Gardann_80, Getalong_93, Gudmit_62, GuuelaD_78, Hafay_81, Halena_75, Holliday_92, Horus_91, Island3_53, Itos_79, Jace_77, Jobypre_79, JoeDirt_77, Jubie_77, Kahlid_80, Kamaru_84, Kingsolomon_76, Krypton555_79, LeBron_76, Leroy_90, Lewan_81, LilDestine_79, LilSpotty_67, Loadrie_79, Lolly9_77, Lumos_79, Lutum_91, MAckerman_74, Mbo4_59, Metamorphoo_49, Miley16_80, MiniLon_82, MiniMac_82, Misha28_68, MkaliMitinis3_81, Moosehead_69, Moostard_76, MortyNRick_83, MsGreen_78, MulchSalad_67, Netyap_81, Nicholas_76, Nicholasp3_80, Nicole72_45, NoodlelyBoi_48, ODay_98, OnionKnight_42, Periwinkle_99, Phabuloso_97, Phistory_88, Piper2020_71, RobsFeet_50, Rose5_77, Rumpelstiltskin_77, Ruthy_70, Samty_77, Sbash_61, Scitech_46, Silverleaf_77, SkinnyPete_48, Snenia_77, Soos_13, Sting_14, Tonitrus_75, TootsiePop_68, Tortellini_59, Tourach_79, Tyumbra_47, Tyson_78, UPIE_76, Vetrrix_79, Wamburggrxpress_77, Whirlwind_79, Whitney_89, Wigglewiggle_79, Wilder_81, Winky_80, Wyatt2_78, Zakai_81, Zaria_78, ZhongYanYuan_77,

Summary by start number:

Start 59:

- Found in 1 of 236 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OnionKnight_42 (singleton),

Start 65:

- Found in 1 of 236 (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: Scitech_46 (N),

Start 74:

- Found in 3 of 236 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sting_14 (CP),

Start 76:

- Found in 3 of 236 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 211
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Clawz_16 (CP), Soos_13 (CP),

Start 77:

- Found in 7 of 236 (3.0%) of genes in pham
- Manual Annotations of this start: 4 of 211
- Called 57.1% of time when present
- Phage (with cluster) where this start called: DobbysSock_66 (CZ4), Shlim410_69 (CZ4), Tonitrus_75 (singleton), Twinkle_70 (CZ4),

Start 79:

- Found in 18 of 236 (7.6%) of genes in pham
- Manual Annotations of this start: 12 of 211
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Awesomesauce_70 (F1), Brujita_53 (I1), Che9c_64 (I2), ChickenDinner_72 (F1), DocMcStuffins_69 (F1), Frankie_73 (F1), Island3_53 (I1), LilSpotty_67 (singleton), Misha28_68 (F1), Piper2020_71 (F1), Sbash_61 (I2), SkinnyPete_48 (N), TootsiePop_68 (F1), Tortellini_59 (P2),

Start 80:

- Found in 3 of 236 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BritBrat_89 (CY2), Finkle_64 (singleton), Mbo4_59 (singleton),

Start 81:

- Found in 1 of 236 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gudmit_62 (singleton),

Start 83:

- Found in 8 of 236 (3.4%) of genes in pham
- Manual Annotations of this start: 7 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_90 (DN3), Crater_90 (DN3), Ecliptus_97 (DN), Holliday_92 (DN1), Kamaru_84 (DN1), Moosehead_69 (CZ6), MortyNRick_83 (DN), Phistory_88 (DN1),

Start 84:

- Found in 105 of 236 (44.5%) of genes in pham
- Manual Annotations of this start: 95 of 211
- Called 97.1% of time when present

- Phage (with cluster) where this start called: Adora_68 (CZ4), Agueybana_76 (CZ1), AlumE_72 (CZ1), Angelique_69 (CY1), Annalisa_70 (CZ4), Antonio_70 (CZ1), Attis_68 (CZ2), BatStarr_74 (CZ1), BaxterFox_77 (CZ3), BeeGee_76 (CY), Beenie_64 (CZ4), Bialota_69 (CZ1), Bjaner7_65 (CZ2), Bosnia_73 (CZ1), BoyNamedSue_72 (CZ1), Bradissa_71 (CY1), Bunnybear_69 (CZ), Cashline_72 (CY), Clap_68 (CZ2), Clark_69 (CZ4), Confidence_73 (CY1), Cynthia_68 (CZ2), Denise_65 (CZ5), Dolores_70 (CZ4), Dorito_64 (CZ4), EMSquaredA_73 (CY1), Easley_68 (CZ4), Ebert_71 (CZ2), EdnaMode_67 (CZ2), EnalisNailo_69 (CY1), Eudoria_71 (CZ1), Eviarto_75 (CZ1), Faith5x5_63 (CZ6), Floral_74 (CY1), GemG_68 (CZ2), Gizermo_68 (CZ2), Haley23_68 (CZ2), Herod_75 (CZ1), Hortense_71 (CZ4), Howe_71 (CZ4), Hugley_73 (CZ1), Hyzer_89 (CZ1), JCole_65 (CZ2), Jablanski_77 (CY), Kita_72 (CZ1), Kuwabara_86 (DN4), Lamberg_64 (CZ2), Lilas_70 (CY1), LonelyBoi_72 (CY), LordFarquaaad_71 (CZ2), Lton_65 (CZ), Lucky10_65 (DH), Madeline_68 (CZ1), Malibo_73 (DW), Malisha_90 (DN), Manasvini_73 (CZ1), Maridalia_74 (CZ1), Marteena_72 (CY1), Matteo_62 (CZ2), Mcklovin_70 (CZ4), MichaelScott_71 (CZ4), Mocha12_68 (CZ2), Morkie_68 (DH), Neobush_73 (CZ1), Nettuno_66 (CZ2), Nymphadora_75 (CZ1), Ohgeesy_74 (CZ), OneDirection_62 (CZ6), Oregano_70 (CZ4), PantheRoc_78 (CZ3), Pepperoni_61 (CZ), PhorbesPhlower_66 (DH), PhriskyACE_67 (CZ4), Pickett_65 (CZ2), Pollux_76 (CY1), Polly_68 (CZ1), Powerball_68 (CZ4), Pytheas_78 (CY), RavenCo17_69 (CZ8), Sahara_67 (CZ2), Samman98_71 (CZ4), Savage_68 (CZ2), Sekhmet_69 (CZ4), Sidious_71 (CZ7), SoilAssassin_68 (CZ2), Sproutie_68 (CZ2), Suerte_64 (CZ4), Suscepit_71 (CZ1), Tayonia_71 (CZ1), ThankyouJordi_74 (CZ1), Thimann_71 (CZ4), TimTam_75 (CZ1), Trumpet_71 (CZ1), TuertoX_68 (CZ2), Vasanti_67 (CZ2), WelcomeAyanna_74 (CZ1), Whiteclaw_68 (CZ2), WinkNick_70 (CZ4), Yeet412_67 (CZ2), Yeezy_76 (CZ3), Zameen_71 (CZ1), Zirinka_69 (CZ1),

Start 85:

- Found in 7 of 236 (3.0%) of genes in pham
- Manual Annotations of this start: 6 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bran_49 (EP), Budski_95 (DN), Frickyeah_97 (DN1), Horus_91 (DN1), Jace_77 (singleton), Leroy_90 (DN1), Periwinkle_99 (DN1),

Start 86:

- Found in 90 of 236 (38.1%) of genes in pham
- Manual Annotations of this start: 76 of 211
- Called 91.1% of time when present
- Phage (with cluster) where this start called: Acquire49_77 (L1), Aegeus_87 (L5), Appletree2_76 (L1), Archie_77 (L2), AvadaKedavra_77 (L1), BENtherdunthat_90 (DN1), Baoshan_77 (L2), Baudelaire_87 (L5), Bazzle_77 (L2), BigCheese_80 (L2), BobsGarage_80 (L2), Breezona_80 (L2), Bromden_78 (L4), Chaser_76 (L4), CicholasNage_74 (L1), Claus_80 (L2), Clautastrophe_76 (L3), ClearAsMud_50 (EC), Crossroads_80 (L2), DirkDirk_74 (L1), DrSeegs_80 (L2), DumpsterDude_68 (DW), DuncansLeg_78 (L3), DyoEdafos_82 (L4), Enceladus_74 (L1), Faith1_80 (L2), Finemlucis_79 (L2), Finnry_78 (L3), Fireman_49 (EC), GAL1_69 (singleton), Gabriela_79 (L2), Gardann_80 (L2), Getalong_93 (DN1), GuuelaD_78 (L2), Hafay_81 (L2), Halena_75 (L1), Itos_79 (L2), Jubie_77 (L3), Kahlid_80 (L2), Kingsolomon_76 (L3), Krypton555_79 (L3), LeBron_76 (L1), Lewan_81 (L2), LilDestine_79 (L2), Loadrie_79 (L2), Lolly9_77 (L3), Lumos_79 (L3), Lutum_91 (DN1), Metamorphoo_49 (EC), Miley16_80 (L2), MiniLon_82 (L3), MiniMac_82 (L3), MkaliMitinis3_81 (L2), Moostard_76 (L3), MulchSalad_67 (F), Netyap_81 (L2), Nicholas_76 (L3),

Nicholasp3_80 (L2), NoodlelyBoi_48 (EC), ODay_98 (DN), Phabuloso_97 (DN1), RobsFeet_50 (EC), Rose5_77 (L1), Rumpelstiltskin_77 (L2), Ruthy_70 (DW), Samty_77 (L3), Snenia_77 (L3), Tourach_79 (L2), Tyrumbra_47 (EC), Tyson_78 (L1), UPIE_76 (L1), Vetric_79 (L2), Wamburgxpress_77 (L1), Whirlwind_79 (L3), Whitney_89 (DN1), Wigglewiggles_79 (L2), Wilder_81 (L2), Winky_80 (L2), Wyatt2_78 (L1), Zakai_81 (L2), Zaria_78 (L1), ZhongYanYuan_77 (L2),

Start 87:

- Found in 2 of 236 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 211
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Nicole72_45 (EC),

Start 92:

- Found in 28 of 236 (11.9%) of genes in pham
- No Manual Annotations of this start.
- Called 3.6% of time when present
- Phage (with cluster) where this start called: Ellson_77 (L3),

Start 93:

- Found in 6 of 236 (2.5%) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Douge_77 (L4),

Start 96:

- Found in 96 of 236 (40.7%) of genes in pham
- Manual Annotations of this start: 4 of 211
- Called 7.3% of time when present
- Phage (with cluster) where this start called: Bellis_76 (L3), Calm_79 (L1), Jobypre_79 (L3), JoeDirt_77 (L1), MAckerman_74 (L1), MsGreen_78 (L3), Silverleaf_77 (L1),

Summary by clusters:

There are 33 clusters represented in this pham: DN, singleton, DH, CZ2, CZ3, CZ1, CZ6, CZ7, CZ4, CZ5, CZ8, DW, I1, I2, DN4, DN1, DN3, P2, CY2, CY1, F, EC, N, CZ, CY, L5, L2, L3, L1, CP, EP, F1, L4,

Info for manual annotations of cluster CP:

- Start number 76 was manually annotated 2 times for cluster CP.

Info for manual annotations of cluster CY:

- Start number 84 was manually annotated 5 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 84 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 80 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:

- Start number 84 was manually annotated 3 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 84 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 84 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 84 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 77 was manually annotated 3 times for cluster CZ4.
- Start number 84 was manually annotated 17 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 84 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 83 was manually annotated 1 time for cluster CZ6.
- Start number 84 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 84 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 84 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DH:

- Start number 84 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 83 was manually annotated 1 time for cluster DN.
- Start number 84 was manually annotated 1 time for cluster DN.
- Start number 85 was manually annotated 1 time for cluster DN.
- Start number 86 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 83 was manually annotated 3 times for cluster DN1.
- Start number 85 was manually annotated 3 times for cluster DN1.
- Start number 86 was manually annotated 5 times for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 83 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 84 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DW:

- Start number 84 was manually annotated 1 time for cluster DW.
- Start number 86 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster EC:

- Start number 86 was manually annotated 6 times for cluster EC.

- Start number 87 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EP:

- Start number 85 was manually annotated 1 time for cluster EP.

Info for manual annotations of cluster F1:

- Start number 79 was manually annotated 5 times for cluster F1.

Info for manual annotations of cluster I1:

- Start number 79 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 79 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster L1:

- Start number 86 was manually annotated 14 times for cluster L1.
- Start number 96 was manually annotated 3 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 86 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 86 was manually annotated 15 times for cluster L3.
- Start number 96 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 86 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 86 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster N:

- Start number 79 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P2:

- Start number 79 was manually annotated 1 time for cluster P2.

Gene Information:

Gene: Acquire49_77 Start: 51648, Stop: 52061, Start Num: 86

Candidate Starts for Acquire49_77:

(Start: 86 @51648 has 76 MA's), (Start: 96 @51687 has 4 MA's), (106, 51723), (128, 51810), (152, 51951), (169, 52029), (170, 52032),

Gene: Adora_68 Start: 47407, Stop: 47808, Start Num: 84

Candidate Starts for Adora_68:

(Start: 77 @47389 has 4 MA's), (Start: 84 @47407 has 95 MA's), (131, 47584), (148, 47728), (161, 47770),

Gene: Aegeus_87 Start: 54478, Stop: 54843, Start Num: 86

Candidate Starts for Aegeus_87:

(Start: 86 @54478 has 76 MA's), (92, 54496), (93, 54502), (Start: 96 @54517 has 4 MA's), (132, 54658), (139, 54724), (140, 54727), (152, 54781), (166, 54829),

Gene: Agueybana_76 Start: 49121, Stop: 49486, Start Num: 84

Candidate Starts for Agueybana_76:

(47, 49004), (53, 49028), (54, 49031), (68, 49073), (Start: 84 @49121 has 95 MA's), (143, 49385),

Gene: AlumE_72 Start: 48795, Stop: 49160, Start Num: 84

Candidate Starts for AlumE_72:

(17, 48408), (44, 48681), (45, 48690), (51, 48714), (69, 48753), (Start: 84 @48795 has 95 MA's),

Gene: Angelique_69 Start: 48080, Stop: 48445, Start Num: 84

Candidate Starts for Angelique_69:

(Start: 84 @48080 has 95 MA's), (123, 48221),

Gene: Annalisa_70 Start: 43981, Stop: 44349, Start Num: 84

Candidate Starts for Annalisa_70:

(44, 43867), (45, 43876), (51, 43900), (69, 43939), (Start: 84 @43981 has 95 MA's),

Gene: Antonio_70 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Antonio_70:

(47, 46443), (Start: 84 @46557 has 95 MA's), (91, 46572), (126, 46713),

Gene: Appletree2_76 Start: 51259, Stop: 51672, Start Num: 86

Candidate Starts for Appletree2_76:

(Start: 86 @51259 has 76 MA's), (Start: 96 @51298 has 4 MA's), (106, 51334), (128, 51421), (152, 51562), (169, 51640), (170, 51643),

Gene: Apricot_90 Start: 48459, Stop: 48836, Start Num: 83

Candidate Starts for Apricot_90:

(Start: 83 @48459 has 7 MA's), (97, 48507), (111, 48555), (128, 48621), (137, 48693), (148, 48759), (156, 48780), (161, 48801),

Gene: Archie_77 Start: 53141, Stop: 53554, Start Num: 86

Candidate Starts for Archie_77:

(Start: 86 @53141 has 76 MA's), (Start: 96 @53180 has 4 MA's), (120, 53261), (128, 53303), (152, 53444), (173, 53540),

Gene: Attis_68 Start: 45280, Stop: 45648, Start Num: 84

Candidate Starts for Attis_68:

(47, 45163), (50, 45172), (54, 45190), (68, 45232), (Start: 84 @45280 has 95 MA's), (91, 45295),

Gene: AvadaKedavra_77 Start: 51727, Stop: 52140, Start Num: 86

Candidate Starts for AvadaKedavra_77:

(Start: 86 @51727 has 76 MA's), (Start: 96 @51766 has 4 MA's), (106, 51802), (128, 51889), (152, 52030), (169, 52108), (170, 52111),

Gene: Awesomesauce_70 Start: 42720, Stop: 43097, Start Num: 79

Candidate Starts for Awesomesauce_70:

(Start: 79 @42720 has 12 MA's), (98, 42789), (111, 42825), (119, 42843), (143, 42984), (145, 43008), (161, 43065), (167, 43089),

Gene: BENtherdunthat_90 Start: 49249, Stop: 49614, Start Num: 86

Candidate Starts for BENtherdunthat_90:

(11, 48544), (13, 48700), (18, 48880), (25, 48991), (37, 49075), (Start: 86 @49249 has 76 MA's), (Start: 96 @49285 has 4 MA's), (114, 49354), (116, 49357), (123, 49390), (129, 49417), (135, 49471), (136, 49474), (152, 49552),

Gene: Baoshan_77 Start: 53427, Stop: 53840, Start Num: 86

Candidate Starts for Baoshan_77:

(Start: 86 @53427 has 76 MA's), (Start: 96 @53466 has 4 MA's), (107, 53505), (120, 53547), (128, 53589), (140, 53676), (152, 53730), (173, 53826),

Gene: BatStarr_74 Start: 49525, Stop: 49890, Start Num: 84

Candidate Starts for BatStarr_74:

(47, 49408), (53, 49432), (54, 49435), (68, 49477), (Start: 84 @49525 has 95 MA's), (91, 49540),

Gene: Baudelaire_87 Start: 54478, Stop: 54843, Start Num: 86

Candidate Starts for Baudelaire_87:

(Start: 86 @54478 has 76 MA's), (92, 54496), (93, 54502), (Start: 96 @54517 has 4 MA's), (132, 54658), (139, 54724), (140, 54727), (152, 54781), (166, 54829),

Gene: BaxterFox_77 Start: 50109, Stop: 50474, Start Num: 84

Candidate Starts for BaxterFox_77:

(47, 49992), (53, 50016), (54, 50019), (68, 50061), (Start: 84 @50109 has 95 MA's), (91, 50124), (143, 50373),

Gene: Bazzle_77 Start: 53330, Stop: 53743, Start Num: 86

Candidate Starts for Bazzle_77:

(Start: 86 @53330 has 76 MA's), (Start: 96 @53369 has 4 MA's), (120, 53450), (128, 53492), (140, 53579), (152, 53633), (173, 53729),

Gene: BeeGee_76 Start: 48379, Stop: 48744, Start Num: 84

Candidate Starts for BeeGee_76:

(44, 48265), (45, 48274), (51, 48298), (69, 48337), (Start: 84 @48379 has 95 MA's),

Gene: Beenie_64 Start: 44525, Stop: 44890, Start Num: 84

Candidate Starts for Beenie_64:

(Start: 84 @44525 has 95 MA's), (140, 44774),

Gene: Bellis_76 Start: 53474, Stop: 53827, Start Num: 96

Candidate Starts for Bellis_76:

(Start: 86 @53435 has 76 MA's), (92, 53453), (Start: 96 @53474 has 4 MA's), (128, 53597), (152, 53738), (169, 53816), (170, 53819),

Gene: Bialota_69 Start: 48237, Stop: 48602, Start Num: 84

Candidate Starts for Bialota_69:

(47, 48120), (53, 48144), (54, 48147), (68, 48189), (Start: 84 @48237 has 95 MA's), (91, 48252),

Gene: BigCheese_80 Start: 53557, Stop: 53970, Start Num: 86

Candidate Starts for BigCheese_80:

(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: Bjaner7_65 Start: 42654, Stop: 43019, Start Num: 84

Candidate Starts for Bjaner7_65:

(12, 42006), (17, 42267), (44, 42540), (45, 42549), (51, 42573), (Start: 84 @42654 has 95 MA's),

Gene: BobsGarage_80 Start: 53557, Stop: 53970, Start Num: 86

Candidate Starts for BobsGarage_80:

(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: Bosnia_73 Start: 50639, Stop: 51004, Start Num: 84

Candidate Starts for Bosnia_73:

(44, 50525), (45, 50534), (51, 50558), (69, 50597), (Start: 84 @50639 has 95 MA's),

Gene: BoyNamedSue_72 Start: 48795, Stop: 49160, Start Num: 84

Candidate Starts for BoyNamedSue_72:

(17, 48408), (44, 48681), (45, 48690), (51, 48714), (69, 48753), (Start: 84 @48795 has 95 MA's),

Gene: Bradissa_71 Start: 49627, Stop: 49992, Start Num: 84

Candidate Starts for Bradissa_71:

(78, 49609), (Start: 84 @49627 has 95 MA's), (91, 49642), (132, 49807), (143, 49891),

Gene: Bran_49 Start: 35390, Stop: 35785, Start Num: 85

Candidate Starts for Bran_49:

(Start: 85 @35390 has 6 MA's), (98, 35450), (134, 35606),

Gene: Breezona_80 Start: 53557, Stop: 53970, Start Num: 86

Candidate Starts for Breezona_80:

(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: BritBrat_89 Start: 51800, Stop: 52234, Start Num: 80

Candidate Starts for BritBrat_89:

(Start: 80 @51800 has 2 MA's), (92, 51821), (97, 51848), (105, 51881), (116, 51920), (122, 51947), (153, 52097), (160, 52121), (175, 52199),

Gene: Bromden_78 Start: 53002, Stop: 53388, Start Num: 86

Candidate Starts for Bromden_78:

(Start: 86 @53002 has 76 MA's), (92, 53020), (93, 53026), (Start: 96 @53041 has 4 MA's), (100, 53065), (128, 53164), (138, 53239), (141, 53263), (152, 53305), (157, 53320), (169, 53380),

Gene: Brujita_53 Start: 36853, Stop: 37233, Start Num: 79

Candidate Starts for Brujita_53:

(Start: 79 @36853 has 12 MA's), (98, 36925), (141, 37117), (143, 37120), (161, 37201),

Gene: Budski_95 Start: 51613, Stop: 51987, Start Num: 85

Candidate Starts for Budski_95:

(36, 51436), (64, 51556), (Start: 85 @51613 has 6 MA's), (92, 51631), (98, 51670), (109, 51694), (110, 51697), (111, 51706), (116, 51718), (122, 51745), (126, 51766), (136, 51835), (139, 51856), (140, 51859), (146, 51898), (148, 51910),

Gene: Bunnybear_69 Start: 47790, Stop: 48155, Start Num: 84

Candidate Starts for Bunnybear_69:

(47, 47673), (53, 47697), (54, 47700), (68, 47742), (Start: 84 @47790 has 95 MA's),

Gene: Calm_79 Start: 52009, Stop: 52383, Start Num: 96

Candidate Starts for Calm_79:

(Start: 86 @51970 has 76 MA's), (Start: 96 @52009 has 4 MA's), (106, 52045), (128, 52132), (152, 52273), (169, 52351), (170, 52354),

Gene: Cashline_72 Start: 50322, Stop: 50687, Start Num: 84

Candidate Starts for Cashline_72:

(78, 50304), (Start: 84 @50322 has 95 MA's), (91, 50337), (132, 50502),

Gene: Chaser_76 Start: 52001, Stop: 52387, Start Num: 86

Candidate Starts for Chaser_76:

(Start: 86 @52001 has 76 MA's), (92, 52019), (93, 52025), (Start: 96 @52040 has 4 MA's), (100, 52064), (128, 52163), (138, 52238), (141, 52262), (152, 52304), (169, 52379),

Gene: Che9c_64 Start: 45395, Stop: 45778, Start Num: 79

Candidate Starts for Che9c_64:

(Start: 79 @45395 has 12 MA's), (98, 45467), (141, 45659), (143, 45662), (161, 45743), (168, 45770),

Gene: ChickenDinner_72 Start: 43637, Stop: 44014, Start Num: 79

Candidate Starts for ChickenDinner_72:

(Start: 79 @43637 has 12 MA's), (98, 43706), (111, 43742), (119, 43760), (143, 43901), (145, 43925), (161, 43982), (167, 44006),

Gene: CicholasNage_74 Start: 51312, Stop: 51725, Start Num: 86

Candidate Starts for CicholasNage_74:

(Start: 86 @51312 has 76 MA's), (Start: 96 @51351 has 4 MA's), (106, 51387), (128, 51474), (152, 51615), (169, 51693), (170, 51696),

Gene: Clap_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Clap_68:

(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Clark_69 Start: 44288, Stop: 44653, Start Num: 84

Candidate Starts for Clark_69:

(Start: 84 @44288 has 95 MA's), (140, 44537),

Gene: Claus_80 Start: 53492, Stop: 53905, Start Num: 86

Candidate Starts for Claus_80:

(Start: 86 @53492 has 76 MA's), (Start: 96 @53531 has 4 MA's), (128, 53654), (140, 53741), (152, 53795), (173, 53891),

Gene: Clautastrophe_76 Start: 53433, Stop: 53825, Start Num: 86

Candidate Starts for Clautastrophe_76:

(Start: 86 @53433 has 76 MA's), (92, 53451), (Start: 96 @53472 has 4 MA's), (128, 53595), (152, 53736), (169, 53814), (170, 53817),

Gene: Clawz_16 Start: 7752, Stop: 8141, Start Num: 76

Candidate Starts for Clawz_16:

(30, 7545), (32, 7566), (47, 7653), (67, 7722), (74, 7749), (Start: 76 @7752 has 2 MA's), (Start: 79 @7761 has 12 MA's), (94, 7806), (109, 7860), (126, 7932), (134, 7992), (140, 8025), (141, 8037), (146, 8064), (148, 8076), (150, 8082), (164, 8127),

Gene: ClearAsMud_50 Start: 32507, Stop: 32881, Start Num: 86

Candidate Starts for ClearAsMud_50:

(Start: 86 @32507 has 76 MA's), (98, 32567), (110, 32594), (128, 32663), (130, 32672), (132, 32681), (133, 32714), (143, 32765), (146, 32789), (148, 32801), (158, 32831), (164, 32852), (165, 32858),

Gene: Confidence_73 Start: 47600, Stop: 47965, Start Num: 84

Candidate Starts for Confidence_73:

(78, 47582), (Start: 84 @47600 has 95 MA's), (91, 47615),

Gene: Crater_90 Start: 48803, Stop: 49180, Start Num: 83

Candidate Starts for Crater_90:

(Start: 83 @48803 has 7 MA's), (97, 48851), (111, 48899), (128, 48965), (137, 49037), (148, 49103), (156, 49124), (161, 49145),

Gene: Crossroads_80 Start: 53632, Stop: 54045, Start Num: 86

Candidate Starts for Crossroads_80:

(Start: 86 @53632 has 76 MA's), (Start: 96 @53671 has 4 MA's), (120, 53752), (128, 53794), (140, 53881), (152, 53935), (173, 54031),

Gene: Cynthia_68 Start: 42831, Stop: 43196, Start Num: 84

Candidate Starts for Cynthia_68:

(12, 42183), (17, 42444), (44, 42717), (45, 42726), (51, 42750), (Start: 84 @42831 has 95 MA's),

Gene: Denise_65 Start: 39624, Stop: 39992, Start Num: 84

Candidate Starts for Denise_65:

(55, 39543), (Start: 84 @39624 has 95 MA's), (Start: 96 @39666 has 4 MA's), (112, 39726), (115, 39735), (117, 39738), (124, 39774),

Gene: DirkDirk_74 Start: 50839, Stop: 51252, Start Num: 86

Candidate Starts for DirkDirk_74:

(Start: 86 @50839 has 76 MA's), (Start: 96 @50878 has 4 MA's), (106, 50914), (128, 51001), (152, 51142), (169, 51220), (170, 51223),

Gene: DobbysSock_66 Start: 44836, Stop: 45252, Start Num: 77

Candidate Starts for DobbysSock_66:

(Start: 77 @44836 has 4 MA's), (Start: 84 @44854 has 95 MA's), (131, 45031), (161, 45217),

Gene: DocMcStuffins_69 Start: 43637, Stop: 44014, Start Num: 79

Candidate Starts for DocMcStuffins_69:

(Start: 79 @43637 has 12 MA's), (98, 43706), (111, 43742), (119, 43760), (143, 43901), (145, 43925), (161, 43982), (167, 44006),

Gene: Dolores_70 Start: 43516, Stop: 43884, Start Num: 84

Candidate Starts for Dolores_70:

(10, 42763), (44, 43402), (45, 43411), (51, 43435), (69, 43474), (Start: 84 @43516 has 95 MA's), (128, 43681),

Gene: Dorito_64 Start: 42718, Stop: 43086, Start Num: 84

Candidate Starts for Dorito_64:

(Start: 84 @42718 has 95 MA's),

Gene: Douge_77 Start: 51948, Stop: 52310, Start Num: 93

Candidate Starts for Douge_77:

(Start: 86 @51924 has 76 MA's), (92, 51942), (93, 51948), (Start: 96 @51963 has 4 MA's), (100, 51987), (128, 52086), (138, 52161), (141, 52185), (152, 52227), (169, 52302),

Gene: DrSeegs_80 Start: 53557, Stop: 53970, Start Num: 86

Candidate Starts for DrSeegs_80:

(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: DumpsterDude_68 Start: 50011, Stop: 50379, Start Num: 86

Candidate Starts for DumpsterDude_68:

(48, 49891), (Start: 86 @50011 has 76 MA's), (Start: 96 @50050 has 4 MA's), (108, 50089), (112, 50110), (117, 50122), (128, 50176),

Gene: DuncansLeg_78 Start: 53419, Stop: 53811, Start Num: 86

Candidate Starts for DuncansLeg_78:

(Start: 86 @53419 has 76 MA's), (92, 53437), (Start: 96 @53458 has 4 MA's), (128, 53581), (138, 53656), (152, 53722), (169, 53800), (170, 53803),

Gene: DyoEdafos_82 Start: 52834, Stop: 53220, Start Num: 86

Candidate Starts for DyoEdafos_82:

(Start: 86 @52834 has 76 MA's), (92, 52852), (93, 52858), (Start: 96 @52873 has 4 MA's), (100, 52897), (128, 52996), (141, 53095), (152, 53137), (169, 53212),

Gene: EMSquaredA_73 Start: 47755, Stop: 48120, Start Num: 84

Candidate Starts for EMSquaredA_73:

(51, 47674), (69, 47713), (Start: 84 @47755 has 95 MA's), (123, 47896),

Gene: Easley_68 Start: 43289, Stop: 43654, Start Num: 84

Candidate Starts for Easley_68:

(3, 42284), (4, 42296), (5, 42332), (6, 42356), (7, 42368), (8, 42380), (14, 42842), (Start: 84 @43289 has 95 MA's),

Gene: Ebert_71 Start: 43265, Stop: 43630, Start Num: 84

Candidate Starts for Ebert_71:

(12, 42617), (17, 42878), (44, 43151), (45, 43160), (51, 43184), (Start: 84 @43265 has 95 MA's),

Gene: Ecliptus_97 Start: 52002, Stop: 52379, Start Num: 83

Candidate Starts for Ecliptus_97:

(Start: 83 @52002 has 7 MA's), (97, 52050), (111, 52098), (128, 52164), (137, 52236), (148, 52302), (156, 52323), (161, 52344),

Gene: EdnaMode_67 Start: 42941, Stop: 43306, Start Num: 84

Candidate Starts for EdnaMode_67:

(44, 42827), (45, 42836), (51, 42860), (Start: 84 @42941 has 95 MA's),

Gene: Ellson_77 Start: 53752, Stop: 54126, Start Num: 92

Candidate Starts for Ellson_77:

(Start: 86 @53734 has 76 MA's), (92, 53752), (Start: 96 @53773 has 4 MA's), (128, 53896), (138, 53971), (152, 54037), (169, 54115), (170, 54118),

Gene: EnalisNailo_69 Start: 48247, Stop: 48612, Start Num: 84

Candidate Starts for EnalisNailo_69:

(17, 47860), (44, 48133), (45, 48142), (51, 48166), (Start: 84 @48247 has 95 MA's),

Gene: Enceladus_74 Start: 51616, Stop: 52029, Start Num: 86
Candidate Starts for Enceladus_74:
(Start: 86 @51616 has 76 MA's), (Start: 96 @51655 has 4 MA's), (106, 51691), (128, 51778), (152, 51919), (169, 51997), (170, 52000),

Gene: Eudoria_71 Start: 46557, Stop: 46922, Start Num: 84
Candidate Starts for Eudoria_71:
(47, 46443), (Start: 84 @46557 has 95 MA's), (91, 46572), (126, 46713),

Gene: Eviarto_75 Start: 49500, Stop: 49865, Start Num: 84
Candidate Starts for Eviarto_75:
(47, 49383), (53, 49407), (54, 49410), (68, 49452), (Start: 84 @49500 has 95 MA's), (91, 49515),

Gene: Faith1_80 Start: 53557, Stop: 53970, Start Num: 86
Candidate Starts for Faith1_80:
(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: Faith5x5_63 Start: 38073, Stop: 38444, Start Num: 84
Candidate Starts for Faith5x5_63:
(55, 37992), (69, 38031), (Start: 84 @38073 has 95 MA's), (Start: 96 @38115 has 4 MA's), (108, 38154), (112, 38175), (117, 38187),

Gene: Finemlucis_79 Start: 54025, Stop: 54423, Start Num: 86
Candidate Starts for Finemlucis_79:
(Start: 86 @54025 has 76 MA's), (Start: 96 @54064 has 4 MA's), (114, 54133), (116, 54136), (128, 54187), (139, 54271), (152, 54328), (170, 54409),

Gene: Finkle_64 Start: 40296, Stop: 40754, Start Num: 80
Candidate Starts for Finkle_64:
(24, 40047), (26, 40068), (Start: 80 @40296 has 2 MA's), (116, 40404), (128, 40458), (130, 40467), (160, 40605), (171, 40659),

Gene: Finnry_78 Start: 53684, Stop: 54076, Start Num: 86
Candidate Starts for Finnry_78:
(Start: 86 @53684 has 76 MA's), (92, 53702), (Start: 96 @53723 has 4 MA's), (128, 53846), (152, 53987), (169, 54065), (170, 54068),

Gene: Fireman_49 Start: 33919, Stop: 34293, Start Num: 86
Candidate Starts for Fireman_49:
(Start: 86 @33919 has 76 MA's), (133, 34126), (143, 34177), (146, 34201), (148, 34213), (163, 34261), (165, 34270),

Gene: Floral_74 Start: 49712, Stop: 50077, Start Num: 84
Candidate Starts for Floral_74:
(51, 49631), (69, 49670), (Start: 84 @49712 has 95 MA's), (123, 49853),

Gene: Frankie_73 Start: 45043, Stop: 45420, Start Num: 79
Candidate Starts for Frankie_73:
(19, 44707), (21, 44749), (61, 44986), (Start: 79 @45043 has 12 MA's), (98, 45112), (141, 45304), (143, 45307), (145, 45331), (161, 45388),

Gene: Frickyeah_97 Start: 50758, Stop: 51126, Start Num: 85

Candidate Starts for Frickyeah_97:

(Start: 85 @50758 has 6 MA's), (98, 50815), (120, 50872), (127, 50914), (128, 50917), (129, 50923), (140, 51004), (146, 51043), (148, 51055), (150, 51061), (161, 51091),

Gene: GAL1_69 Start: 43840, Stop: 44205, Start Num: 86

Candidate Starts for GAL1_69:

(Start: 86 @43840 has 76 MA's), (Start: 96 @43876 has 4 MA's), (114, 43945), (116, 43948), (129, 44008), (135, 44062), (136, 44065), (138, 44077), (152, 44143),

Gene: Gabriela_79 Start: 52903, Stop: 53316, Start Num: 86

Candidate Starts for Gabriela_79:

(Start: 86 @52903 has 76 MA's), (Start: 96 @52942 has 4 MA's), (120, 53023), (128, 53065), (140, 53152), (152, 53206), (173, 53302),

Gene: Gardann_80 Start: 53392, Stop: 53805, Start Num: 86

Candidate Starts for Gardann_80:

(Start: 86 @53392 has 76 MA's), (Start: 96 @53431 has 4 MA's), (120, 53512), (128, 53554), (140, 53641), (152, 53695), (173, 53791),

Gene: GemG_68 Start: 42837, Stop: 43202, Start Num: 84

Candidate Starts for GemG_68:

(12, 42189), (17, 42450), (44, 42723), (45, 42732), (51, 42756), (Start: 84 @42837 has 95 MA's),

Gene: Getalong_93 Start: 51704, Stop: 52069, Start Num: 86

Candidate Starts for Getalong_93:

(11, 50999), (13, 51155), (18, 51335), (25, 51446), (37, 51530), (Start: 86 @51704 has 76 MA's), (Start: 96 @51740 has 4 MA's), (114, 51809), (116, 51812), (123, 51845), (129, 51872), (135, 51926), (136, 51929), (152, 52007),

Gene: Gizermo_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Gizermo_68:

(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Gudmit_62 Start: 37386, Stop: 37871, Start Num: 81

Candidate Starts for Gudmit_62:

(62, 37326), (Start: 81 @37386 has 1 MA's), (Start: 96 @37425 has 4 MA's), (101, 37452), (111, 37497), (126, 37557), (138, 37638), (139, 37647), (148, 37701), (161, 37743),

Gene: GuuelaD_78 Start: 53672, Stop: 54085, Start Num: 86

Candidate Starts for GuuelaD_78:

(Start: 86 @53672 has 76 MA's), (Start: 96 @53711 has 4 MA's), (120, 53792), (128, 53834), (140, 53921), (152, 53975), (173, 54071),

Gene: Hafay_81 Start: 53487, Stop: 53900, Start Num: 86

Candidate Starts for Hafay_81:

(Start: 86 @53487 has 76 MA's), (Start: 96 @53526 has 4 MA's), (128, 53649), (140, 53736), (152, 53790), (173, 53886),

Gene: Halena_75 Start: 50886, Stop: 51299, Start Num: 86

Candidate Starts for Halena_75:

(Start: 86 @50886 has 76 MA's), (Start: 96 @50925 has 4 MA's), (106, 50961), (128, 51048), (152, 51189), (169, 51267), (170, 51270),

Gene: Haley23_68 Start: 42833, Stop: 43198, Start Num: 84
Candidate Starts for Haley23_68:
(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Herod_75 Start: 49919, Stop: 50284, Start Num: 84
Candidate Starts for Herod_75:
(47, 49802), (53, 49826), (54, 49829), (68, 49871), (Start: 84 @49919 has 95 MA's), (91, 49934),

Gene: Holliday_92 Start: 52368, Stop: 52745, Start Num: 83
Candidate Starts for Holliday_92:
(Start: 83 @52368 has 7 MA's), (97, 52416), (111, 52464), (137, 52602), (148, 52668), (161, 52710),

Gene: Hortense_71 Start: 48762, Stop: 49163, Start Num: 84
Candidate Starts for Hortense_71:
(Start: 77 @48744 has 4 MA's), (Start: 84 @48762 has 95 MA's), (131, 48939), (148, 49083), (161, 49125),

Gene: Horus_91 Start: 51033, Stop: 51401, Start Num: 85
Candidate Starts for Horus_91:
(Start: 85 @51033 has 6 MA's), (98, 51090), (120, 51147), (127, 51189), (128, 51192), (129, 51198), (140, 51279), (146, 51318), (148, 51330), (150, 51336), (161, 51366),

Gene: Howe_71 Start: 48762, Stop: 49163, Start Num: 84
Candidate Starts for Howe_71:
(Start: 77 @48744 has 4 MA's), (Start: 84 @48762 has 95 MA's), (131, 48939), (148, 49083), (161, 49125),

Gene: Hugley_73 Start: 49899, Stop: 50264, Start Num: 84
Candidate Starts for Hugley_73:
(47, 49782), (53, 49806), (54, 49809), (68, 49851), (Start: 84 @49899 has 95 MA's), (91, 49914),

Gene: Hyzer_89 Start: 56367, Stop: 56672, Start Num: 84
Candidate Starts for Hyzer_89:
(68, 56319), (Start: 84 @56367 has 95 MA's),

Gene: Island3_53 Start: 36853, Stop: 37233, Start Num: 79
Candidate Starts for Island3_53:
(Start: 79 @36853 has 12 MA's), (98, 36925), (141, 37117), (143, 37120), (161, 37201),

Gene: Itos_79 Start: 52463, Stop: 52876, Start Num: 86
Candidate Starts for Itos_79:
(Start: 86 @52463 has 76 MA's), (Start: 96 @52502 has 4 MA's), (120, 52583), (128, 52625), (140, 52712), (152, 52766), (173, 52862),

Gene: JCole_65 Start: 41503, Stop: 41868, Start Num: 84
Candidate Starts for JCole_65:
(9, 40720), (12, 40855), (17, 41116), (44, 41389), (45, 41398), (51, 41422), (69, 41461), (Start: 84 @41503 has 95 MA's),

Gene: Jablanski_77 Start: 51014, Stop: 51379, Start Num: 84
Candidate Starts for Jablanski_77:
(40, 50894), (63, 50963), (70, 50978), (Start: 84 @51014 has 95 MA's), (141, 51275),

Gene: Jace_77 Start: 44043, Stop: 44462, Start Num: 85

Candidate Starts for Jace_77:

(20, 43710), (33, 43836), (Start: 85 @44043 has 6 MA's), (97, 44088), (99, 44103), (105, 44121), (111, 44148), (116, 44160), (126, 44208), (128, 44214), (142, 44313), (144, 44316), (151, 44358), (153, 44361), (160, 44385), (174, 44445),

Gene: Jobypre_79 Start: 53472, Stop: 53825, Start Num: 96

Candidate Starts for Jobypre_79:

(Start: 86 @53433 has 76 MA's), (92, 53451), (Start: 96 @53472 has 4 MA's), (128, 53595), (152, 53736), (169, 53814), (170, 53817),

Gene: JoeDirt_77 Start: 52253, Stop: 52627, Start Num: 96

Candidate Starts for JoeDirt_77:

(Start: 96 @52253 has 4 MA's), (106, 52289), (128, 52376), (152, 52517), (169, 52595), (170, 52598),

Gene: Jubie_77 Start: 53568, Stop: 53960, Start Num: 86

Candidate Starts for Jubie_77:

(Start: 86 @53568 has 76 MA's), (92, 53586), (Start: 96 @53607 has 4 MA's), (128, 53730), (152, 53871), (169, 53949), (170, 53952),

Gene: Kahlid_80 Start: 53563, Stop: 53976, Start Num: 86

Candidate Starts for Kahlid_80:

(Start: 86 @53563 has 76 MA's), (Start: 96 @53602 has 4 MA's), (111, 53662), (120, 53683), (128, 53725), (140, 53812), (152, 53866), (173, 53962),

Gene: Kamaru_84 Start: 48067, Stop: 48444, Start Num: 83

Candidate Starts for Kamaru_84:

(36, 47893), (Start: 83 @48067 has 7 MA's), (92, 48088), (97, 48115), (122, 48202), (137, 48301), (139, 48313), (147, 48364), (148, 48367), (161, 48409),

Gene: Kingsolomon_76 Start: 53440, Stop: 53832, Start Num: 86

Candidate Starts for Kingsolomon_76:

(Start: 86 @53440 has 76 MA's), (92, 53458), (Start: 96 @53479 has 4 MA's), (128, 53602), (152, 53743), (169, 53821), (170, 53824),

Gene: Kita_72 Start: 46566, Stop: 46931, Start Num: 84

Candidate Starts for Kita_72:

(47, 46452), (Start: 84 @46566 has 95 MA's), (91, 46581), (126, 46722),

Gene: Krypton555_79 Start: 53667, Stop: 54059, Start Num: 86

Candidate Starts for Krypton555_79:

(Start: 86 @53667 has 76 MA's), (92, 53685), (Start: 96 @53706 has 4 MA's), (128, 53829), (152, 53970), (169, 54048), (170, 54051),

Gene: Kuwabara_86 Start: 51241, Stop: 51609, Start Num: 84

Candidate Starts for Kuwabara_86:

(Start: 84 @51241 has 95 MA's), (Start: 96 @51283 has 4 MA's), (108, 51322), (112, 51343), (115, 51352), (117, 51355), (167, 51601),

Gene: Lamberg_64 Start: 41342, Stop: 41707, Start Num: 84

Candidate Starts for Lamberg_64:

(12, 40694), (17, 40955), (44, 41228), (45, 41237), (51, 41261), (Start: 84 @41342 has 95 MA's),

Gene: LeBron_76 Start: 50885, Stop: 51298, Start Num: 86

Candidate Starts for LeBron_76:

(Start: 86 @50885 has 76 MA's), (Start: 96 @50924 has 4 MA's), (106, 50960), (128, 51047), (152, 51188), (169, 51266), (170, 51269),

Gene: Leroy_90 Start: 49228, Stop: 49596, Start Num: 85

Candidate Starts for Leroy_90:

(Start: 85 @49228 has 6 MA's), (98, 49285), (120, 49342), (127, 49384), (128, 49387), (129, 49393), (140, 49474), (146, 49513), (148, 49525), (150, 49531), (161, 49561),

Gene: Lewan_81 Start: 53615, Stop: 54049, Start Num: 86

Candidate Starts for Lewan_81:

(Start: 86 @53615 has 76 MA's), (Start: 96 @53654 has 4 MA's), (120, 53735), (128, 53777), (140, 53864), (152, 53918), (173, 54014),

Gene: LilDestine_79 Start: 53467, Stop: 53880, Start Num: 86

Candidate Starts for LilDestine_79:

(Start: 86 @53467 has 76 MA's), (Start: 96 @53506 has 4 MA's), (120, 53587), (128, 53629), (140, 53716), (152, 53770), (173, 53866),

Gene: LilSpotty_67 Start: 41443, Stop: 41820, Start Num: 79

Candidate Starts for LilSpotty_67:

(42, 41326), (43, 41329), (49, 41350), (Start: 79 @41443 has 12 MA's), (98, 41512), (141, 41704), (143, 41707), (145, 41731), (161, 41788),

Gene: Lilas_70 Start: 49785, Stop: 50150, Start Num: 84

Candidate Starts for Lilas_70:

(17, 49398), (44, 49671), (45, 49680), (51, 49704), (Start: 84 @49785 has 95 MA's),

Gene: Loadrie_79 Start: 53642, Stop: 54055, Start Num: 86

Candidate Starts for Loadrie_79:

(Start: 86 @53642 has 76 MA's), (Start: 96 @53681 has 4 MA's), (120, 53762), (128, 53804), (140, 53891), (152, 53945), (173, 54041),

Gene: Lolly9_77 Start: 53537, Stop: 53929, Start Num: 86

Candidate Starts for Lolly9_77:

(Start: 86 @53537 has 76 MA's), (92, 53555), (Start: 96 @53576 has 4 MA's), (128, 53699), (152, 53840), (169, 53918), (170, 53921),

Gene: LonelyBoi_72 Start: 50747, Stop: 51112, Start Num: 84

Candidate Starts for LonelyBoi_72:

(52, 50669), (Start: 84 @50747 has 95 MA's), (91, 50762),

Gene: LordFarquaad_71 Start: 45261, Stop: 45629, Start Num: 84

Candidate Starts for LordFarquaad_71:

(47, 45144), (50, 45153), (54, 45171), (68, 45213), (Start: 84 @45261 has 95 MA's), (91, 45276),

Gene: Lton_65 Start: 38394, Stop: 38762, Start Num: 84

Candidate Starts for Lton_65:

(Start: 84 @38394 has 95 MA's), (Start: 96 @38436 has 4 MA's), (108, 38475), (112, 38496), (115, 38505), (117, 38508), (167, 38754),

Gene: Lucky10_65 Start: 40814, Stop: 41182, Start Num: 84

Candidate Starts for Lucky10_65:

(38, 40652), (Start: 84 @40814 has 95 MA's), (95, 40853), (Start: 96 @40856 has 4 MA's), (108, 40895), (112, 40916), (115, 40925), (117, 40928),

Gene: Lumos_79 Start: 53430, Stop: 53822, Start Num: 86

Candidate Starts for Lumos_79:

(Start: 86 @53430 has 76 MA's), (92, 53448), (Start: 96 @53469 has 4 MA's), (128, 53592), (152, 53733), (169, 53811), (170, 53814),

Gene: Lutum_91 Start: 49684, Stop: 50049, Start Num: 86

Candidate Starts for Lutum_91:

(11, 48979), (13, 49135), (18, 49315), (25, 49426), (37, 49510), (Start: 86 @49684 has 76 MA's), (Start: 96 @49720 has 4 MA's), (114, 49789), (116, 49792), (123, 49825), (129, 49852), (135, 49906), (136, 49909), (152, 49987),

Gene: MAckerman_74 Start: 50918, Stop: 51292, Start Num: 96

Candidate Starts for MAckerman_74:

(Start: 86 @50879 has 76 MA's), (Start: 96 @50918 has 4 MA's), (106, 50954), (128, 51041), (152, 51182), (169, 51260), (170, 51263),

Gene: Madeline_68 Start: 48371, Stop: 48736, Start Num: 84

Candidate Starts for Madeline_68:

(47, 48254), (50, 48263), (54, 48281), (68, 48323), (Start: 84 @48371 has 95 MA's), (91, 48386), (103, 48440), (126, 48527),

Gene: Malibo_73 Start: 47674, Stop: 48039, Start Num: 84

Candidate Starts for Malibo_73:

(15, 47248), (47, 47557), (53, 47581), (54, 47584), (68, 47626), (Start: 84 @47674 has 95 MA's),

Gene: Malisha_90 Start: 52796, Stop: 53167, Start Num: 84

Candidate Starts for Malisha_90:

(55, 52715), (69, 52754), (Start: 84 @52796 has 95 MA's), (Start: 96 @52838 has 4 MA's), (108, 52877), (112, 52898), (117, 52910),

Gene: Manasvini_73 Start: 46581, Stop: 46946, Start Num: 84

Candidate Starts for Manasvini_73:

(47, 46467), (Start: 84 @46581 has 95 MA's), (91, 46596), (126, 46737),

Gene: Maridalia_74 Start: 47802, Stop: 48167, Start Num: 84

Candidate Starts for Maridalia_74:

(47, 47685), (54, 47712), (68, 47754), (Start: 84 @47802 has 95 MA's), (91, 47817),

Gene: Marteena_72 Start: 47755, Stop: 48120, Start Num: 84

Candidate Starts for Marteena_72:

(51, 47674), (69, 47713), (Start: 84 @47755 has 95 MA's), (123, 47896),

Gene: Matteo_62 Start: 41374, Stop: 41742, Start Num: 84

Candidate Starts for Matteo_62:

(17, 40987), (44, 41260), (45, 41269), (51, 41293), (Start: 84 @41374 has 95 MA's),

Gene: Mbo4_59 Start: 42474, Stop: 42896, Start Num: 80

Candidate Starts for Mbo4_59:

(23, 42183), (29, 42258), (41, 42348), (Start: 80 @42474 has 2 MA's), (97, 42522), (104, 42552), (122, 42621), (160, 42795),

Gene: Mcklovin_70 Start: 50090, Stop: 50455, Start Num: 84

Candidate Starts for Mcklovin_70:

(44, 49976), (45, 49985), (51, 50009), (69, 50048), (Start: 84 @50090 has 95 MA's), (139, 50336),

Gene: Metamorphoo_49 Start: 33181, Stop: 33555, Start Num: 86

Candidate Starts for Metamorphoo_49:

(Start: 86 @33181 has 76 MA's), (133, 33388), (143, 33439), (146, 33463), (148, 33475), (163, 33523), (165, 33532),

Gene: MichaelScott_71 Start: 44969, Stop: 45334, Start Num: 84

Candidate Starts for MichaelScott_71:

(Start: 84 @44969 has 95 MA's), (140, 45218),

Gene: Miley16_80 Start: 53557, Stop: 53970, Start Num: 86

Candidate Starts for Miley16_80:

(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140, 53806), (152, 53860), (173, 53956),

Gene: MiniLon_82 Start: 53538, Stop: 53930, Start Num: 86

Candidate Starts for MiniLon_82:

(Start: 86 @53538 has 76 MA's), (92, 53556), (Start: 96 @53577 has 4 MA's), (128, 53700), (152, 53841), (169, 53919), (170, 53922),

Gene: MiniMac_82 Start: 53533, Stop: 53925, Start Num: 86

Candidate Starts for MiniMac_82:

(Start: 86 @53533 has 76 MA's), (92, 53551), (Start: 96 @53572 has 4 MA's), (128, 53695), (152, 53836), (169, 53914), (170, 53917),

Gene: Misha28_68 Start: 42725, Stop: 43102, Start Num: 79

Candidate Starts for Misha28_68:

(Start: 79 @42725 has 12 MA's), (98, 42794), (111, 42830), (119, 42848), (143, 42989), (145, 43013), (161, 43070), (167, 43094),

Gene: MkaliMitinis3_81 Start: 53626, Stop: 54039, Start Num: 86

Candidate Starts for MkaliMitinis3_81:

(Start: 86 @53626 has 76 MA's), (Start: 96 @53665 has 4 MA's), (120, 53746), (128, 53788), (140, 53875), (152, 53929), (173, 54025),

Gene: Mocha12_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Mocha12_68:

(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Moosehead_69 Start: 39233, Stop: 39610, Start Num: 83

Candidate Starts for Moosehead_69:

(35, 39047), (56, 39152), (61, 39164), (73, 39209), (Start: 83 @39233 has 7 MA's), (97, 39281), (111, 39329), (148, 39533),

Gene: Moostard_76 Start: 53435, Stop: 53827, Start Num: 86

Candidate Starts for Moostard_76:

(Start: 86 @53435 has 76 MA's), (92, 53453), (Start: 96 @53474 has 4 MA's), (128, 53597), (152, 53738), (169, 53816), (170, 53819),

Gene: Morkie_68 Start: 39542, Stop: 39910, Start Num: 84

Candidate Starts for Morkie_68:

(Start: 84 @39542 has 95 MA's), (Start: 96 @39584 has 4 MA's), (108, 39623), (112, 39644), (115, 39653), (117, 39656), (167, 39902),

Gene: MortyNRick_83 Start: 48781, Stop: 49158, Start Num: 83

Candidate Starts for MortyNRick_83:

(Start: 83 @48781 has 7 MA's), (97, 48829), (111, 48877), (137, 49015), (141, 49042), (148, 49081), (156, 49102), (161, 49123),

Gene: MsGreen_78 Start: 53471, Stop: 53824, Start Num: 96

Candidate Starts for MsGreen_78:

(Start: 86 @53432 has 76 MA's), (92, 53450), (Start: 96 @53471 has 4 MA's), (128, 53594), (152, 53735), (169, 53813), (170, 53816),

Gene: MulchSalad_67 Start: 40786, Stop: 41157, Start Num: 86

Candidate Starts for MulchSalad_67:

(Start: 86 @40786 has 76 MA's), (89, 40795), (91, 40801), (Start: 96 @40825 has 4 MA's), (113, 40891), (116, 40897), (128, 40951), (129, 40957), (140, 41038),

Gene: Neobush_73 Start: 47125, Stop: 47490, Start Num: 84

Candidate Starts for Neobush_73:

(47, 47011), (Start: 84 @47125 has 95 MA's), (91, 47140), (126, 47281),

Gene: Nettuno_66 Start: 42038, Stop: 42406, Start Num: 84

Candidate Starts for Nettuno_66:

(47, 41921), (50, 41930), (54, 41948), (68, 41990), (Start: 84 @42038 has 95 MA's), (91, 42053),

Gene: Netyap_81 Start: 53558, Stop: 53971, Start Num: 86

Candidate Starts for Netyap_81:

(Start: 86 @53558 has 76 MA's), (Start: 96 @53597 has 4 MA's), (120, 53678), (128, 53720), (140, 53807), (152, 53861), (173, 53957),

Gene: Nicholas_76 Start: 53440, Stop: 53832, Start Num: 86

Candidate Starts for Nicholas_76:

(Start: 86 @53440 has 76 MA's), (92, 53458), (Start: 96 @53479 has 4 MA's), (128, 53602), (152, 53743), (169, 53821), (170, 53824),

Gene: Nicholasp3_80 Start: 53392, Stop: 53805, Start Num: 86

Candidate Starts for Nicholasp3_80:

(Start: 86 @53392 has 76 MA's), (Start: 96 @53431 has 4 MA's), (120, 53512), (128, 53554), (140, 53641), (152, 53695), (173, 53791),

Gene: Nicole72_45 Start: 35846, Stop: 36274, Start Num: 87

Candidate Starts for Nicole72_45:

(39, 35690), (Start: 87 @35846 has 1 MA's), (90, 35855), (133, 36047), (134, 36050), (141, 36095), (143, 36098), (146, 36122), (148, 36134), (157, 36161), (160, 36173), (162, 36179), (164, 36185), (165, 36191), (168, 36203), (172, 36230),

Gene: NoodlelyBoi_48 Start: 32719, Stop: 33093, Start Num: 86

Candidate Starts for NoodlelyBoi_48:

(Start: 86 @32719 has 76 MA's), (98, 32779), (110, 32806), (128, 32875), (130, 32884), (132, 32893), (133, 32926), (140, 32962), (143, 32977), (146, 33001), (148, 33013), (164, 33064), (165, 33070),

Gene: Nymphadora_75 Start: 49524, Stop: 49889, Start Num: 84

Candidate Starts for Nymphadora_75:

(47, 49407), (53, 49431), (54, 49434), (68, 49476), (Start: 84 @49524 has 95 MA's), (91, 49539),

Gene: ODay_98 Start: 52337, Stop: 52702, Start Num: 86

Candidate Starts for ODay_98:

(Start: 86 @52337 has 76 MA's), (Start: 96 @52373 has 4 MA's), (114, 52442), (116, 52445), (121, 52463), (123, 52478), (129, 52505), (133, 52550), (135, 52559), (136, 52562), (148, 52625), (152, 52640),

Gene: Ohgeesy_74 Start: 49004, Stop: 49369, Start Num: 84

Candidate Starts for Ohgeesy_74:

(47, 48887), (54, 48914), (Start: 84 @49004 has 95 MA's),

Gene: OneDirection_62 Start: 36956, Stop: 37324, Start Num: 84

Candidate Starts for OneDirection_62:

(Start: 84 @36956 has 95 MA's), (Start: 96 @36998 has 4 MA's), (108, 37037), (112, 37058), (115, 37067), (117, 37070),

Gene: OnionKnight_42 Start: 30317, Stop: 30808, Start Num: 59

Candidate Starts for OnionKnight_42:

(Start: 59 @30317 has 1 MA's), (71, 30359), (95, 30434), (108, 30485), (110, 30494), (115, 30515), (138, 30641), (140, 30653), (149, 30707), (153, 30722), (155, 30725), (169, 30797),

Gene: Oregano_70 Start: 43852, Stop: 44250, Start Num: 84

Candidate Starts for Oregano_70:

(Start: 84 @43852 has 95 MA's), (98, 43912), (131, 44029), (148, 44173), (161, 44215),

Gene: PantheRoc_78 Start: 49218, Stop: 49622, Start Num: 84

Candidate Starts for PantheRoc_78:

(46, 49101), (51, 49125), (53, 49128), (66, 49170), (Start: 84 @49218 has 95 MA's), (97, 49266), (116, 49326), (125, 49365), (128, 49380), (131, 49395), (148, 49539), (159, 49575), (161, 49584),

Gene: Pepperoni_61 Start: 38082, Stop: 38450, Start Num: 84

Candidate Starts for Pepperoni_61:

(55, 38001), (Start: 84 @38082 has 95 MA's), (Start: 96 @38124 has 4 MA's), (108, 38163), (112, 38184), (115, 38193), (117, 38196), (167, 38442),

Gene: Periwinkle_99 Start: 52035, Stop: 52403, Start Num: 85

Candidate Starts for Periwinkle_99:

(Start: 85 @52035 has 6 MA's), (98, 52092), (120, 52149), (127, 52191), (128, 52194), (129, 52200), (140, 52281), (146, 52320), (148, 52332), (150, 52338), (161, 52368),

Gene: Phabuloso_97 Start: 51176, Stop: 51541, Start Num: 86

Candidate Starts for Phabuloso_97:

(11, 50471), (13, 50627), (18, 50807), (25, 50918), (37, 51002), (Start: 86 @51176 has 76 MA's), (Start: 96 @51212 has 4 MA's), (114, 51281), (116, 51284), (123, 51317), (129, 51344), (135, 51398), (136, 51401), (152, 51479),

Gene: Phistory_88 Start: 48067, Stop: 48444, Start Num: 83
Candidate Starts for Phistory_88:
(Start: 83 @48067 has 7 MA's), (97, 48115), (111, 48163), (128, 48229), (137, 48301), (148, 48367),
(156, 48388), (161, 48409),

Gene: PhorbesPhlower_66 Start: 38937, Stop: 39305, Start Num: 84
Candidate Starts for PhorbesPhlower_66:
(Start: 84 @38937 has 95 MA's), (Start: 96 @38979 has 4 MA's), (108, 39018), (112, 39039), (115,
39048), (117, 39051), (167, 39297),

Gene: PhriskyACE_67 Start: 44129, Stop: 44497, Start Num: 84
Candidate Starts for PhriskyACE_67:
(51, 44048), (69, 44087), (Start: 84 @44129 has 95 MA's), (109, 44213),

Gene: Pickett_65 Start: 41546, Stop: 41911, Start Num: 84
Candidate Starts for Pickett_65:
(44, 41432), (45, 41441), (51, 41465), (Start: 84 @41546 has 95 MA's),

Gene: Piper2020_71 Start: 43620, Stop: 43997, Start Num: 79
Candidate Starts for Piper2020_71:
(Start: 79 @43620 has 12 MA's), (98, 43689), (111, 43725), (119, 43743), (143, 43884), (145, 43908),
(161, 43965), (167, 43989),

Gene: Pollux_76 Start: 49712, Stop: 50077, Start Num: 84
Candidate Starts for Pollux_76:
(51, 49631), (69, 49670), (Start: 84 @49712 has 95 MA's), (123, 49853),

Gene: Polly_68 Start: 46000, Stop: 46365, Start Num: 84
Candidate Starts for Polly_68:
(47, 45886), (Start: 84 @46000 has 95 MA's), (91, 46015), (126, 46156),

Gene: Powerball_68 Start: 44232, Stop: 44600, Start Num: 84
Candidate Starts for Powerball_68:
(51, 44151), (69, 44190), (Start: 84 @44232 has 95 MA's), (109, 44316),

Gene: Pytheas_78 Start: 51013, Stop: 51378, Start Num: 84
Candidate Starts for Pytheas_78:
(40, 50893), (63, 50962), (70, 50977), (Start: 84 @51013 has 95 MA's), (141, 51274),

Gene: RavenCo17_69 Start: 47361, Stop: 47729, Start Num: 84
Candidate Starts for RavenCo17_69:
(10, 46593), (Start: 84 @47361 has 95 MA's), (91, 47376), (143, 47625),

Gene: RobsFeet_50 Start: 33462, Stop: 33836, Start Num: 86
Candidate Starts for RobsFeet_50:
(Start: 86 @33462 has 76 MA's), (133, 33669), (143, 33720), (146, 33744), (148, 33756), (163,
33804), (165, 33813),

Gene: Rose5_77 Start: 52059, Stop: 52472, Start Num: 86
Candidate Starts for Rose5_77:
(Start: 86 @52059 has 76 MA's), (Start: 96 @52098 has 4 MA's), (106, 52134), (128, 52221), (152,
52362), (169, 52440), (170, 52443),

Gene: Rumpelstiltskin_77 Start: 53185, Stop: 53598, Start Num: 86
Candidate Starts for Rumpelstiltskin_77:
(Start: 86 @53185 has 76 MA's), (Start: 96 @53224 has 4 MA's), (120, 53305), (128, 53347), (140, 53434), (152, 53488), (173, 53584),

Gene: Ruthy_70 Start: 49109, Stop: 49477, Start Num: 86
Candidate Starts for Ruthy_70:
(25, 48851), (27, 48860), (48, 48989), (Start: 86 @49109 has 76 MA's), (Start: 96 @49148 has 4 MA's), (108, 49187), (112, 49208), (117, 49220), (128, 49274),

Gene: Sahara_67 Start: 42654, Stop: 43022, Start Num: 84
Candidate Starts for Sahara_67:
(1, 41634), (2, 41637), (17, 42267), (44, 42540), (45, 42549), (51, 42573), (Start: 84 @42654 has 95 MA's),

Gene: Samman98_71 Start: 44391, Stop: 44756, Start Num: 84
Candidate Starts for Samman98_71:
(Start: 84 @44391 has 95 MA's), (140, 44640),

Gene: Samty_77 Start: 53428, Stop: 53820, Start Num: 86
Candidate Starts for Samty_77:
(Start: 86 @53428 has 76 MA's), (92, 53446), (Start: 96 @53467 has 4 MA's), (128, 53590), (152, 53731), (169, 53809), (170, 53812),

Gene: Savage_68 Start: 42833, Stop: 43198, Start Num: 84
Candidate Starts for Savage_68:
(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Sbash_61 Start: 42805, Stop: 43188, Start Num: 79
Candidate Starts for Sbash_61:
(28, 42580), (57, 42736), (58, 42739), (Start: 79 @42805 has 12 MA's), (88, 42826), (98, 42877), (141, 43069), (143, 43072), (161, 43153), (168, 43180),

Gene: Scitech_46 Start: 32555, Stop: 32974, Start Num: 65
Candidate Starts for Scitech_46:
(65, 32555), (72, 32582), (Start: 79 @32597 has 12 MA's), (98, 32666), (111, 32702), (119, 32720), (143, 32861), (161, 32942), (167, 32966),

Gene: Sekhmet_69 Start: 43915, Stop: 44283, Start Num: 84
Candidate Starts for Sekhmet_69:
(10, 43162), (44, 43801), (45, 43810), (51, 43834), (69, 43873), (Start: 84 @43915 has 95 MA's),

Gene: Shlim410_69 Start: 48744, Stop: 49163, Start Num: 77
Candidate Starts for Shlim410_69:
(Start: 77 @48744 has 4 MA's), (Start: 84 @48762 has 95 MA's), (131, 48939), (148, 49083), (161, 49125),

Gene: Sidious_71 Start: 48554, Stop: 48919, Start Num: 84
Candidate Starts for Sidious_71:
(51, 48473), (69, 48512), (Start: 84 @48554 has 95 MA's),

Gene: Silverleaf_77 Start: 51554, Stop: 51928, Start Num: 96
Candidate Starts for Silverleaf_77:

(Start: 86 @51515 has 76 MA's), (Start: 96 @51554 has 4 MA's), (106, 51590), (128, 51677), (152, 51818), (169, 51896), (170, 51899),

Gene: SkinnyPete_48 Start: 33096, Stop: 33473, Start Num: 79

Candidate Starts for SkinnyPete_48:

(Start: 79 @33096 has 12 MA's), (98, 33165), (111, 33201), (119, 33219), (143, 33360), (161, 33441), (167, 33465),

Gene: Snenia_77 Start: 53434, Stop: 53826, Start Num: 86

Candidate Starts for Snenia_77:

(Start: 86 @53434 has 76 MA's), (92, 53452), (Start: 96 @53473 has 4 MA's), (128, 53596), (152, 53737), (169, 53815), (170, 53818),

Gene: SoilAssassin_68 Start: 45279, Stop: 45647, Start Num: 84

Candidate Starts for SoilAssassin_68:

(47, 45162), (50, 45171), (54, 45189), (68, 45231), (Start: 84 @45279 has 95 MA's), (91, 45294),

Gene: Soos_13 Start: 6967, Stop: 7356, Start Num: 76

Candidate Starts for Soos_13:

(32, 6781), (52, 6892), (67, 6937), (74, 6964), (Start: 76 @6967 has 2 MA's), (Start: 79 @6976 has 12 MA's), (82, 6985), (102, 7060), (129, 7159), (139, 7237), (141, 7252), (146, 7279), (148, 7291), (154, 7309), (157, 7318), (164, 7342),

Gene: Sproutie_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Sproutie_68:

(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Sting_14 Start: 7376, Stop: 7768, Start Num: 74

Candidate Starts for Sting_14:

(30, 7172), (32, 7193), (52, 7304), (67, 7349), (74, 7376), (Start: 76 @7379 has 2 MA's), (Start: 79 @7388 has 12 MA's), (82, 7397), (102, 7472), (129, 7571), (139, 7649), (141, 7664), (146, 7691), (148, 7703), (154, 7721), (157, 7730), (164, 7754),

Gene: Suerte_64 Start: 43530, Stop: 43898, Start Num: 84

Candidate Starts for Suerte_64:

(44, 43416), (45, 43425), (51, 43449), (Start: 84 @43530 has 95 MA's),

Gene: Suscepit_71 Start: 46558, Stop: 46923, Start Num: 84

Candidate Starts for Suscepit_71:

(47, 46444), (Start: 84 @46558 has 95 MA's), (91, 46573), (126, 46714),

Gene: Tayonia_71 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Tayonia_71:

(47, 46443), (Start: 84 @46557 has 95 MA's), (91, 46572), (126, 46713),

Gene: ThankyouJordi_74 Start: 49930, Stop: 50295, Start Num: 84

Candidate Starts for ThankyouJordi_74:

(22, 49627), (47, 49813), (50, 49822), (54, 49840), (68, 49882), (Start: 84 @49930 has 95 MA's),

Gene: Thimann_71 Start: 44657, Stop: 45025, Start Num: 84

Candidate Starts for Thimann_71:

(3, 43652), (4, 43664), (5, 43700), (6, 43724), (7, 43736), (8, 43748), (14, 44210), (Start: 84 @44657 has 95 MA's),

Gene: TimTam_75 Start: 49524, Stop: 49889, Start Num: 84

Candidate Starts for TimTam_75:

(47, 49407), (53, 49431), (54, 49434), (68, 49476), (Start: 84 @49524 has 95 MA's), (91, 49539),

Gene: Tonitrus_75 Start: 53537, Stop: 53983, Start Num: 77

Candidate Starts for Tonitrus_75:

(31, 53345), (75, 53534), (Start: 77 @53537 has 4 MA's), (Start: 87 @53561 has 1 MA's), (97, 53606), (98, 53618), (103, 53630), (118, 53669), (126, 53714), (130, 53729), (139, 53804),

Gene: TootsiePop_68 Start: 42725, Stop: 43102, Start Num: 79

Candidate Starts for TootsiePop_68:

(Start: 79 @42725 has 12 MA's), (98, 42794), (111, 42830), (119, 42848), (143, 42989), (145, 43013), (161, 43070), (167, 43094),

Gene: Tortellini_59 Start: 41926, Stop: 42303, Start Num: 79

Candidate Starts for Tortellini_59:

(16, 41533), (34, 41752), (61, 41869), (Start: 79 @41926 has 12 MA's), (98, 41995), (111, 42031), (119, 42049), (145, 42214), (161, 42271), (167, 42295),

Gene: Tourach_79 Start: 53675, Stop: 54073, Start Num: 86

Candidate Starts for Tourach_79:

(Start: 86 @53675 has 76 MA's), (Start: 96 @53714 has 4 MA's), (106, 53750), (120, 53795), (128, 53837), (140, 53924), (152, 53978), (169, 54056),

Gene: Trumpet_71 Start: 46558, Stop: 46923, Start Num: 84

Candidate Starts for Trumpet_71:

(47, 46444), (Start: 84 @46558 has 95 MA's), (91, 46573), (126, 46714),

Gene: TuertoX_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for TuertoX_68:

(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Twinkle_70 Start: 49803, Stop: 50222, Start Num: 77

Candidate Starts for Twinkle_70:

(Start: 77 @49803 has 4 MA's), (Start: 84 @49821 has 95 MA's), (131, 49998), (148, 50142), (161, 50184),

Gene: Tyumbra_47 Start: 33262, Stop: 33636, Start Num: 86

Candidate Starts for Tyumbra_47:

(Start: 86 @33262 has 76 MA's), (133, 33469), (143, 33520), (146, 33544), (148, 33556), (163, 33604), (165, 33613),

Gene: Tyson_78 Start: 51985, Stop: 52398, Start Num: 86

Candidate Starts for Tyson_78:

(Start: 86 @51985 has 76 MA's), (Start: 96 @52024 has 4 MA's), (106, 52060), (128, 52147), (152, 52288), (169, 52366), (170, 52369),

Gene: UPIE_76 Start: 51581, Stop: 51994, Start Num: 86

Candidate Starts for UPIE_76:

(Start: 86 @51581 has 76 MA's), (Start: 96 @51620 has 4 MA's), (106, 51656), (128, 51743), (152, 51884), (169, 51962), (170, 51965),

Gene: Vasanti_67 Start: 44256, Stop: 44621, Start Num: 84
Candidate Starts for Vasanti_67:
(47, 44139), (53, 44163), (54, 44166), (68, 44208), (Start: 84 @44256 has 95 MA's), (119, 44367),
(123, 44397),

Gene: Vetrrix_79 Start: 53474, Stop: 53887, Start Num: 86
Candidate Starts for Vetrrix_79:
(Start: 86 @53474 has 76 MA's), (Start: 96 @53513 has 4 MA's), (120, 53594), (128, 53636), (140,
53723), (152, 53777), (173, 53873),

Gene: Wamburgexpress_77 Start: 52020, Stop: 52433, Start Num: 86
Candidate Starts for Wamburgexpress_77:
(Start: 86 @52020 has 76 MA's), (Start: 96 @52059 has 4 MA's), (106, 52095), (128, 52182), (152,
52323), (169, 52401), (170, 52404),

Gene: WelcomeAyanna_74 Start: 50077, Stop: 50442, Start Num: 84
Candidate Starts for WelcomeAyanna_74:
(22, 49774), (47, 49960), (50, 49969), (54, 49987), (68, 50029), (Start: 84 @50077 has 95 MA's),

Gene: Whirlwind_79 Start: 53633, Stop: 54025, Start Num: 86
Candidate Starts for Whirlwind_79:
(Start: 86 @53633 has 76 MA's), (92, 53651), (Start: 96 @53672 has 4 MA's), (128, 53795), (152,
53936), (169, 54014), (170, 54017),

Gene: Whiteclaw_68 Start: 42833, Stop: 43198, Start Num: 84
Candidate Starts for Whiteclaw_68:
(12, 42185), (17, 42446), (44, 42719), (45, 42728), (51, 42752), (Start: 84 @42833 has 95 MA's),

Gene: Whitney_89 Start: 51269, Stop: 51634, Start Num: 86
Candidate Starts for Whitney_89:
(Start: 86 @51269 has 76 MA's), (Start: 96 @51305 has 4 MA's), (114, 51374), (116, 51377), (123,
51410), (129, 51437), (135, 51491), (136, 51494), (152, 51572),

Gene: Wigglewigggle_79 Start: 53419, Stop: 53832, Start Num: 86
Candidate Starts for Wigglewigggle_79:
(Start: 86 @53419 has 76 MA's), (Start: 96 @53458 has 4 MA's), (120, 53539), (128, 53581), (140,
53668), (152, 53722), (173, 53818),

Gene: Wilder_81 Start: 53563, Stop: 53976, Start Num: 86
Candidate Starts for Wilder_81:
(Start: 86 @53563 has 76 MA's), (Start: 96 @53602 has 4 MA's), (111, 53662), (120, 53683), (128,
53725), (140, 53812), (152, 53866), (173, 53962),

Gene: WinkNick_70 Start: 43439, Stop: 43807, Start Num: 84
Candidate Starts for WinkNick_70:
(10, 42686), (44, 43325), (45, 43334), (51, 43358), (69, 43397), (Start: 84 @43439 has 95 MA's), (128,
43604),

Gene: Winky_80 Start: 53557, Stop: 53970, Start Num: 86
Candidate Starts for Winky_80:
(Start: 86 @53557 has 76 MA's), (Start: 96 @53596 has 4 MA's), (120, 53677), (128, 53719), (140,
53806), (152, 53860), (173, 53956),

Gene: Wyatt2_78 Start: 51983, Stop: 52396, Start Num: 86

Candidate Starts for Wyatt2_78:

(Start: 86 @51983 has 76 MA's), (Start: 96 @52022 has 4 MA's), (106, 52058), (128, 52145), (152, 52286), (169, 52364), (170, 52367),

Gene: Yeet412_67 Start: 44083, Stop: 44451, Start Num: 84

Candidate Starts for Yeet412_67:

(47, 43966), (50, 43975), (54, 43993), (68, 44035), (Start: 84 @44083 has 95 MA's), (91, 44098),

Gene: Yeezy_76 Start: 47471, Stop: 47836, Start Num: 84

Candidate Starts for Yeezy_76:

(60, 47405), (Start: 84 @47471 has 95 MA's), (91, 47486),

Gene: Zakai_81 Start: 53883, Stop: 54296, Start Num: 86

Candidate Starts for Zakai_81:

(Start: 86 @53883 has 76 MA's), (Start: 96 @53922 has 4 MA's), (120, 54003), (128, 54045), (140, 54132), (152, 54186), (173, 54282),

Gene: Zameen_71 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Zameen_71:

(47, 46443), (Start: 84 @46557 has 95 MA's), (91, 46572), (126, 46713),

Gene: Zaria_78 Start: 51435, Stop: 51848, Start Num: 86

Candidate Starts for Zaria_78:

(Start: 86 @51435 has 76 MA's), (Start: 96 @51474 has 4 MA's), (106, 51510), (128, 51597), (152, 51738), (169, 51816), (170, 51819),

Gene: ZhongYanYuan_77 Start: 53010, Stop: 53423, Start Num: 86

Candidate Starts for ZhongYanYuan_77:

(Start: 86 @53010 has 76 MA's), (Start: 96 @53049 has 4 MA's), (120, 53130), (128, 53172), (140, 53259), (152, 53313), (173, 53409),

Gene: Zirinka_69 Start: 48225, Stop: 48590, Start Num: 84

Candidate Starts for Zirinka_69:

(47, 48108), (53, 48132), (54, 48135), (68, 48177), (Start: 84 @48225 has 95 MA's), (91, 48240),