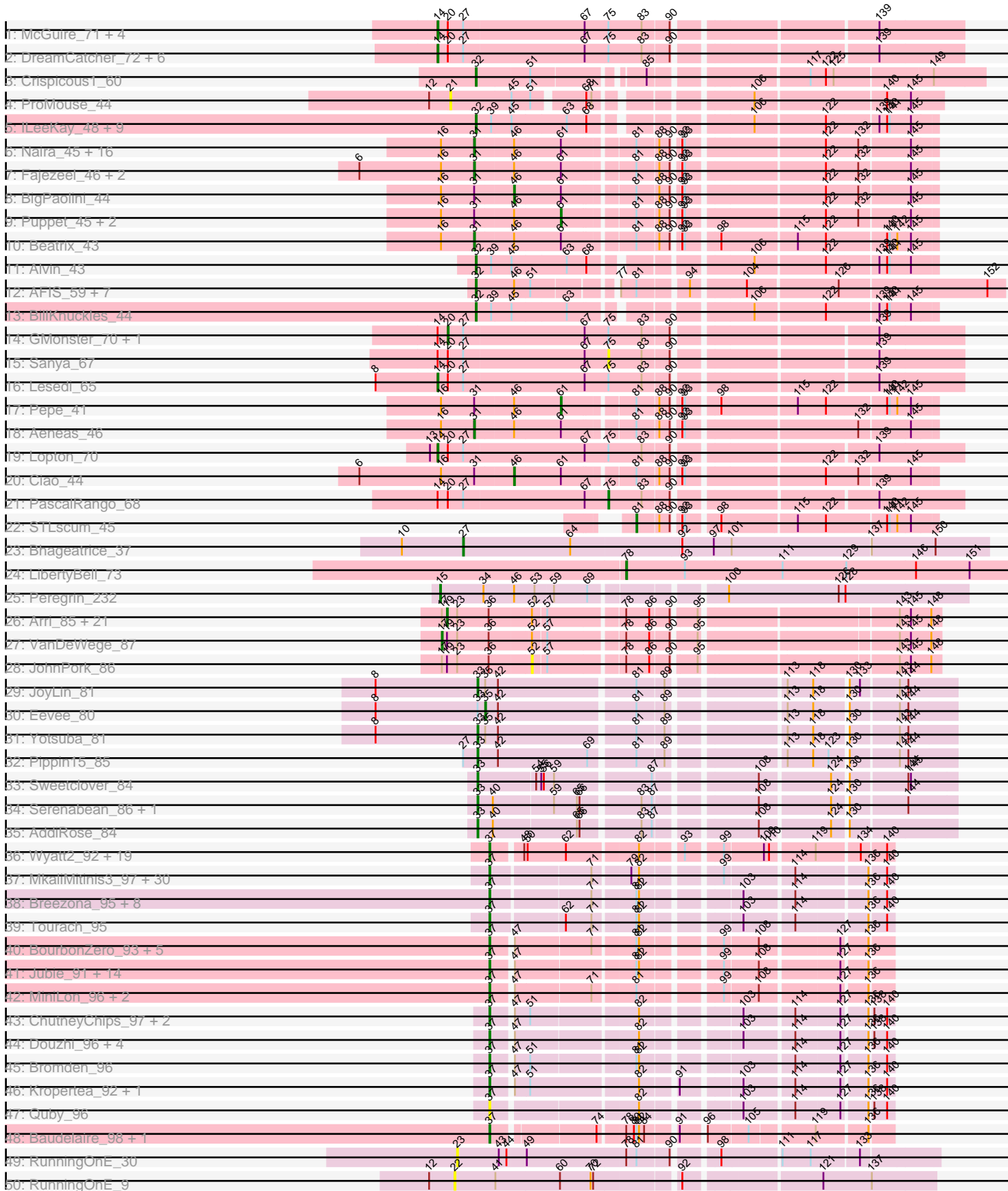
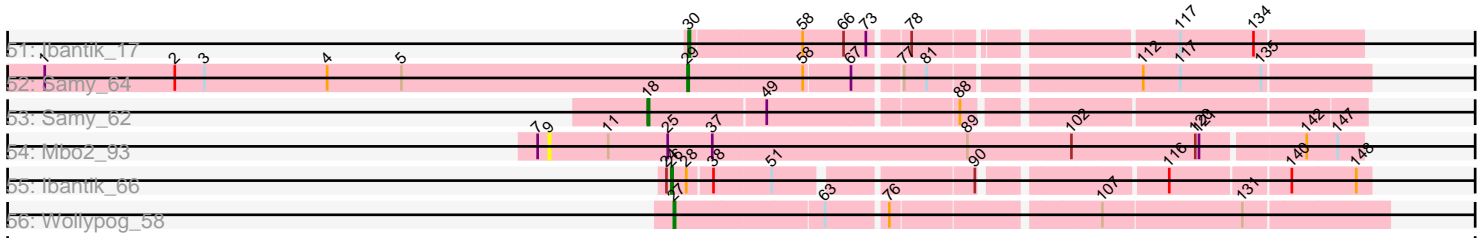


Pham 311232



Pham 311232



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 311232 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311232 has 211 members, 31 are drafts.

Phages represented in each track:

- Track 1 : McGuire_71, Ichabod_74, Squee_73, McSinger_68, BluSpix_68
- Track 2 : DreamCatcher_72, GrecoEtereo_71, AFIS_66, SarFire_70, Thor_70, Snazzy_68, Bigchungj_69
- Track 3 : Crispicous1_60
- Track 4 : ProMouse_44
- Track 5 : lLeeKay_48, Fushigi_42, Trouble_45, BluSpix_41, IgnatiusPatJac_43, Ajay_44, Kykar_44, Marco3_46, Seanderson_46, Petruccio_44
- Track 6 : Naira_45, Marge_44, StrongArm_43, Bexan_42, Dexes_44, Slagathor_46, TheloniousMonk_45, Fenn_45, Rajelicia_45, Arcanine_45, Eyeball_45, Niza_46, Bones_44, Licorice_47, Ruotula_47, Sagefire_47, Smairt_46
- Track 7 : Fajezeel_46, Greg_46, Pippin_46
- Track 8 : BigPaolini_44
- Track 9 : Puppet_45, Teodoridan_42, Ringer_45
- Track 10 : Beatrix_43
- Track 11 : Alvin_43
- Track 12 : AFIS_59, Bruns_64, NEHalo_60, SpikeBT_61, Moose_64, SwissCheese_66, GageAP_64, Forsytheast_64
- Track 13 : BillKnuckles_44
- Track 14 : GMonster_70, IgnatiusPatJac_70
- Track 15 : Sanya_67
- Track 16 : Lesedi_65
- Track 17 : Pepe_41
- Track 18 : Aeneas_46
- Track 19 : Lopton_70
- Track 20 : Ciao_44
- Track 21 : PascalRango_68
- Track 22 : STLscum_45
- Track 23 : Bhageatrice_37
- Track 24 : LibertyBell_73
- Track 25 : Peregrin_232
- Track 26 : Arri_85, SmokingBunny_86, Wizard_80, Fireball_88, PinkCoffee_86, Gezellig_81, TillyBobJoe_83, Salvador_85, CherryCola_84, Twister6_84, Savbucketdawg_80, Evamon_85, Phlop_82, KimmyK_83, Valary_86, PullumCavea_83, RogerDodger_88, Togo_85, Egi03_83, Sendy_87, Portcullis_85, Shinji_84
- Track 27 : VanDeWege_87
- Track 28 : JohnPork_86

- Track 29 : JoyLin_81
- Track 30 : Eevee_80
- Track 31 : Yotsuba_81
- Track 32 : Pippin15_85
- Track 33 : Sweetclover_84
- Track 34 : Serenabean_86, Daddyjeff_86
- Track 35 : AddiRose_84
- Track 36 : Wyatt2_92, Appletree2_90, LeBron_90, Rose5_92, UPIE_90, Silverleaf_90, Tyson_92, DirkDirk_88, Calm_92, Enceladus_88, Acquire49_91, CicholasNage_88, JoeDirt_92, Zaria_91, Halena_88, MAckerman_89, Poochiewood_89, AvadaKedavra_91, OhShagHennessy_87, Wamburggrxpress_90
- Track 37 : MkaliMitinis3_97, DHan_98, OverPar_97, LilDestine_93, DanBing_94, Bazzle_92, Finemlucis_96, Loadrie_94, Underpass_87, BigCheese_95, Archie_92, Claus_94, GuuelaD_92, Baoshan_95, Kahlid_94, Lewan_96, Zakai_96, Hafay_96, Nicholasp3_95, Crossroads_95, Vetrix_93, Sarshaun_96, Soap141_95, Wilder_96, Lynnae_96, ZhongYanYuan_92, BobsGarage_94, Rossetti_95, Gardann_95, Rumpelstiltskin_91, SoJulia_97
- Track 38 : Breezona_95, Faith1_95, DrSeegs_94, Miley16_95, Wigglewiggle_95, Itos_95, Winky_95, Netyap_94, Gabriela_95
- Track 39 : Tourach_95
- Track 40 : BourbonZero_93, Ellson_91, KirDoubleO7_90, DuncansLeg_92, LiyuLake_91, Krypton555_94
- Track 41 : Jubie_91, Snenia_91, TriFive_93, Moostard_89, Jobypre_92, Red305_93, Finnry_92, Nicholas_90, Kingsolomon_90, MsGreen_92, Bellis_92, Samty_91, Clautastrophe_90, Lumos_92, Whirlwind_93
- Track 42 : MiniLon_96, MiniMac_96, Lolly9_91
- Track 43 : ChutneyChips_97, Chaser_95, FarmResident_97
- Track 44 : Douzhi_96, Sheng711_97, Douge_96, BrainDrainer_97, PYPDinur_96
- Track 45 : Bromden_96
- Track 46 : Kropertea_92, DyoEdafos_98
- Track 47 : Quby_96
- Track 48 : Baudelaire_98, Aegeus_98
- Track 49 : RunningOnE_30
- Track 50 : RunningOnE_9
- Track 51 : Ibantik_17
- Track 52 : Sammy_64
- Track 53 : Sammy_62
- Track 54 : Mbo2_93
- Track 55 : Ibantik_66
- Track 56 : Wollypog_58

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

The start number called the most often in the published annotations is 37, it was called in 78 of the 180 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_91, Aegeus_98, Appletree2_90, Archie_92, AvadaKedavra_91, Baoshan_95, Baudelaire_98, Bazzle_92, Bellis_92, BigCheese_95, BobsGarage_94, BourbonZero_93, BrainDrainer_97, Breezona_95, Bromden_96, Calm_92,

Chaser_95, ChutneyChips_97, CicholasNage_88, Claus_94, Clautastrophe_90, Crossroads_95, DHan_98, DanBing_94, DirkDirk_88, Douge_96, Douzhi_96, DrSeegs_94, DuncansLeg_92, DyoEdafos_98, Ellson_91, Enceladus_88, Faith1_95, FarmResident_97, Finemlucis_96, Finnry_92, Gabriela_95, Gardann_95, GuuelaD_92, Hafay_96, Halena_88, Itos_95, Jobypre_92, JoeDirt_92, Jubie_91, Kahlid_94, Kingsolomon_90, KirDoubleO7_90, Kropertea_92, Krypton555_94, LeBron_90, Lewan_96, LilDestine_93, LiyuLake_91, Loadrie_94, Lolly9_91, Lumos_92, Lynnae_96, MAckerman_89, Miley16_95, MiniLon_96, MiniMac_96, MkaliMitinis3_97, Moostard_89, MsGreen_92, Netyap_94, Nicholas_90, Nicholasp3_95, OhShagHennessy_87, OverPar_97, PYPDinur_96, Poochiewood_89, Quby_96, Red305_93, Rose5_92, Rossetti_95, Rumpelstiltskin_91, Samty_91, Sarshaun_96, Sheng711_97, Silverleaf_90, Snenia_91, SoJulia_97, Soap141_95, Tourach_95, TriFive_93, Tyson_92, UPIE_90, Underpass_87, Vetrix_93, Wamburgrxpress_90, Whirlwind_93, Wigglewiggle_95, Wilder_96, Winky_95, Wyatt2_92, Zakai_96, Zaria_91, ZhongYanYuan_92,

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

- Mbo2_93,

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

- AFIS_59, AFIS_66, AddiRose_84, Aeneas_46, Ajay_44, Alvin_43, Arcanine_45, Arri_85, Beatrix_43, Bexan_42, Bhageatrice_37, BigPaolini_44, Bigchungi_69, BillKnuckles_44, BluSpix_41, BluSpix_68, Bones_44, Bruns_64, CherryCola_84, Ciao_44, Crispicous1_60, Daddyjeff_86, Dexes_44, DreamCatcher_72, Eevee_80, Egi03_83, Evamon_85, Eyeball_45, Fajezeel_46, Fenn_45, Fireball_88, Forsytheast_64, Fushigi_42, GMonster_70, GageAP_64, Gezellig_81, GrecoEtereo_71, Greg_46, ILeeKay_48, Ibantik_17, Ibantik_66, Ichabod_74, IgnatiusPatJac_43, IgnatiusPatJac_70, JohnPork_86, JoyLin_81, KimmyK_83, Kykar_44, Lesedi_65, LibertyBell_73, Licorice_47, Lopton_70, Marco3_46, Marge_44, McGuire_71, McSinger_68, Moose_64, NEHalo_60, Naira_45, Niza_46, PascalRango_68, Pepe_41, Peregrin_232, Petruccio_44, Phlop_82, PinkCoffee_86, Pippin15_85, Pippin_46, Portcullis_85, ProMouse_44, PullumCavea_83, Puppet_45, Rajelicia_45, Ringer_45, RogerDodger_88, RunningOnE_30, RunningOnE_9, Ruotula_47, STLscum_45, Sagefire_47, Salvador_85, Samy_62, Samy_64, Sanya_67, SarFire_70, Savbucketdawg_80, Seanderson_46, Sendy_87, Serenabean_86, Shinji_84, Slagathor_46, Smairt_46, SmokingBunny_86, Snazzy_68, SpikeBT_61, Squee_73, StrongArm_43, Sweetclover_84, SwissCheese_66, Teodoridan_42, TheloniousMonk_45, Thor_70, TillyBobJoe_83, Togo_85, Trouble_45, Twister6_84, Valary_86, VanDeWege_87, Wizard_80, Wollypog_58, Yotsuba_81,

Summary by start number:

Start 9:

- Found in 1 of 211 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2_93 (singleton),

Start 14:

- Found in 18 of 211 (8.5%) of genes in pham
- Manual Annotations of this start: 14 of 180
- Called 77.8% of time when present

- Phage (with cluster) where this start called: AFIS_66 (A1), Bigchungji_69 (A1), BluSpix_68 (A1), DreamCatcher_72 (A1), GrecoEtereo_71 (A1), Ichabod_74 (A1), Lesedi_65 (A1), Lopton_70 (A1), McGuire_71 (A1), McSinger_68 (A1), SarFire_70 (A1), Snazzy_68 (A1), Squee_73 (A1), Thor_70 (A1),

Start 15:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Peregrin_232 (CB),

Start 17:

- Found in 24 of 211 (11.4%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 4.2% of time when present
- Phage (with cluster) where this start called: VanDeWege_87 (DC1),

Start 18:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Samy_62 (singleton),

Start 19:

- Found in 24 of 211 (11.4%) of genes in pham
- Manual Annotations of this start: 20 of 180
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Arri_85 (DC1), CherryCola_84 (DC1), Egi03_83 (DC1), Evamon_85 (DC1), Fireball_88 (DC1), Gezellig_81 (DC1), KimmyK_83 (DC1), Phlop_82 (DC1), PinkCoffee_86 (DC1), Portcullis_85 (DC1), PullumCavea_83 (DC1), RogerDodger_88 (DC1), Salvador_85 (DC1), Savbucketdawg_80 (DC1), Sendy_87 (DC1), Shinji_84 (DC1), SmokingBunny_86 (DC1), TillyBobJoe_83 (DC1), Togo_85 (DC1), Twister6_84 (DC1), Valary_86 (DC1), Wizard_80 (DC1),

Start 20:

- Found in 18 of 211 (8.5%) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 11.1% of time when present
- Phage (with cluster) where this start called: GMonster_70 (A1), IgnatiusPatJac_70 (A1),

Start 21:

- Found in 1 of 211 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ProMouse_44 (A1),

Start 22:

- Found in 1 of 211 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RunningOnE_9 (UNK),

Start 23:

- Found in 25 of 211 (11.8%) of genes in pham
- No Manual Annotations of this start.
- Called 4.0% of time when present
- Phage (with cluster) where this start called: RunningOnE_30 (UNK),

Start 26:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik_66 (singleton),

Start 27:

- Found in 21 of 211 (10.0%) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 9.5% of time when present
- Phage (with cluster) where this start called: Bhageatrice_37 (AY), Wollypog_58 (singleton),

Start 29:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Samy_64 (singleton),

Start 30:

- Found in 1 of 211 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik_17 (singleton),

Start 31:

- Found in 28 of 211 (13.3%) of genes in pham
- Manual Annotations of this start: 22 of 180
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Aeneas_46 (A1), Arcanine_45 (A1), Beatrix_43 (A1), Bexan_42 (A1), Bones_44 (A1), Dexes_44 (A1), Eyeball_45 (A1), Fajezeel_46 (A1), Fenn_45 (A1), Greg_46 (A1), Licorice_47 (A1), Marge_44 (A1), Naira_45 (A1), Niza_46 (A1), Pippin_46 (A1), Rajelicia_45 (A1), Ruotula_47 (A1), Sagefire_47 (A1), Slagathor_46 (A1), Smairt_46 (A1), StrongArm_43 (A1), TheloniousMonk_45 (A1),

Start 32:

- Found in 21 of 211 (10.0%) of genes in pham
- Manual Annotations of this start: 21 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AFIS_59 (A1), Ajay_44 (A1), Alvin_43 (A1), BillKnuckles_44 (A1), BluSpix_41 (A1), Bruns_64 (A1), Crispicous1_60 (A1), Forsytheast_64 (A1), Fushigi_42 (A1), GageAP_64 (A1), ILeeKay_48 (A1), IgnatiusPatJac_43 (A1), Kykar_44 (A1), Marco3_46 (A1), Moose_64 (A1), NEHalo_60 (A1), Petruccio_44 (A1), Seanderson_46 (A1), SpikeBT_61 (A1), SwissCheese_66 (A1), Trouble_45 (A1),

Start 33:

- Found in 8 of 211 (3.8%) of genes in pham
- Manual Annotations of this start: 7 of 180
- Called 87.5% of time when present
- Phage (with cluster) where this start called: AddiRose_84 (JA), Daddyjeff_86 (JA), JoyLin_81 (JA), Pippin15_85 (JA), Serenabean_86 (JA), Sweetclover_84 (JA), Yotsuba_81 (JA),

Start 35:

- Found in 3 of 211 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Eevee_80 (JA),

Start 37:

- Found in 100 of 211 (47.4%) of genes in pham
- Manual Annotations of this start: 78 of 180
- Called 99.0% of time when present
- Phage (with cluster) where this start called: Acquire49_91 (L1), Aegeus_98 (L5), Appletree2_90 (L1), Archie_92 (L2), AvadaKedavra_91 (L1), Baoshan_95 (L2), Baudelaire_98 (L5), Bazzle_92 (L2), Bellis_92 (L3), BigCheese_95 (L2), BobsGarage_94 (L2), BourbonZero_93 (L3), BrainDrainer_97 (L4), Breezona_95 (L2), Bromden_96 (L4), Calm_92 (L1), Chaser_95 (L4), ChutneyChips_97 (L4), CicholasNage_88 (L1), Claus_94 (L2), Clautastrophe_90 (L3), Crossroads_95 (L2), DHan_98 (L2), DanBing_94 (L2), DirkDirk_88 (L1), Douge_96 (L4), Douzhi_96 (L4), DrSeegs_94 (L2), DuncansLeg_92 (L3), DyoEdafos_98 (L4), Ellson_91 (L3), Enceladus_88 (L1), Faith1_95 (L2), FarmResident_97 (L4), Finemlucis_96 (L2), Finnry_92 (L3), Gabriela_95 (L2), Gardann_95 (L2), GuuelaD_92 (L2), Hafay_96 (L2), Halena_88 (L1), Itos_95 (L2), Jobypre_92 (L3), JoeDirt_92 (L1), Jubie_91 (L3), Kahlid_94 (L2), Kingsolomon_90 (L3), KirDoubleO7_90 (L3), Kropertea_92 (L4), Krypton555_94 (L3), LeBron_90 (L1), Lewan_96 (L2), LilDestine_93 (L2), LiyuLake_91 (L3), Loadrie_94 (L2), Lolly9_91 (L3), Lumos_92 (L3), Lynnae_96 (L2), MAckerman_89 (L1), Miley16_95 (L2), MiniLon_96 (L3), MiniMac_96 (L3), MkaliMinitis3_97 (L2), Moostard_89 (L3), MsGreen_92 (L3), Netyap_94 (L2), Nicholas_90 (L3), Nicholasp3_95 (L2), OhShagHennessy_87 (L1), OverPar_97 (L2), PYPDinur_96 (L4), Poochiewood_89 (L1), Quby_96 (L4), Red305_93 (L3), Rose5_92 (L1), Rossetti_95 (L2), Rumpelstiltskin_91 (L2), Samty_91 (L3), Sarshaun_96 (L2), Sheng711_97 (L4), Silverleaf_90 (L1), Snenia_91 (L3), SoJulia_97 (L2), Soap141_95 (L2), Tourach_95 (L2), TriFive_93 (L3), Tyson_92 (L1), UPIE_90 (L1), Underpass_87 (L2), Vetrix_93 (L2), Wamburgxpress_90 (L1), Whirlwind_93 (L3), Wigglewiggle_95 (L2), Wilder_96 (L2), Winky_95 (L2), Wyatt2_92 (L1), Zakai_96 (L2), Zaria_91 (L1), ZhongYanYuan_92 (L2),

Start 46:

- Found in 37 of 211 (17.5%) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 5.4% of time when present
- Phage (with cluster) where this start called: BigPaolini_44 (A1), Ciao_44 (A1),

Start 52:

- Found in 24 of 211 (11.4%) of genes in pham
- No Manual Annotations of this start.

- Called 4.2% of time when present
- Phage (with cluster) where this start called: JohnPork_86 (DC1),

Start 61:

- Found in 28 of 211 (13.3%) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Pepe_41 (A1), Puppet_45 (A1), Ringer_45 (A1), Teodoridan_42 (A1),

Start 75:

- Found in 18 of 211 (8.5%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 11.1% of time when present
- Phage (with cluster) where this start called: PascalRango_68 (A1), Sanya_67 (A1),

Start 78:

- Found in 29 of 211 (13.7%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 3.4% of time when present
- Phage (with cluster) where this start called: LibertyBell_73 (BI3),

Start 81:

- Found in 80 of 211 (37.9%) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 1.2% of time when present
- Phage (with cluster) where this start called: STLscum_45 (A1),

Summary by clusters:

There are 13 clusters represented in this pham: singleton, CB, BI3, A1, L4, L5, L2, L3, L1, AY, UNK, JA, DC1,

Info for manual annotations of cluster A1:

- Start number 14 was manually annotated 14 times for cluster A1.
- Start number 20 was manually annotated 2 times for cluster A1.
- Start number 31 was manually annotated 22 times for cluster A1.
- Start number 32 was manually annotated 21 times for cluster A1.
- Start number 46 was manually annotated 2 times for cluster A1.
- Start number 61 was manually annotated 2 times for cluster A1.
- Start number 75 was manually annotated 1 time for cluster A1.
- Start number 81 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster AY:

- Start number 27 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BI3:

- Start number 78 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster CB:

- Start number 15 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster DC1:

- Start number 17 was manually annotated 1 time for cluster DC1.
- Start number 19 was manually annotated 20 times for cluster DC1.

Info for manual annotations of cluster JA:

- Start number 33 was manually annotated 7 times for cluster JA.
- Start number 35 was manually annotated 1 time for cluster JA.

Info for manual annotations of cluster L1:

- Start number 37 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 37 was manually annotated 32 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 37 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 37 was manually annotated 6 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 37 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: AFIS_59 Start: 40536, Stop: 39979, Start Num: 32

Candidate Starts for AFIS_59:

(Start: 32 @40536 has 21 MA's), (Start: 46 @40494 has 2 MA's), (51, 40476), (77, 40392), (Start: 81 @40374 has 1 MA's), (94, 40323), (104, 40269), (126, 40167), (152, 39999),

Gene: AFIS_66 Start: 43840, Stop: 43262, Start Num: 14

Candidate Starts for AFIS_66:

(Start: 14 @43840 has 14 MA's), (Start: 20 @43828 has 2 MA's), (Start: 27 @43810 has 2 MA's), (67, 43669), (Start: 75 @43642 has 1 MA's), (83, 43603), (90, 43573), (139, 43360),

Gene: Acquire49_91 Start: 57365, Stop: 57775, Start Num: 37

Candidate Starts for Acquire49_91:

(Start: 37 @57365 has 78 MA's), (48, 57395), (50, 57398), (62, 57443), (82, 57521), (93, 57563), (99, 57599), (109, 57641), (110, 57647), (119, 57695), (134, 57740), (140, 57767),

Gene: AddiRose_84 Start: 50059, Stop: 50565, Start Num: 33

Candidate Starts for AddiRose_84:

(Start: 33 @50059 has 7 MA's), (40, 50077), (65, 50173), (66, 50176), (83, 50239), (87, 50251), (108, 50353), (124, 50431), (130, 50446),

Gene: Aegeus_98 Start: 59877, Stop: 60281, Start Num: 37

Candidate Starts for Aegeus_98:

(Start: 37 @59877 has 78 MA's), (74, 59988), (Start: 78 @60015 has 1 MA's), (80, 60024), (Start: 81 @60027 has 1 MA's), (82, 60030), (84, 60036), (91, 60066), (96, 60090), (105, 60132), (119, 60201), (136, 60255),

Gene: Aeneas_46 Start: 33206, Stop: 32721, Start Num: 31

Candidate Starts for Aeneas_46:

(16, 33245), (Start: 31 @33206 has 22 MA's), (Start: 46 @33164 has 2 MA's), (Start: 61 @33110 has 2 MA's), (Start: 81 @33035 has 1 MA's), (88, 33011), (90, 32999), (92, 32993), (93, 32990), (132, 32807), (145, 32750),

Gene: Ajay_44 Start: 32810, Stop: 32334, Start Num: 32

Candidate Starts for Ajay_44:

(Start: 32 @32810 has 21 MA's), (39, 32792), (45, 32771), (63, 32708), (68, 32687), (106, 32534), (122, 32456), (139, 32399), (140, 32390), (141, 32387), (145, 32363),

Gene: Alvin_43 Start: 33331, Stop: 32855, Start Num: 32

Candidate Starts for Alvin_43:

(Start: 32 @33331 has 21 MA's), (39, 33313), (45, 33292), (63, 33229), (68, 33208), (106, 33055), (122, 32977), (139, 32920), (140, 32911), (141, 32908), (145, 32884),

Gene: Appletree2_90 Start: 57125, Stop: 57535, Start Num: 37

Candidate Starts for Appletree2_90:

(Start: 37 @57125 has 78 MA's), (48, 57155), (50, 57158), (62, 57203), (82, 57281), (93, 57323), (99, 57359), (109, 57401), (110, 57407), (119, 57455), (134, 57500), (140, 57527),

Gene: Arcanine_45 Start: 32773, Stop: 32288, Start Num: 31

Candidate Starts for Arcanine_45:

(16, 32812), (Start: 31 @32773 has 22 MA's), (Start: 46 @32731 has 2 MA's), (Start: 61 @32677 has 2 MA's), (Start: 81 @32602 has 1 MA's), (88, 32578), (90, 32566), (92, 32560), (93, 32557), (122, 32410), (132, 32374), (145, 32317),

Gene: Archie_92 Start: 59049, Stop: 59462, Start Num: 37

Candidate Starts for Archie_92:

(Start: 37 @59049 has 78 MA's), (71, 59160), (79, 59199), (82, 59208), (99, 59286), (114, 59358), (136, 59436), (140, 59454),

Gene: Arri_85 Start: 56022, Stop: 55507, Start Num: 19

Candidate Starts for Arri_85:

(Start: 17 @56028 has 1 MA's), (Start: 19 @56022 has 20 MA's), (23, 56010), (36, 55974), (52, 55929), (57, 55914), (Start: 78 @55836 has 1 MA's), (86, 55809), (90, 55788), (95, 55764), (143, 55554), (145, 55542), (148, 55518),

Gene: AvadaKedavra_91 Start: 57477, Stop: 57887, Start Num: 37

Candidate Starts for AvadaKedavra_91:

(Start: 37 @57477 has 78 MA's), (48, 57507), (50, 57510), (62, 57555), (82, 57633), (93, 57675), (99, 57711), (109, 57753), (110, 57759), (119, 57807), (134, 57852), (140, 57879),

Gene: Baoshan_95 Start: 59704, Stop: 60117, Start Num: 37

Candidate Starts for Baoshan_95:

(Start: 37 @59704 has 78 MA's), (71, 59815), (79, 59854), (82, 59863), (99, 59941), (114, 60013), (136, 60091), (140, 60109),

Gene: Baudelaire_98 Start: 59877, Stop: 60281, Start Num: 37

Candidate Starts for Baudelaire_98:

(Start: 37 @59877 has 78 MA's), (74, 59988), (Start: 78 @60015 has 1 MA's), (80, 60024), (Start: 81 @60027 has 1 MA's), (82, 60030), (84, 60036), (91, 60066), (96, 60090), (105, 60132), (119, 60201), (136, 60255),

Gene: Bazzle_92 Start: 59605, Stop: 60018, Start Num: 37

Candidate Starts for Bazzle_92:

(Start: 37 @59605 has 78 MA's), (71, 59716), (79, 59755), (82, 59764), (99, 59842), (114, 59914), (136, 59992), (140, 60010),

Gene: Beatrix_43 Start: 34176, Stop: 33691, Start Num: 31

Candidate Starts for Beatrix_43:

(16, 34215), (Start: 31 @34176 has 22 MA's), (Start: 46 @34134 has 2 MA's), (Start: 61 @34080 has 2 MA's), (Start: 81 @34005 has 1 MA's), (88, 33981), (90, 33969), (92, 33963), (93, 33960), (98, 33927), (115, 33846), (122, 33813), (140, 33747), (141, 33744), (142, 33735), (145, 33720),

Gene: Bellis_92 Start: 59240, Stop: 59647, Start Num: 37

Candidate Starts for Bellis_92:

(Start: 37 @59240 has 78 MA's), (47, 59261), (Start: 81 @59390 has 1 MA's), (82, 59393), (99, 59471), (108, 59507), (127, 59594), (136, 59621),

Gene: Bexan_42 Start: 33854, Stop: 33369, Start Num: 31

Candidate Starts for Bexan_42:

(16, 33893), (Start: 31 @33854 has 22 MA's), (Start: 46 @33812 has 2 MA's), (Start: 61 @33758 has 2 MA's), (Start: 81 @33683 has 1 MA's), (88, 33659), (90, 33647), (92, 33641), (93, 33638), (122, 33491), (132, 33455), (145, 33398),

Gene: Bhageatrice_37 Start: 26729, Stop: 27340, Start Num: 27

Candidate Starts for Bhageatrice_37:

(10, 26657), (Start: 27 @26729 has 2 MA's), (64, 26855), (92, 26984), (97, 27020), (101, 27041), (137, 27203), (150, 27278),

Gene: BigCheese_95 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for BigCheese_95:

(Start: 37 @59815 has 78 MA's), (71, 59926), (79, 59965), (82, 59974), (99, 60052), (114, 60124), (136, 60202), (140, 60220),

Gene: BigPaolini_44 Start: 31801, Stop: 31358, Start Num: 46

Candidate Starts for BigPaolini_44:

(16, 31882), (Start: 31 @31843 has 22 MA's), (Start: 46 @31801 has 2 MA's), (Start: 61 @31747 has 2 MA's), (Start: 81 @31672 has 1 MA's), (88, 31648), (90, 31636), (92, 31630), (93, 31627), (122, 31480), (132, 31444), (145, 31387),

Gene: Bigchungj_69 Start: 44593, Stop: 44015, Start Num: 14

Candidate Starts for Bigchungj_69:

(Start: 14 @44593 has 14 MA's), (Start: 20 @44581 has 2 MA's), (Start: 27 @44563 has 2 MA's), (67, 44422), (Start: 75 @44395 has 1 MA's), (83, 44356), (90, 44326), (139, 44113),

Gene: BillKnuckles_44 Start: 33515, Stop: 33039, Start Num: 32

Candidate Starts for BillKnuckles_44:

(Start: 32 @33515 has 21 MA's), (39, 33497), (45, 33476), (63, 33413), (106, 33239), (122, 33161), (139, 33104), (140, 33095), (141, 33092), (145, 33068),

Gene: BluSpix_41 Start: 28937, Stop: 28461, Start Num: 32

Candidate Starts for BluSpix_41:

(Start: 32 @28937 has 21 MA's), (39, 28919), (45, 28898), (63, 28835), (68, 28814), (106, 28661), (122, 28583), (139, 28526), (140, 28517), (141, 28514), (145, 28490),

Gene: BluSpix_68 Start: 40281, Stop: 39703, Start Num: 14

Candidate Starts for BluSpix_68:

(Start: 14 @40281 has 14 MA's), (Start: 20 @40269 has 2 MA's), (Start: 27 @40251 has 2 MA's), (67, 40110), (Start: 75 @40083 has 1 MA's), (83, 40044), (90, 40014), (139, 39801),

Gene: BobsGarage_94 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for BobsGarage_94:

(Start: 37 @59815 has 78 MA's), (71, 59926), (79, 59965), (82, 59974), (99, 60052), (114, 60124), (136, 60202), (140, 60220),

Gene: Bones_44 Start: 33339, Stop: 32854, Start Num: 31

Candidate Starts for Bones_44:

(16, 33378), (Start: 31 @33339 has 22 MA's), (Start: 46 @33297 has 2 MA's), (Start: 61 @33243 has 2 MA's), (Start: 81 @33168 has 1 MA's), (88, 33144), (90, 33132), (92, 33126), (93, 33123), (122, 32976), (132, 32940), (145, 32883),

Gene: BourbonZero_93 Start: 59266, Stop: 59673, Start Num: 37

Candidate Starts for BourbonZero_93:

(Start: 37 @59266 has 78 MA's), (47, 59287), (71, 59371), (Start: 81 @59416 has 1 MA's), (82, 59419), (99, 59497), (108, 59533), (127, 59620), (136, 59647),

Gene: BrainDrainer_97 Start: 59520, Stop: 59927, Start Num: 37

Candidate Starts for BrainDrainer_97:

(Start: 37 @59520 has 78 MA's), (47, 59541), (82, 59673), (103, 59769), (114, 59823), (127, 59874), (136, 59901), (138, 59904), (140, 59919),

Gene: Breezona_95 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for Breezona_95:

(Start: 37 @59815 has 78 MA's), (71, 59926), (Start: 81 @59971 has 1 MA's), (82, 59974), (103, 60070), (114, 60124), (136, 60202), (140, 60220),

Gene: Bromden_96 Start: 60413, Stop: 60820, Start Num: 37

Candidate Starts for Bromden_96:

(Start: 37 @60413 has 78 MA's), (47, 60434), (51, 60449), (Start: 81 @60563 has 1 MA's), (82, 60566), (114, 60716), (127, 60767), (136, 60794), (140, 60812),

Gene: Bruns_64 Start: 41012, Stop: 40455, Start Num: 32

Candidate Starts for Bruns_64:

(Start: 32 @41012 has 21 MA's), (Start: 46 @40970 has 2 MA's), (51, 40952), (77, 40868), (Start: 81 @40850 has 1 MA's), (94, 40799), (104, 40745), (126, 40643), (152, 40475),

Gene: Calm_92 Start: 57376, Stop: 57786, Start Num: 37

Candidate Starts for Calm_92:

(Start: 37 @57376 has 78 MA's), (48, 57406), (50, 57409), (62, 57454), (82, 57532), (93, 57574), (99, 57610), (109, 57652), (110, 57658), (119, 57706), (134, 57751), (140, 57778),

Gene: Chaser_95 Start: 58821, Stop: 59228, Start Num: 37

Candidate Starts for Chaser_95:

(Start: 37 @58821 has 78 MA's), (47, 58842), (51, 58857), (82, 58974), (103, 59070), (114, 59124), (127, 59175), (136, 59202), (138, 59205), (140, 59220),

Gene: CherryCola_84 Start: 56435, Stop: 55920, Start Num: 19

Candidate Starts for CherryCola_84:

(Start: 17 @56441 has 1 MA's), (Start: 19 @56435 has 20 MA's), (23, 56423), (36, 56387), (52, 56342), (57, 56327), (Start: 78 @56249 has 1 MA's), (86, 56222), (90, 56201), (95, 56177), (143, 55967), (145, 55955), (148, 55931),

Gene: ChutneyChips_97 Start: 59567, Stop: 59974, Start Num: 37

Candidate Starts for ChutneyChips_97:

(Start: 37 @59567 has 78 MA's), (47, 59588), (51, 59603), (82, 59720), (103, 59816), (114, 59870), (127, 59921), (136, 59948), (138, 59951), (140, 59966),

Gene: Ciao_44 Start: 32944, Stop: 32501, Start Num: 46

Candidate Starts for Ciao_44:

(6, 33121), (16, 33025), (Start: 31 @32986 has 22 MA's), (Start: 46 @32944 has 2 MA's), (Start: 61 @32890 has 2 MA's), (Start: 81 @32815 has 1 MA's), (88, 32791), (90, 32779), (92, 32773), (93, 32770), (122, 32623), (132, 32587), (145, 32530),

Gene: CicholasNage_88 Start: 57029, Stop: 57439, Start Num: 37

Candidate Starts for CicholasNage_88:

(Start: 37 @57029 has 78 MA's), (48, 57059), (50, 57062), (62, 57107), (82, 57185), (93, 57227), (99, 57263), (109, 57305), (110, 57311), (119, 57359), (134, 57404), (140, 57431),

Gene: Claus_94 Start: 59528, Stop: 59941, Start Num: 37

Candidate Starts for Claus_94:

(Start: 37 @59528 has 78 MA's), (71, 59639), (79, 59678), (82, 59687), (99, 59765), (114, 59837), (136, 59915), (140, 59933),

Gene: Clautastrophe_90 Start: 59235, Stop: 59642, Start Num: 37

Candidate Starts for Clautastrophe_90:

(Start: 37 @59235 has 78 MA's), (47, 59256), (Start: 81 @59385 has 1 MA's), (82, 59388), (99, 59466), (108, 59502), (127, 59589), (136, 59616),

Gene: Crispicious1_60 Start: 40522, Stop: 39992, Start Num: 32

Candidate Starts for Crispicious1_60:

(Start: 32 @40522 has 21 MA's), (51, 40462), (85, 40348), (117, 40186), (122, 40168), (125, 40159), (149, 40051),

Gene: Crossroads_95 Start: 59527, Stop: 59940, Start Num: 37

Candidate Starts for Crossroads_95:

(Start: 37 @59527 has 78 MA's), (71, 59638), (79, 59677), (82, 59686), (99, 59764), (114, 59836), (136, 59914), (140, 59932),

Gene: DHan_98 Start: 59751, Stop: 60164, Start Num: 37

Candidate Starts for DHan_98:

(Start: 37 @59751 has 78 MA's), (71, 59862), (79, 59901), (82, 59910), (99, 59988), (114, 60060), (136, 60138), (140, 60156),

Gene: Daddyjeff_86 Start: 50407, Stop: 50913, Start Num: 33

Candidate Starts for Daddyjeff_86:

(Start: 33 @50407 has 7 MA's), (40, 50425), (59, 50494), (65, 50521), (66, 50524), (83, 50587), (87, 50599), (108, 50701), (124, 50779), (130, 50794), (144, 50857),

Gene: DanBing_94 Start: 59444, Stop: 59857, Start Num: 37

Candidate Starts for DanBing_94:

(Start: 37 @59444 has 78 MA's), (71, 59555), (79, 59594), (82, 59603), (99, 59681), (114, 59753), (136, 59831), (140, 59849),

Gene: Dexes_44 Start: 33602, Stop: 33117, Start Num: 31

Candidate Starts for Dexes_44:

(16, 33641), (Start: 31 @33602 has 22 MA's), (Start: 46 @33560 has 2 MA's), (Start: 61 @33506 has 2 MA's), (Start: 81 @33431 has 1 MA's), (88, 33407), (90, 33395), (92, 33389), (93, 33386), (122, 33239), (132, 33203), (145, 33146),

Gene: DirkDirk_88 Start: 56705, Stop: 57115, Start Num: 37

Candidate Starts for DirkDirk_88:

(Start: 37 @56705 has 78 MA's), (48, 56735), (50, 56738), (62, 56783), (82, 56861), (93, 56903), (99, 56939), (109, 56981), (110, 56987), (119, 57035), (134, 57080), (140, 57107),

Gene: Douge_96 Start: 58940, Stop: 59347, Start Num: 37

Candidate Starts for Douge_96:

(Start: 37 @58940 has 78 MA's), (47, 58961), (82, 59093), (103, 59189), (114, 59243), (127, 59294), (136, 59321), (138, 59324), (140, 59339),

Gene: Douzhi_96 Start: 59209, Stop: 59616, Start Num: 37

Candidate Starts for Douzhi_96:

(Start: 37 @59209 has 78 MA's), (47, 59230), (82, 59362), (103, 59458), (114, 59512), (127, 59563), (136, 59590), (138, 59593), (140, 59608),

Gene: DrSeegs_94 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for DrSeegs_94:

(Start: 37 @59815 has 78 MA's), (71, 59926), (Start: 81 @59971 has 1 MA's), (82, 59974), (103, 60070), (114, 60124), (136, 60202), (140, 60220),

Gene: DreamCatcher_72 Start: 44845, Stop: 44267, Start Num: 14

Candidate Starts for DreamCatcher_72:

(Start: 14 @44845 has 14 MA's), (Start: 20 @44833 has 2 MA's), (Start: 27 @44815 has 2 MA's), (67, 44674), (Start: 75 @44647 has 1 MA's), (83, 44608), (90, 44578), (139, 44365),

Gene: DuncansLeg_92 Start: 59254, Stop: 59661, Start Num: 37

Candidate Starts for DuncansLeg_92:

(Start: 37 @59254 has 78 MA's), (47, 59275), (71, 59359), (Start: 81 @59404 has 1 MA's), (82, 59407), (99, 59485), (108, 59521), (127, 59608), (136, 59635),

Gene: DyoEdafos_98 Start: 59531, Stop: 59938, Start Num: 37

Candidate Starts for DyoEdafos_98:

(Start: 37 @59531 has 78 MA's), (47, 59552), (51, 59567), (82, 59684), (91, 59720), (103, 59780), (114, 59834), (127, 59885), (136, 59912), (140, 59930),

Gene: Eevee_80 Start: 51716, Stop: 52216, Start Num: 35

Candidate Starts for Eevee_80:

(8, 51587), (Start: 33 @51707 has 7 MA's), (Start: 35 @51716 has 1 MA's), (42, 51731), (Start: 81 @51884 has 1 MA's), (89, 51914), (113, 52031), (118, 52061), (130, 52097), (143, 52151), (144, 52160),

Gene: Egi03_83 Start: 55457, Stop: 54942, Start Num: 19

Candidate Starts for Egi03_83:

(Start: 17 @55463 has 1 MA's), (Start: 19 @55457 has 20 MA's), (23, 55445), (36, 55409), (52, 55364), (57, 55349), (Start: 78 @55271 has 1 MA's), (86, 55244), (90, 55223), (95, 55199), (143, 54989), (145, 54977), (148, 54953),

Gene: Ellson_91 Start: 59569, Stop: 59976, Start Num: 37

Candidate Starts for Ellson_91:

(Start: 37 @59569 has 78 MA's), (47, 59590), (71, 59674), (Start: 81 @59719 has 1 MA's), (82, 59722), (99, 59800), (108, 59836), (127, 59923), (136, 59950),

Gene: Enceladus_88 Start: 57406, Stop: 57816, Start Num: 37

Candidate Starts for Enceladus_88:

(Start: 37 @57406 has 78 MA's), (48, 57436), (50, 57439), (62, 57484), (82, 57562), (93, 57604), (99, 57640), (109, 57682), (110, 57688), (119, 57736), (134, 57781), (140, 57808),

Gene: Evamon_85 Start: 55834, Stop: 55319, Start Num: 19

Candidate Starts for Evamon_85:

(Start: 17 @55840 has 1 MA's), (Start: 19 @55834 has 20 MA's), (23, 55822), (36, 55786), (52, 55741), (57, 55726), (Start: 78 @55648 has 1 MA's), (86, 55621), (90, 55600), (95, 55576), (143, 55366), (145, 55354), (148, 55330),

Gene: Eyeball_45 Start: 33249, Stop: 32764, Start Num: 31

Candidate Starts for Eyeball_45:

(16, 33288), (Start: 31 @33249 has 22 MA's), (Start: 46 @33207 has 2 MA's), (Start: 61 @33153 has 2 MA's), (Start: 81 @33078 has 1 MA's), (88, 33054), (90, 33042), (92, 33036), (93, 33033), (122, 32886), (132, 32850), (145, 32793),

Gene: Faith1_95 Start: 59452, Stop: 59865, Start Num: 37

Candidate Starts for Faith1_95:

(Start: 37 @59452 has 78 MA's), (71, 59563), (Start: 81 @59608 has 1 MA's), (82, 59611), (103, 59707), (114, 59761), (136, 59839), (140, 59857),

Gene: Fajezeel_46 Start: 33359, Stop: 32874, Start Num: 31

Candidate Starts for Fajezeel_46:

(6, 33494), (16, 33398), (Start: 31 @33359 has 22 MA's), (Start: 46 @33317 has 2 MA's), (Start: 61 @33263 has 2 MA's), (Start: 81 @33188 has 1 MA's), (88, 33164), (90, 33152), (92, 33146), (93, 33143), (122, 32996), (132, 32960), (145, 32903),

Gene: FarmResident_97 Start: 59091, Stop: 59498, Start Num: 37

Candidate Starts for FarmResident_97:

(Start: 37 @59091 has 78 MA's), (47, 59112), (51, 59127), (82, 59244), (103, 59340), (114, 59394), (127, 59445), (136, 59472), (138, 59475), (140, 59490),

Gene: Fenn_45 Start: 34680, Stop: 34195, Start Num: 31

Candidate Starts for Fenn_45:

(16, 34719), (Start: 31 @34680 has 22 MA's), (Start: 46 @34638 has 2 MA's), (Start: 61 @34584 has 2 MA's), (Start: 81 @34509 has 1 MA's), (88, 34485), (90, 34473), (92, 34467), (93, 34464), (122, 34317), (132, 34281), (145, 34224),

Gene: Finemlucis_96 Start: 60566, Stop: 60979, Start Num: 37

Candidate Starts for Finemlucis_96:

(Start: 37 @60566 has 78 MA's), (71, 60677), (79, 60716), (82, 60725), (99, 60803), (114, 60875), (136, 60953), (140, 60971),

Gene: Finnry_92 Start: 59588, Stop: 59995, Start Num: 37

Candidate Starts for Finnry_92:

(Start: 37 @59588 has 78 MA's), (47, 59609), (Start: 81 @59738 has 1 MA's), (82, 59741), (99, 59819), (108, 59855), (127, 59942), (136, 59969),

Gene: Fireball_88 Start: 56296, Stop: 55781, Start Num: 19

Candidate Starts for Fireball_88:

(Start: 17 @56302 has 1 MA's), (Start: 19 @56296 has 20 MA's), (23, 56284), (36, 56248), (52, 56203), (57, 56188), (Start: 78 @56110 has 1 MA's), (86, 56083), (90, 56062), (95, 56038), (143, 55828), (145, 55816), (148, 55792),

Gene: Forsytheast_64 Start: 41180, Stop: 40623, Start Num: 32

Candidate Starts for Forsytheast_64:

(Start: 32 @41180 has 21 MA's), (Start: 46 @41138 has 2 MA's), (51, 41120), (77, 41036), (Start: 81 @41018 has 1 MA's), (94, 40967), (104, 40913), (126, 40811), (152, 40643),

Gene: Fushigi_42 Start: 30914, Stop: 30438, Start Num: 32

Candidate Starts for Fushigi_42:

(Start: 32 @30914 has 21 MA's), (39, 30896), (45, 30875), (63, 30812), (68, 30791), (106, 30638), (122, 30560), (139, 30503), (140, 30494), (141, 30491), (145, 30467),

Gene: GMonster_70 Start: 44872, Stop: 44306, Start Num: 20

Candidate Starts for GMonster_70:

(Start: 14 @44884 has 14 MA's), (Start: 20 @44872 has 2 MA's), (Start: 27 @44854 has 2 MA's), (67, 44713), (Start: 75 @44686 has 1 MA's), (83, 44647), (90, 44617), (139, 44404),

Gene: Gabriela_95 Start: 58798, Stop: 59211, Start Num: 37

Candidate Starts for Gabriela_95:

(Start: 37 @58798 has 78 MA's), (71, 58909), (Start: 81 @58954 has 1 MA's), (82, 58957), (103, 59053), (114, 59107), (136, 59185), (140, 59203),

Gene: GageAP_64 Start: 42203, Stop: 41646, Start Num: 32

Candidate Starts for GageAP_64:

(Start: 32 @42203 has 21 MA's), (Start: 46 @42161 has 2 MA's), (51, 42143), (77, 42059), (Start: 81 @42041 has 1 MA's), (94, 41990), (104, 41936), (126, 41834), (152, 41666),

Gene: Gardann_95 Start: 59299, Stop: 59712, Start Num: 37

Candidate Starts for Gardann_95:

(Start: 37 @59299 has 78 MA's), (71, 59410), (79, 59449), (82, 59458), (99, 59536), (114, 59608), (136, 59686), (140, 59704),

Gene: Gezellig_81 Start: 55680, Stop: 55165, Start Num: 19

Candidate Starts for Gezellig_81:

(Start: 17 @55686 has 1 MA's), (Start: 19 @55680 has 20 MA's), (23, 55668), (36, 55632), (52, 55587), (57, 55572), (Start: 78 @55494 has 1 MA's), (86, 55467), (90, 55446), (95, 55422), (143, 55212), (145, 55200), (148, 55176),

Gene: GrecoEtereo_71 Start: 44625, Stop: 44047, Start Num: 14

Candidate Starts for GrecoEtereo_71:

(Start: 14 @44625 has 14 MA's), (Start: 20 @44613 has 2 MA's), (Start: 27 @44595 has 2 MA's), (67, 44454), (Start: 75 @44427 has 1 MA's), (83, 44388), (90, 44358), (139, 44145),

Gene: Greg_46 Start: 33359, Stop: 32874, Start Num: 31

Candidate Starts for Greg_46:

(6, 33494), (16, 33398), (Start: 31 @33359 has 22 MA's), (Start: 46 @33317 has 2 MA's), (Start: 61 @33263 has 2 MA's), (Start: 81 @33188 has 1 MA's), (88, 33164), (90, 33152), (92, 33146), (93, 33143), (122, 32996), (132, 32960), (145, 32903),

Gene: GuuelaD_92 Start: 59411, Stop: 59824, Start Num: 37

Candidate Starts for GuuelaD_92:

(Start: 37 @59411 has 78 MA's), (71, 59522), (79, 59561), (82, 59570), (99, 59648), (114, 59720), (136, 59798), (140, 59816),

Gene: Hafay_96 Start: 59523, Stop: 59936, Start Num: 37

Candidate Starts for Hafay_96:

(Start: 37 @59523 has 78 MA's), (71, 59634), (79, 59673), (82, 59682), (99, 59760), (114, 59832), (136, 59910), (140, 59928),

Gene: Halena_88 Start: 56292, Stop: 56702, Start Num: 37

Candidate Starts for Halena_88:

(Start: 37 @56292 has 78 MA's), (48, 56322), (50, 56325), (62, 56370), (82, 56448), (93, 56490), (99, 56526), (109, 56568), (110, 56574), (119, 56622), (134, 56667), (140, 56694),

Gene: ILeeKay_48 Start: 33858, Stop: 33382, Start Num: 32

Candidate Starts for ILeeKay_48:

(Start: 32 @33858 has 21 MA's), (39, 33840), (45, 33819), (63, 33756), (68, 33735), (106, 33582), (122, 33504), (139, 33447), (140, 33438), (141, 33435), (145, 33411),

Gene: Ibantik_17 Start: 6683, Stop: 6195, Start Num: 30

Candidate Starts for Ibantik_17:

(Start: 30 @6683 has 1 MA's), (58, 6599), (66, 6566), (73, 6548), (Start: 78 @6521 has 1 MA's), (117, 6335), (134, 6278),

Gene: Ibantik_66 Start: 28032, Stop: 28526, Start Num: 26

Candidate Starts for Ibantik_66:

(24, 28029), (Start: 26 @28032 has 1 MA's), (28, 28044), (38, 28062), (51, 28104), (90, 28245), (116, 28374), (140, 28464), (148, 28515),

Gene: Ichabod_74 Start: 45654, Stop: 45076, Start Num: 14

Candidate Starts for Ichabod_74:

(Start: 14 @45654 has 14 MA's), (Start: 20 @45642 has 2 MA's), (Start: 27 @45624 has 2 MA's), (67, 45483), (Start: 75 @45456 has 1 MA's), (83, 45417), (90, 45387), (139, 45174),

Gene: IgnatiusPatJac_70 Start: 44214, Stop: 43648, Start Num: 20

Candidate Starts for IgnatiusPatJac_70:

(Start: 14 @44226 has 14 MA's), (Start: 20 @44214 has 2 MA's), (Start: 27 @44196 has 2 MA's), (67, 44055), (Start: 75 @44028 has 1 MA's), (83, 43989), (90, 43959), (139, 43746),

Gene: IgnatiusPatJac_43 Start: 32882, Stop: 32406, Start Num: 32

Candidate Starts for IgnatiusPatJac_43:

(Start: 32 @32882 has 21 MA's), (39, 32864), (45, 32843), (63, 32780), (68, 32759), (106, 32606), (122, 32528), (139, 32471), (140, 32462), (141, 32459), (145, 32435),

Gene: Itos_95 Start: 58358, Stop: 58771, Start Num: 37

Candidate Starts for Itos_95:

(Start: 37 @58358 has 78 MA's), (71, 58469), (Start: 81 @58514 has 1 MA's), (82, 58517), (103, 58613), (114, 58667), (136, 58745), (140, 58763),

Gene: Jobypre_92 Start: 59235, Stop: 59642, Start Num: 37

Candidate Starts for Jobypre_92:

(Start: 37 @59235 has 78 MA's), (47, 59256), (Start: 81 @59385 has 1 MA's), (82, 59388), (99, 59466), (108, 59502), (127, 59589), (136, 59616),

Gene: JoeDirt_92 Start: 57967, Stop: 58377, Start Num: 37

Candidate Starts for JoeDirt_92:

(Start: 37 @57967 has 78 MA's), (48, 57997), (50, 58000), (62, 58045), (82, 58123), (93, 58165), (99, 58201), (109, 58243), (110, 58249), (119, 58297), (134, 58342), (140, 58369),

Gene: JohnPork_86 Start: 55643, Stop: 55221, Start Num: 52

Candidate Starts for JohnPork_86:

(Start: 17 @55742 has 1 MA's), (Start: 19 @55736 has 20 MA's), (23, 55724), (36, 55688), (52, 55643), (57, 55628), (Start: 78 @55550 has 1 MA's), (86, 55523), (90, 55502), (95, 55478), (143, 55268), (145, 55256), (148, 55232),

Gene: JoyLin_81 Start: 52459, Stop: 52968, Start Num: 33

Candidate Starts for JoyLin_81:

(8, 52339), (Start: 33 @52459 has 7 MA's), (Start: 35 @52468 has 1 MA's), (42, 52483), (Start: 81 @52636 has 1 MA's), (89, 52666), (113, 52783), (118, 52813), (130, 52849), (133, 52861), (143, 52903), (144, 52912),

Gene: Jubie_91 Start: 59370, Stop: 59777, Start Num: 37

Candidate Starts for Jubie_91:

(Start: 37 @59370 has 78 MA's), (47, 59391), (Start: 81 @59520 has 1 MA's), (82, 59523), (99, 59601), (108, 59637), (127, 59724), (136, 59751),

Gene: Kahlid_94 Start: 59217, Stop: 59630, Start Num: 37

Candidate Starts for Kahlid_94:

(Start: 37 @59217 has 78 MA's), (71, 59328), (79, 59367), (82, 59376), (99, 59454), (114, 59526), (136, 59604), (140, 59622),

Gene: KimmyK_83 Start: 56127, Stop: 55612, Start Num: 19

Candidate Starts for KimmyK_83:

(Start: 17 @56133 has 1 MA's), (Start: 19 @56127 has 20 MA's), (23, 56115), (36, 56079), (52, 56034), (57, 56019), (Start: 78 @55941 has 1 MA's), (86, 55914), (90, 55893), (95, 55869), (143, 55659), (145, 55647), (148, 55623),

Gene: Kingsolomon_90 Start: 59344, Stop: 59751, Start Num: 37

Candidate Starts for Kingsolomon_90:

(Start: 37 @59344 has 78 MA's), (47, 59365), (Start: 81 @59494 has 1 MA's), (82, 59497), (99, 59575), (108, 59611), (127, 59698), (136, 59725),

Gene: KirDoubleO7_90 Start: 59256, Stop: 59663, Start Num: 37

Candidate Starts for KirDoubleO7_90:

(Start: 37 @59256 has 78 MA's), (47, 59277), (71, 59361), (Start: 81 @59406 has 1 MA's), (82, 59409), (99, 59487), (108, 59523), (127, 59610), (136, 59637),

Gene: Kropertea_92 Start: 58811, Stop: 59221, Start Num: 37

Candidate Starts for Kropertea_92:

(Start: 37 @58811 has 78 MA's), (47, 58832), (51, 58847), (82, 58967), (91, 59003), (103, 59063), (114, 59117), (127, 59168), (136, 59195), (140, 59213),

Gene: Krypton555_94 Start: 59747, Stop: 60154, Start Num: 37

Candidate Starts for Krypton555_94:

(Start: 37 @59747 has 78 MA's), (47, 59768), (71, 59852), (Start: 81 @59897 has 1 MA's), (82, 59900), (99, 59978), (108, 60014), (127, 60101), (136, 60128),

Gene: Kykar_44 Start: 32934, Stop: 32458, Start Num: 32

Candidate Starts for Kykar_44:

(Start: 32 @32934 has 21 MA's), (39, 32916), (45, 32895), (63, 32832), (68, 32811), (106, 32658), (122, 32580), (139, 32523), (140, 32514), (141, 32511), (145, 32487),

Gene: LeBron_90 Start: 56599, Stop: 57009, Start Num: 37

Candidate Starts for LeBron_90:

(Start: 37 @56599 has 78 MA's), (48, 56629), (50, 56632), (62, 56677), (82, 56755), (93, 56797), (99, 56833), (109, 56875), (110, 56881), (119, 56929), (134, 56974), (140, 57001),

Gene: Lesedi_65 Start: 42530, Stop: 41952, Start Num: 14

Candidate Starts for Lesedi_65:

(8, 42602), (Start: 14 @42530 has 14 MA's), (Start: 20 @42518 has 2 MA's), (Start: 27 @42500 has 2 MA's), (67, 42359), (Start: 75 @42332 has 1 MA's), (83, 42293), (90, 42263), (139, 42050),

Gene: Lewan_96 Start: 59451, Stop: 59864, Start Num: 37

Candidate Starts for Lewan_96:

(Start: 37 @59451 has 78 MA's), (71, 59562), (79, 59601), (82, 59610), (99, 59688), (114, 59760), (136, 59838), (140, 59856),

Gene: LibertyBell_73 Start: 45969, Stop: 46457, Start Num: 78

Candidate Starts for LibertyBell_73:

(Start: 78 @45969 has 1 MA's), (93, 46038), (111, 46152), (129, 46227), (146, 46308), (151, 46371),

Gene: Licorice_47 Start: 34445, Stop: 33960, Start Num: 31

Candidate Starts for Licorice_47:

(16, 34484), (Start: 31 @34445 has 22 MA's), (Start: 46 @34403 has 2 MA's), (Start: 61 @34349 has 2 MA's), (Start: 81 @34274 has 1 MA's), (88, 34250), (90, 34238), (92, 34232), (93, 34229), (122, 34082), (132, 34046), (145, 33989),

Gene: LilDestine_93 Start: 59128, Stop: 59541, Start Num: 37

Candidate Starts for LilDestine_93:

(Start: 37 @59128 has 78 MA's), (71, 59239), (79, 59278), (82, 59287), (99, 59365), (114, 59437), (136, 59515), (140, 59533),

Gene: LiyuLake_91 Start: 59329, Stop: 59736, Start Num: 37

Candidate Starts for LiyuLake_91:

(Start: 37 @59329 has 78 MA's), (47, 59350), (71, 59434), (Start: 81 @59479 has 1 MA's), (82, 59482), (99, 59560), (108, 59596), (127, 59683), (136, 59710),

Gene: Loadrie_94 Start: 59619, Stop: 60032, Start Num: 37

Candidate Starts for Loadrie_94:

(Start: 37 @59619 has 78 MA's), (71, 59730), (79, 59769), (82, 59778), (99, 59856), (114, 59928), (136, 60006), (140, 60024),

Gene: Lolly9_91 Start: 59420, Stop: 59827, Start Num: 37

Candidate Starts for Lolly9_91:

(Start: 37 @59420 has 78 MA's), (47, 59441), (71, 59525), (Start: 81 @59570 has 1 MA's), (99, 59651), (108, 59687), (127, 59774), (136, 59801),

Gene: Lopton_70 Start: 46302, Stop: 45724, Start Num: 14

Candidate Starts for Lopton_70:

(13, 46311), (Start: 14 @46302 has 14 MA's), (Start: 20 @46290 has 2 MA's), (Start: 27 @46272 has 2 MA's), (67, 46131), (Start: 75 @46104 has 1 MA's), (83, 46065), (90, 46035), (139, 45822),

Gene: Lumos_92 Start: 59232, Stop: 59639, Start Num: 37

Candidate Starts for Lumos_92:

(Start: 37 @59232 has 78 MA's), (47, 59253), (Start: 81 @59382 has 1 MA's), (82, 59385), (99, 59463), (108, 59499), (127, 59586), (136, 59613),

Gene: Lynnae_96 Start: 59229, Stop: 59642, Start Num: 37

Candidate Starts for Lynnae_96:

(Start: 37 @59229 has 78 MA's), (71, 59340), (79, 59379), (82, 59388), (99, 59466), (114, 59538), (136, 59616), (140, 59634),

Gene: MAckerman_89 Start: 56285, Stop: 56695, Start Num: 37

Candidate Starts for MAckerman_89:

(Start: 37 @56285 has 78 MA's), (48, 56315), (50, 56318), (62, 56363), (82, 56441), (93, 56483), (99, 56519), (109, 56561), (110, 56567), (119, 56615), (134, 56660), (140, 56687),

Gene: Marco3_46 Start: 33679, Stop: 33203, Start Num: 32

Candidate Starts for Marco3_46:

(Start: 32 @33679 has 21 MA's), (39, 33661), (45, 33640), (63, 33577), (68, 33556), (106, 33403), (122, 33325), (139, 33268), (140, 33259), (141, 33256), (145, 33232),

Gene: Marge_44 Start: 33477, Stop: 32992, Start Num: 31

Candidate Starts for Marge_44:

(16, 33516), (Start: 31 @33477 has 22 MA's), (Start: 46 @33435 has 2 MA's), (Start: 61 @33381 has 2 MA's), (Start: 81 @33306 has 1 MA's), (88, 33282), (90, 33270), (92, 33264), (93, 33261), (122, 33114), (132, 33078), (145, 33021),

Gene: Mbo2_93 Start: 66190, Stop: 65546, Start Num: 9

Candidate Starts for Mbo2_93:

(7, 66199), (9, 66190), (11, 66142), (25, 66094), (Start: 37 @66058 has 78 MA's), (89, 65854), (102, 65770), (120, 65671), (121, 65668), (142, 65590), (147, 65566),

Gene: McGuire_71 Start: 44174, Stop: 43596, Start Num: 14

Candidate Starts for McGuire_71:

(Start: 14 @44174 has 14 MA's), (Start: 20 @44162 has 2 MA's), (Start: 27 @44144 has 2 MA's), (67, 44003), (Start: 75 @43976 has 1 MA's), (83, 43937), (90, 43907), (139, 43694),

Gene: McSinger_68 Start: 43534, Stop: 42956, Start Num: 14

Candidate Starts for McSinger_68:

(Start: 14 @43534 has 14 MA's), (Start: 20 @43522 has 2 MA's), (Start: 27 @43504 has 2 MA's), (67, 43363), (Start: 75 @43336 has 1 MA's), (83, 43297), (90, 43267), (139, 43054),

Gene: Miley16_95 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for Miley16_95:

(Start: 37 @59815 has 78 MA's), (71, 59926), (Start: 81 @59971 has 1 MA's), (82, 59974), (103, 60070), (114, 60124), (136, 60202), (140, 60220),

Gene: MiniLon_96 Start: 59421, Stop: 59828, Start Num: 37

Candidate Starts for MiniLon_96:

(Start: 37 @59421 has 78 MA's), (47, 59442), (71, 59526), (Start: 81 @59571 has 1 MA's), (99, 59652), (108, 59688), (127, 59775), (136, 59802),

Gene: MiniMac_96 Start: 59416, Stop: 59823, Start Num: 37

Candidate Starts for MiniMac_96:

(Start: 37 @59416 has 78 MA's), (47, 59437), (71, 59521), (Start: 81 @59566 has 1 MA's), (99, 59647), (108, 59683), (127, 59770), (136, 59797),

Gene: MkaliMitinis3_97 Start: 59582, Stop: 59995, Start Num: 37

Candidate Starts for MkaliMitinis3_97:

(Start: 37 @59582 has 78 MA's), (71, 59693), (79, 59732), (82, 59741), (99, 59819), (114, 59891), (136, 59969), (140, 59987),

Gene: Moose_64 Start: 41180, Stop: 40623, Start Num: 32

Candidate Starts for Moose_64:

(Start: 32 @41180 has 21 MA's), (Start: 46 @41138 has 2 MA's), (51, 41120), (77, 41036), (Start: 81 @41018 has 1 MA's), (94, 40967), (104, 40913), (126, 40811), (152, 40643),

Gene: Moostard_89 Start: 59339, Stop: 59746, Start Num: 37

Candidate Starts for Moostard_89:

(Start: 37 @59339 has 78 MA's), (47, 59360), (Start: 81 @59489 has 1 MA's), (82, 59492), (99, 59570), (108, 59606), (127, 59693), (136, 59720),

Gene: MsGreen_92 Start: 59234, Stop: 59641, Start Num: 37

Candidate Starts for MsGreen_92:

(Start: 37 @59234 has 78 MA's), (47, 59255), (Start: 81 @59384 has 1 MA's), (82, 59387), (99, 59465), (108, 59501), (127, 59588), (136, 59615),

Gene: NEHalo_60 Start: 41604, Stop: 41047, Start Num: 32

Candidate Starts for NEHalo_60:

(Start: 32 @41604 has 21 MA's), (Start: 46 @41562 has 2 MA's), (51, 41544), (77, 41460), (Start: 81 @41442 has 1 MA's), (94, 41391), (104, 41337), (126, 41235), (152, 41067),

Gene: Naira_45 Start: 34727, Stop: 34242, Start Num: 31

Candidate Starts for Naira_45:

(16, 34766), (Start: 31 @34727 has 22 MA's), (Start: 46 @34685 has 2 MA's), (Start: 61 @34631 has 2 MA's), (Start: 81 @34556 has 1 MA's), (88, 34532), (90, 34520), (92, 34514), (93, 34511), (122, 34364), (132, 34328), (145, 34271),

Gene: Netyap_94 Start: 59453, Stop: 59866, Start Num: 37

Candidate Starts for Netyap_94:

(Start: 37 @59453 has 78 MA's), (71, 59564), (Start: 81 @59609 has 1 MA's), (82, 59612), (103, 59708), (114, 59762), (136, 59840), (140, 59858),

Gene: Nicholas_90 Start: 59344, Stop: 59751, Start Num: 37

Candidate Starts for Nicholas_90:

(Start: 37 @59344 has 78 MA's), (47, 59365), (Start: 81 @59494 has 1 MA's), (82, 59497), (99, 59575), (108, 59611), (127, 59698), (136, 59725),

Gene: Nicholasp3_95 Start: 59299, Stop: 59712, Start Num: 37

Candidate Starts for Nicholasp3_95:

(Start: 37 @59299 has 78 MA's), (71, 59410), (79, 59449), (82, 59458), (99, 59536), (114, 59608), (136, 59686), (140, 59704),

Gene: Niza_46 Start: 34104, Stop: 33619, Start Num: 31

Candidate Starts for Niza_46:

(16, 34143), (Start: 31 @34104 has 22 MA's), (Start: 46 @34062 has 2 MA's), (Start: 61 @34008 has 2 MA's), (Start: 81 @33933 has 1 MA's), (88, 33909), (90, 33897), (92, 33891), (93, 33888), (122, 33741), (132, 33705), (145, 33648),

Gene: OhShagHennessy_87 Start: 56542, Stop: 56952, Start Num: 37

Candidate Starts for OhShagHennessy_87:

(Start: 37 @56542 has 78 MA's), (48, 56572), (50, 56575), (62, 56620), (82, 56698), (93, 56740), (99, 56776), (109, 56818), (110, 56824), (119, 56872), (134, 56917), (140, 56944),

Gene: OverPar_97 Start: 59619, Stop: 60032, Start Num: 37

Candidate Starts for OverPar_97:

(Start: 37 @59619 has 78 MA's), (71, 59730), (79, 59769), (82, 59778), (99, 59856), (114, 59928), (136, 60006), (140, 60024),

Gene: PYPDinur_96 Start: 59772, Stop: 60179, Start Num: 37

Candidate Starts for PYPDinur_96:

(Start: 37 @59772 has 78 MA's), (47, 59793), (82, 59925), (103, 60021), (114, 60075), (127, 60126), (136, 60153), (138, 60156), (140, 60171),

Gene: PascalRango_68 Start: 44439, Stop: 44059, Start Num: 75

Candidate Starts for PascalRango_68:

(Start: 14 @44637 has 14 MA's), (Start: 20 @44625 has 2 MA's), (Start: 27 @44607 has 2 MA's), (67, 44466), (Start: 75 @44439 has 1 MA's), (83, 44400), (90, 44370), (139, 44157),

Gene: Pepe_41 Start: 31155, Stop: 30766, Start Num: 61

Candidate Starts for Pepe_41:

(16, 31290), (Start: 31 @31251 has 22 MA's), (Start: 46 @31209 has 2 MA's), (Start: 61 @31155 has 2 MA's), (Start: 81 @31080 has 1 MA's), (88, 31056), (90, 31044), (92, 31038), (93, 31035), (98, 31002), (115, 30921), (122, 30888), (140, 30822), (141, 30819), (142, 30810), (145, 30795),

Gene: Peregrin_232 Start: 114891, Stop: 115472, Start Num: 15

Candidate Starts for Peregrin_232:

(Start: 15 @114891 has 1 MA's), (34, 114942), (Start: 46 @114978 has 2 MA's), (53, 115002), (59, 115023), (69, 115062), (100, 115197), (126, 115323), (128, 115329),

Gene: Petruccio_44 Start: 32947, Stop: 32471, Start Num: 32

Candidate Starts for Petruccio_44:

(Start: 32 @32947 has 21 MA's), (39, 32929), (45, 32908), (63, 32845), (68, 32824), (106, 32671), (122, 32593), (139, 32536), (140, 32527), (141, 32524), (145, 32500),

Gene: Phlop_82 Start: 55730, Stop: 55215, Start Num: 19

Candidate Starts for Phlop_82:

(Start: 17 @55736 has 1 MA's), (Start: 19 @55730 has 20 MA's), (23, 55718), (36, 55682), (52, 55637), (57, 55622), (Start: 78 @55544 has 1 MA's), (86, 55517), (90, 55496), (95, 55472), (143, 55262), (145, 55250), (148, 55226),

Gene: PinkCoffee_86 Start: 55594, Stop: 55079, Start Num: 19

Candidate Starts for PinkCoffee_86:

(Start: 17 @55600 has 1 MA's), (Start: 19 @55594 has 20 MA's), (23, 55582), (36, 55546), (52, 55501), (57, 55486), (Start: 78 @55408 has 1 MA's), (86, 55381), (90, 55360), (95, 55336), (143, 55126), (145, 55114), (148, 55090),

Gene: Pippin_46 Start: 33403, Stop: 32918, Start Num: 31

Candidate Starts for Pippin_46:

(6, 33538), (16, 33442), (Start: 31 @33403 has 22 MA's), (Start: 46 @33361 has 2 MA's), (Start: 61 @33307 has 2 MA's), (Start: 81 @33232 has 1 MA's), (88, 33208), (90, 33196), (92, 33190), (93, 33187), (122, 33040), (132, 33004), (145, 32947),

Gene: Pippin15_85 Start: 49798, Stop: 50307, Start Num: 33

Candidate Starts for Pippin15_85:

(Start: 27 @49786 has 2 MA's), (Start: 33 @49798 has 7 MA's), (42, 49822), (69, 49927), (Start: 81 @49975 has 1 MA's), (89, 50005), (113, 50122), (118, 50152), (123, 50170), (130, 50188), (143, 50242), (144, 50251),

Gene: Pochiewood_89 Start: 57939, Stop: 58349, Start Num: 37

Candidate Starts for Pochiewood_89:

(Start: 37 @57939 has 78 MA's), (48, 57969), (50, 57972), (62, 58017), (82, 58095), (93, 58137), (99, 58173), (109, 58215), (110, 58221), (119, 58269), (134, 58314), (140, 58341),

Gene: Portcullis_85 Start: 55736, Stop: 55221, Start Num: 19

Candidate Starts for Portcullis_85:

(Start: 17 @55742 has 1 MA's), (Start: 19 @55736 has 20 MA's), (23, 55724), (36, 55688), (52, 55643), (57, 55628), (Start: 78 @55550 has 1 MA's), (86, 55523), (90, 55502), (95, 55478), (143, 55268), (145, 55256), (148, 55232),

Gene: ProMouse_44 Start: 33305, Stop: 32802, Start Num: 21

Candidate Starts for ProMouse_44:

(12, 33329), (21, 33305), (45, 33236), (51, 33215), (68, 33164), (71, 33158), (106, 33011), (140, 32867), (145, 32840),

Gene: PullumCavea_83 Start: 55907, Stop: 55392, Start Num: 19

Candidate Starts for PullumCavea_83:

(Start: 17 @55913 has 1 MA's), (Start: 19 @55907 has 20 MA's), (23, 55895), (36, 55859), (52, 55814), (57, 55799), (Start: 78 @55721 has 1 MA's), (86, 55694), (90, 55673), (95, 55649), (143, 55439), (145, 55427), (148, 55403),

Gene: Puppet_45 Start: 33423, Stop: 33034, Start Num: 61

Candidate Starts for Puppet_45:

(16, 33558), (Start: 31 @33519 has 22 MA's), (Start: 46 @33477 has 2 MA's), (Start: 61 @33423 has 2 MA's), (Start: 81 @33348 has 1 MA's), (88, 33324), (90, 33312), (92, 33306), (93, 33303), (122, 33156), (132, 33120), (145, 33063),

Gene: Quby_96 Start: 59183, Stop: 59590, Start Num: 37

Candidate Starts for Quby_96:

(Start: 37 @59183 has 78 MA's), (82, 59336), (103, 59432), (114, 59486), (127, 59537), (136, 59564), (138, 59567), (140, 59582),

Gene: Rajelicia_45 Start: 33435, Stop: 32950, Start Num: 31

Candidate Starts for Rajelicia_45:

(16, 33474), (Start: 31 @33435 has 22 MA's), (Start: 46 @33393 has 2 MA's), (Start: 61 @33339 has 2 MA's), (Start: 81 @33264 has 1 MA's), (88, 33240), (90, 33228), (92, 33222), (93, 33219), (122, 33072), (132, 33036), (145, 32979),

Gene: Red305_93 Start: 59235, Stop: 59642, Start Num: 37

Candidate Starts for Red305_93:

(Start: 37 @59235 has 78 MA's), (47, 59256), (Start: 81 @59385 has 1 MA's), (82, 59388), (99, 59466), (108, 59502), (127, 59589), (136, 59616),

Gene: Ringer_45 Start: 33671, Stop: 33282, Start Num: 61

Candidate Starts for Ringer_45:

(16, 33806), (Start: 31 @33767 has 22 MA's), (Start: 46 @33725 has 2 MA's), (Start: 61 @33671 has 2 MA's), (Start: 81 @33596 has 1 MA's), (88, 33572), (90, 33560), (92, 33554), (93, 33551), (122, 33404), (132, 33368), (145, 33311),

Gene: RogerDodger_88 Start: 56495, Stop: 55980, Start Num: 19

Candidate Starts for RogerDodger_88:

(Start: 17 @56501 has 1 MA's), (Start: 19 @56495 has 20 MA's), (23, 56483), (36, 56447), (52, 56402), (57, 56387), (Start: 78 @56309 has 1 MA's), (86, 56282), (90, 56261), (95, 56237), (143, 56027), (145, 56015), (148, 55991),

Gene: Rose5_92 Start: 57809, Stop: 58219, Start Num: 37

Candidate Starts for Rose5_92:

(Start: 37 @57809 has 78 MA's), (48, 57839), (50, 57842), (62, 57887), (82, 57965), (93, 58007), (99, 58043), (109, 58085), (110, 58091), (119, 58139), (134, 58184), (140, 58211),

Gene: Rossetti_95 Start: 59618, Stop: 60031, Start Num: 37

Candidate Starts for Rossetti_95:

(Start: 37 @59618 has 78 MA's), (71, 59729), (79, 59768), (82, 59777), (99, 59855), (114, 59927), (136, 60005), (140, 60023),

Gene: Rumpelstiltskin_91 Start: 59092, Stop: 59505, Start Num: 37

Candidate Starts for Rumpelstiltskin_91:

(Start: 37 @59092 has 78 MA's), (71, 59203), (79, 59242), (82, 59251), (99, 59329), (114, 59401), (136, 59479), (140, 59497),

Gene: RunningOnE_30 Start: 14405, Stop: 13887, Start Num: 23

Candidate Starts for RunningOnE_30:

(23, 14405), (43, 14357), (44, 14348), (49, 14327), (Start: 78 @14213 has 1 MA's), (Start: 81 @14201 has 1 MA's), (90, 14165), (98, 14123), (111, 14060), (117, 14027), (133, 13973),

Gene: RunningOnE_9 Start: 3940, Stop: 3410, Start Num: 22

Candidate Starts for RunningOnE_9:

(12, 3970), (22, 3940), (41, 3892), (60, 3817), (70, 3781), (72, 3778), (92, 3688), (121, 3541), (137, 3484),

Gene: Ruotula_47 Start: 34572, Stop: 34078, Start Num: 31

Candidate Starts for Ruotula_47:

(16, 34611), (Start: 31 @34572 has 22 MA's), (Start: 46 @34530 has 2 MA's), (Start: 61 @34476 has 2 MA's), (Start: 81 @34401 has 1 MA's), (88, 34377), (90, 34365), (92, 34359), (93, 34356), (122, 34200), (132, 34164), (145, 34107),

Gene: STLscum_45 Start: 33801, Stop: 33487, Start Num: 81

Candidate Starts for STLscum_45:

(Start: 81 @33801 has 1 MA's), (88, 33777), (90, 33765), (92, 33759), (93, 33756), (98, 33723), (115, 33642), (122, 33609), (140, 33543), (141, 33540), (142, 33531), (145, 33516),

Gene: Sagefire_47 Start: 34321, Stop: 33836, Start Num: 31

Candidate Starts for Sagefire_47:

(16, 34360), (Start: 31 @34321 has 22 MA's), (Start: 46 @34279 has 2 MA's), (Start: 61 @34225 has 2 MA's), (Start: 81 @34150 has 1 MA's), (88, 34126), (90, 34114), (92, 34108), (93, 34105), (122, 33958), (132, 33922), (145, 33865),

Gene: Salvador_85 Start: 55832, Stop: 55317, Start Num: 19

Candidate Starts for Salvador_85:

(Start: 17 @55838 has 1 MA's), (Start: 19 @55832 has 20 MA's), (23, 55820), (36, 55784), (52, 55739), (57, 55724), (Start: 78 @55646 has 1 MA's), (86, 55619), (90, 55598), (95, 55574), (143, 55364), (145, 55352), (148, 55328),

Gene: Samty_91 Start: 59332, Stop: 59739, Start Num: 37

Candidate Starts for Samty_91:

(Start: 37 @59332 has 78 MA's), (47, 59353), (Start: 81 @59482 has 1 MA's), (82, 59485), (99, 59563), (108, 59599), (127, 59686), (136, 59713),

Gene: Samy_64 Start: 40970, Stop: 41473, Start Num: 29

Candidate Starts for Samy_64:

(1, 40451), (2, 40556), (3, 40580), (4, 40679), (5, 40739), (Start: 29 @40970 has 1 MA's), (58, 41057), (67, 41093), (77, 41126), (Start: 81 @41144 has 1 MA's), (112, 41297), (117, 41327), (135, 41390),

Gene: Samy_62 Start: 37969, Stop: 38490, Start Num: 18

Candidate Starts for Samy_62:

(Start: 18 @37969 has 1 MA's), (49, 38059), (88, 38200),

Gene: Sanya_67 Start: 45283, Stop: 44903, Start Num: 75

Candidate Starts for Sanya_67:

(Start: 14 @45481 has 14 MA's), (Start: 20 @45469 has 2 MA's), (Start: 27 @45451 has 2 MA's), (67, 45310), (Start: 75 @45283 has 1 MA's), (83, 45244), (90, 45214), (139, 45001),

Gene: SarFire_70 Start: 44563, Stop: 43985, Start Num: 14

Candidate Starts for SarFire_70:

(Start: 14 @44563 has 14 MA's), (Start: 20 @44551 has 2 MA's), (Start: 27 @44533 has 2 MA's), (67, 44392), (Start: 75 @44365 has 1 MA's), (83, 44326), (90, 44296), (139, 44083),

Gene: Sarshaun_96 Start: 60210, Stop: 60623, Start Num: 37

Candidate Starts for Sarshaun_96:

(Start: 37 @60210 has 78 MA's), (71, 60321), (79, 60360), (82, 60369), (99, 60447), (114, 60519), (136, 60597), (140, 60615),

Gene: Savbucketdawg_80 Start: 55174, Stop: 54659, Start Num: 19

Candidate Starts for Savbucketdawg_80:

(Start: 17 @55180 has 1 MA's), (Start: 19 @55174 has 20 MA's), (23, 55162), (36, 55126), (52, 55081), (57, 55066), (Start: 78 @54988 has 1 MA's), (86, 54961), (90, 54940), (95, 54916), (143, 54706), (145, 54694), (148, 54670),

Gene: Seanderson_46 Start: 33923, Stop: 33447, Start Num: 32

Candidate Starts for Seanderson_46:

(Start: 32 @33923 has 21 MA's), (39, 33905), (45, 33884), (63, 33821), (68, 33800), (106, 33647), (122, 33569), (139, 33512), (140, 33503), (141, 33500), (145, 33476),

Gene: Sendy_87 Start: 55912, Stop: 55397, Start Num: 19

Candidate Starts for Sendy_87:

(Start: 17 @55918 has 1 MA's), (Start: 19 @55912 has 20 MA's), (23, 55900), (36, 55864), (52, 55819), (57, 55804), (Start: 78 @55726 has 1 MA's), (86, 55699), (90, 55678), (95, 55654), (143, 55444), (145, 55432), (148, 55408),

Gene: Serenabean_86 Start: 50568, Stop: 51074, Start Num: 33

Candidate Starts for Serenabean_86:

(Start: 33 @50568 has 7 MA's), (40, 50586), (59, 50655), (65, 50682), (66, 50685), (83, 50748), (87, 50760), (108, 50862), (124, 50940), (130, 50955), (144, 51018),

Gene: Sheng711_97 Start: 59248, Stop: 59655, Start Num: 37

Candidate Starts for Sheng711_97:

(Start: 37 @59248 has 78 MA's), (47, 59269), (82, 59401), (103, 59497), (114, 59551), (127, 59602), (136, 59629), (138, 59632), (140, 59647),

Gene: Shinji_84 Start: 55913, Stop: 55398, Start Num: 19

Candidate Starts for Shinji_84:

(Start: 17 @55919 has 1 MA's), (Start: 19 @55913 has 20 MA's), (23, 55901), (36, 55865), (52, 55820), (57, 55805), (Start: 78 @55727 has 1 MA's), (86, 55700), (90, 55679), (95, 55655), (143, 55445), (145, 55433), (148, 55409),

Gene: Silverleaf_90 Start: 57305, Stop: 57715, Start Num: 37

Candidate Starts for Silverleaf_90:

(Start: 37 @57305 has 78 MA's), (48, 57335), (50, 57338), (62, 57383), (82, 57461), (93, 57503), (99, 57539), (109, 57581), (110, 57587), (119, 57635), (134, 57680), (140, 57707),

Gene: Slagathor_46 Start: 33360, Stop: 32875, Start Num: 31

Candidate Starts for Slagathor_46:

(16, 33399), (Start: 31 @33360 has 22 MA's), (Start: 46 @33318 has 2 MA's), (Start: 61 @33264 has 2 MA's), (Start: 81 @33189 has 1 MA's), (88, 33165), (90, 33153), (92, 33147), (93, 33144), (122, 32997), (132, 32961), (145, 32904),

Gene: Smairt_46 Start: 33659, Stop: 33174, Start Num: 31

Candidate Starts for Smairt_46:

(16, 33698), (Start: 31 @33659 has 22 MA's), (Start: 46 @33617 has 2 MA's), (Start: 61 @33563 has 2 MA's), (Start: 81 @33488 has 1 MA's), (88, 33464), (90, 33452), (92, 33446), (93, 33443), (122, 33296), (132, 33260), (145, 33203),

Gene: SmokingBunny_86 Start: 56828, Stop: 56313, Start Num: 19

Candidate Starts for SmokingBunny_86:

(Start: 17 @56834 has 1 MA's), (Start: 19 @56828 has 20 MA's), (23, 56816), (36, 56780), (52, 56735), (57, 56720), (Start: 78 @56642 has 1 MA's), (86, 56615), (90, 56594), (95, 56570), (143, 56360), (145, 56348), (148, 56324),

Gene: Snazzy_68 Start: 43855, Stop: 43277, Start Num: 14

Candidate Starts for Snazzy_68:

(Start: 14 @43855 has 14 MA's), (Start: 20 @43843 has 2 MA's), (Start: 27 @43825 has 2 MA's), (67, 43684), (Start: 75 @43657 has 1 MA's), (83, 43618), (90, 43588), (139, 43375),

Gene: Snenia_91 Start: 59236, Stop: 59643, Start Num: 37

Candidate Starts for Snenia_91:

(Start: 37 @59236 has 78 MA's), (47, 59257), (Start: 81 @59386 has 1 MA's), (82, 59389), (99, 59467), (108, 59503), (127, 59590), (136, 59617),

Gene: SoJulia_97 Start: 60975, Stop: 61388, Start Num: 37

Candidate Starts for SoJulia_97:

(Start: 37 @60975 has 78 MA's), (71, 61086), (79, 61125), (82, 61134), (99, 61212), (114, 61284), (136, 61362), (140, 61380),

Gene: Soap141_95 Start: 60210, Stop: 60623, Start Num: 37

Candidate Starts for Soap141_95:

(Start: 37 @60210 has 78 MA's), (71, 60321), (79, 60360), (82, 60369), (99, 60447), (114, 60519), (136, 60597), (140, 60615),

Gene: SpikeBT_61 Start: 41461, Stop: 40904, Start Num: 32

Candidate Starts for SpikeBT_61:

(Start: 32 @41461 has 21 MA's), (Start: 46 @41419 has 2 MA's), (51, 41401), (77, 41317), (Start: 81 @41299 has 1 MA's), (94, 41248), (104, 41194), (126, 41092), (152, 40924),

Gene: Squee_73 Start: 44893, Stop: 44315, Start Num: 14

Candidate Starts for Squee_73:

(Start: 14 @44893 has 14 MA's), (Start: 20 @44881 has 2 MA's), (Start: 27 @44863 has 2 MA's), (67, 44722), (Start: 75 @44695 has 1 MA's), (83, 44656), (90, 44626), (139, 44413),

Gene: StrongArm_43 Start: 33982, Stop: 33497, Start Num: 31

Candidate Starts for StrongArm_43:

(16, 34021), (Start: 31 @33982 has 22 MA's), (Start: 46 @33940 has 2 MA's), (Start: 61 @33886 has 2 MA's), (Start: 81 @33811 has 1 MA's), (88, 33787), (90, 33775), (92, 33769), (93, 33766), (122, 33619), (132, 33583), (145, 33526),

Gene: Sweetclover_84 Start: 49276, Stop: 49782, Start Num: 33

Candidate Starts for Sweetclover_84:

(Start: 33 @49276 has 7 MA's), (54, 49342), (55, 49348), (56, 49351), (59, 49363), (87, 49468), (108, 49570), (124, 49648), (130, 49663), (144, 49726), (145, 49729),

Gene: SwissCheese_66 Start: 41680, Stop: 41123, Start Num: 32

Candidate Starts for SwissCheese_66:

(Start: 32 @41680 has 21 MA's), (Start: 46 @41638 has 2 MA's), (51, 41620), (77, 41536), (Start: 81 @41518 has 1 MA's), (94, 41467), (104, 41413), (126, 41311), (152, 41143),

Gene: Teodoridan_42 Start: 32338, Stop: 31949, Start Num: 61

Candidate Starts for Teodoridan_42:

(16, 32473), (Start: 31 @32434 has 22 MA's), (Start: 46 @32392 has 2 MA's), (Start: 61 @32338 has 2 MA's), (Start: 81 @32263 has 1 MA's), (88, 32239), (90, 32227), (92, 32221), (93, 32218), (122, 32071), (132, 32035), (145, 31978),

Gene: TheloniousMonk_45 Start: 34368, Stop: 33883, Start Num: 31

Candidate Starts for TheloniousMonk_45:

(16, 34407), (Start: 31 @34368 has 22 MA's), (Start: 46 @34326 has 2 MA's), (Start: 61 @34272 has 2 MA's), (Start: 81 @34197 has 1 MA's), (88, 34173), (90, 34161), (92, 34155), (93, 34152), (122, 34005), (132, 33969), (145, 33912),

Gene: Thor_70 Start: 43921, Stop: 43343, Start Num: 14

Candidate Starts for Thor_70:

(Start: 14 @43921 has 14 MA's), (Start: 20 @43909 has 2 MA's), (Start: 27 @43891 has 2 MA's), (67, 43750), (Start: 75 @43723 has 1 MA's), (83, 43684), (90, 43654), (139, 43441),

Gene: TillyBobJoe_83 Start: 55714, Stop: 55199, Start Num: 19

Candidate Starts for TillyBobJoe_83:

(Start: 17 @55720 has 1 MA's), (Start: 19 @55714 has 20 MA's), (23, 55702), (36, 55666), (52, 55621), (57, 55606), (Start: 78 @55528 has 1 MA's), (86, 55501), (90, 55480), (95, 55456), (143, 55246), (145, 55234), (148, 55210),

Gene: Togo_85 Start: 56828, Stop: 56313, Start Num: 19

Candidate Starts for Togo_85:

(Start: 17 @56834 has 1 MA's), (Start: 19 @56828 has 20 MA's), (23, 56816), (36, 56780), (52, 56735), (57, 56720), (Start: 78 @56642 has 1 MA's), (86, 56615), (90, 56594), (95, 56570), (143, 56360), (145, 56348), (148, 56324),

Gene: Tourach_95 Start: 60189, Stop: 60602, Start Num: 37

Candidate Starts for Tourach_95:

(Start: 37 @60189 has 78 MA's), (62, 60270), (71, 60300), (Start: 81 @60345 has 1 MA's), (82, 60348), (103, 60444), (114, 60498), (136, 60576), (140, 60594),

Gene: TriFive_93 Start: 59348, Stop: 59755, Start Num: 37

Candidate Starts for TriFive_93:

(Start: 37 @59348 has 78 MA's), (47, 59369), (Start: 81 @59498 has 1 MA's), (82, 59501), (99, 59579), (108, 59615), (127, 59702), (136, 59729),

Gene: Trouble_45 Start: 34048, Stop: 33572, Start Num: 32

Candidate Starts for Trouble_45:

(Start: 32 @34048 has 21 MA's), (39, 34030), (45, 34009), (63, 33946), (68, 33925), (106, 33772), (122, 33694), (139, 33637), (140, 33628), (141, 33625), (145, 33601),

Gene: Twister6_84 Start: 55177, Stop: 54662, Start Num: 19

Candidate Starts for Twister6_84:

(Start: 17 @55183 has 1 MA's), (Start: 19 @55177 has 20 MA's), (23, 55165), (36, 55129), (52, 55084), (57, 55069), (Start: 78 @54991 has 1 MA's), (86, 54964), (90, 54943), (95, 54919), (143, 54709), (145, 54697), (148, 54673),

Gene: Tyson_92 Start: 57702, Stop: 58112, Start Num: 37

Candidate Starts for Tyson_92:

(Start: 37 @57702 has 78 MA's), (48, 57732), (50, 57735), (62, 57780), (82, 57858), (93, 57900), (99, 57936), (109, 57978), (110, 57984), (119, 58032), (134, 58077), (140, 58104),

Gene: UPIE_90 Start: 57298, Stop: 57708, Start Num: 37

Candidate Starts for UPIE_90:

(Start: 37 @57298 has 78 MA's), (48, 57328), (50, 57331), (62, 57376), (82, 57454), (93, 57496), (99, 57532), (109, 57574), (110, 57580), (119, 57628), (134, 57673), (140, 57700),

Gene: Underpass_87 Start: 54335, Stop: 54748, Start Num: 37

Candidate Starts for Underpass_87:

(Start: 37 @54335 has 78 MA's), (71, 54446), (79, 54485), (82, 54494), (99, 54572), (114, 54644), (136, 54722), (140, 54740),

Gene: Valary_86 Start: 56820, Stop: 56305, Start Num: 19

Candidate Starts for Valary_86:

(Start: 17 @56826 has 1 MA's), (Start: 19 @56820 has 20 MA's), (23, 56808), (36, 56772), (52, 56727), (57, 56712), (Start: 78 @56634 has 1 MA's), (86, 56607), (90, 56586), (95, 56562), (143, 56352), (145, 56340), (148, 56316),

Gene: VanDeWege_87 Start: 56351, Stop: 55830, Start Num: 17

Candidate Starts for VanDeWege_87:

(Start: 17 @56351 has 1 MA's), (Start: 19 @56345 has 20 MA's), (23, 56333), (36, 56297), (52, 56252), (57, 56237), (Start: 78 @56159 has 1 MA's), (86, 56132), (90, 56111), (95, 56087), (143, 55877), (145, 55865), (148, 55841),

Gene: Vetric_93 Start: 59073, Stop: 59486, Start Num: 37

Candidate Starts for Vetric_93:

(Start: 37 @59073 has 78 MA's), (71, 59184), (79, 59223), (82, 59232), (99, 59310), (114, 59382), (136, 59460), (140, 59478),

Gene: Wamburgexpress_90 Start: 57426, Stop: 57836, Start Num: 37

Candidate Starts for Wamburgexpress_90:

(Start: 37 @57426 has 78 MA's), (48, 57456), (50, 57459), (62, 57504), (82, 57582), (93, 57624), (99, 57660), (109, 57702), (110, 57708), (119, 57756), (134, 57801), (140, 57828),

Gene: Whirlwind_93 Start: 59575, Stop: 59982, Start Num: 37

Candidate Starts for Whirlwind_93:

(Start: 37 @59575 has 78 MA's), (47, 59596), (Start: 81 @59725 has 1 MA's), (82, 59728), (99, 59806), (108, 59842), (127, 59929), (136, 59956),

Gene: Wigglewobble_95 Start: 59375, Stop: 59788, Start Num: 37

Candidate Starts for Wigglewobble_95:

(Start: 37 @59375 has 78 MA's), (71, 59486), (Start: 81 @59531 has 1 MA's), (82, 59534), (103, 59630), (114, 59684), (136, 59762), (140, 59780),

Gene: Wilder_96 Start: 59217, Stop: 59630, Start Num: 37

Candidate Starts for Wilder_96:

(Start: 37 @59217 has 78 MA's), (71, 59328), (79, 59367), (82, 59376), (99, 59454), (114, 59526), (136, 59604), (140, 59622),

Gene: Winky_95 Start: 59815, Stop: 60228, Start Num: 37

Candidate Starts for Winky_95:

(Start: 37 @59815 has 78 MA's), (71, 59926), (Start: 81 @59971 has 1 MA's), (82, 59974), (103, 60070), (114, 60124), (136, 60202), (140, 60220),

Gene: Wizard_80 Start: 55680, Stop: 55165, Start Num: 19

Candidate Starts for Wizard_80:

(Start: 17 @55686 has 1 MA's), (Start: 19 @55680 has 20 MA's), (23, 55668), (36, 55632), (52, 55587), (57, 55572), (Start: 78 @55494 has 1 MA's), (86, 55467), (90, 55446), (95, 55422), (143, 55212), (145, 55200), (148, 55176),

Gene: Wollypog_58 Start: 43704, Stop: 44234, Start Num: 27

Candidate Starts for Wollypog_58:

(Start: 27 @43704 has 2 MA's), (63, 43818), (76, 43863), (107, 44016), (131, 44124),

Gene: Wyatt2_92 Start: 57733, Stop: 58143, Start Num: 37

Candidate Starts for Wyatt2_92:

(Start: 37 @57733 has 78 MA's), (48, 57763), (50, 57766), (62, 57811), (82, 57889), (93, 57931), (99, 57967), (109, 58009), (110, 58015), (119, 58063), (134, 58108), (140, 58135),

Gene: Yotsuba_81 Start: 52477, Stop: 52986, Start Num: 33

Candidate Starts for Yotsuba_81:

(8, 52357), (Start: 33 @52477 has 7 MA's), (Start: 35 @52486 has 1 MA's), (42, 52501), (Start: 81 @52654 has 1 MA's), (89, 52684), (113, 52801), (118, 52831), (130, 52867), (143, 52921), (144, 52930),

Gene: Zakai_96 Start: 59860, Stop: 60273, Start Num: 37

Candidate Starts for Zakai_96:

(Start: 37 @59860 has 78 MA's), (71, 59971), (79, 60010), (82, 60019), (99, 60097), (114, 60169), (136, 60247), (140, 60265),

Gene: Zaria_91 Start: 56841, Stop: 57251, Start Num: 37

Candidate Starts for Zaria_91:

(Start: 37 @56841 has 78 MA's), (48, 56871), (50, 56874), (62, 56919), (82, 56997), (93, 57039), (99, 57075), (109, 57117), (110, 57123), (119, 57171), (134, 57216), (140, 57243),

Gene: ZhongYanYuan_92 Start: 59271, Stop: 59684, Start Num: 37

Candidate Starts for ZhongYanYuan_92:

(Start: 37 @59271 has 78 MA's), (71, 59382), (79, 59421), (82, 59430), (99, 59508), (114, 59580), (136, 59658), (140, 59676),