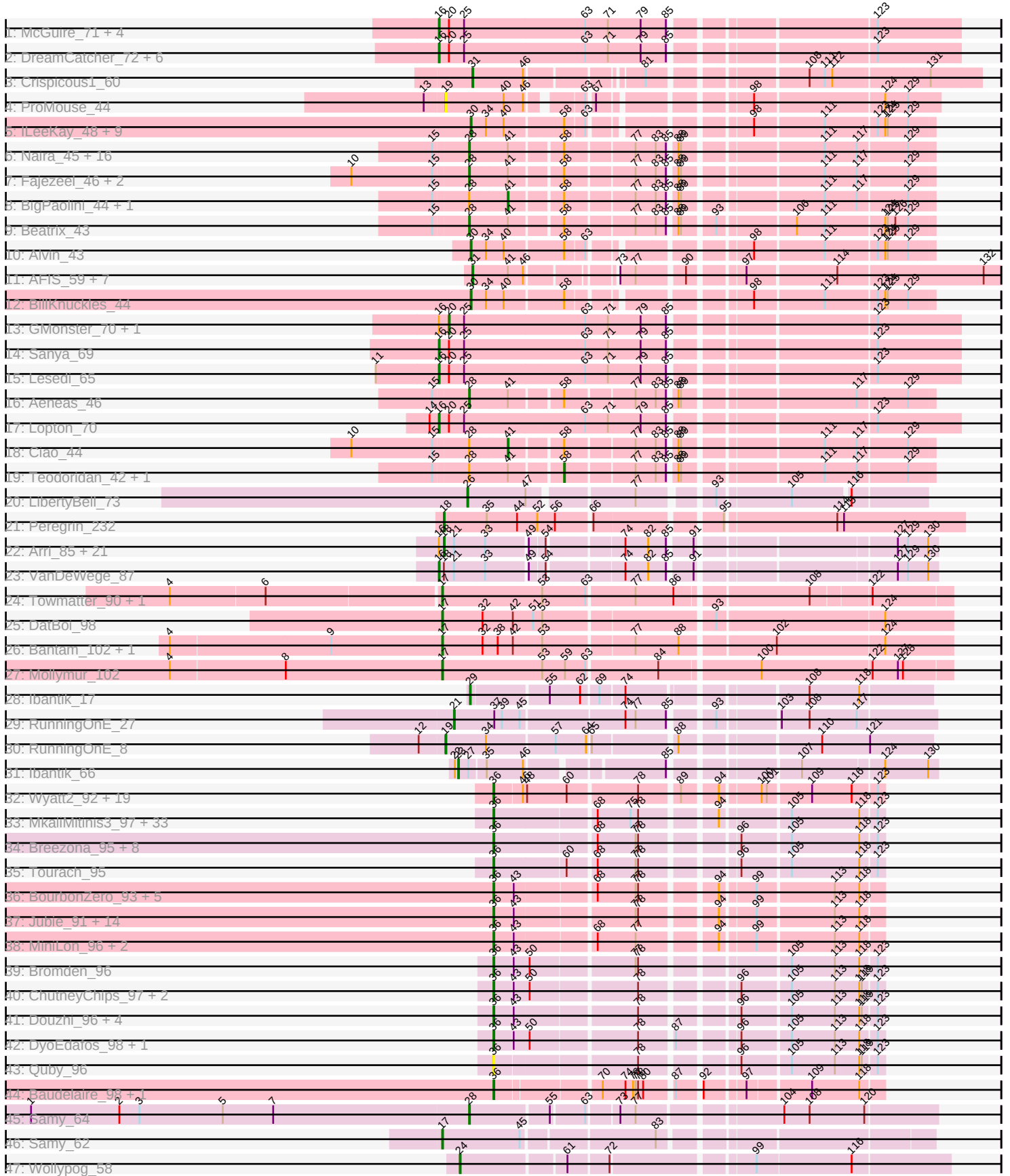


Pham 330495



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 330495 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330495 has 206 members, 28 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, Bigchung_69
- Track 3 : Crispious1_60
- Track 4 : ProMouse_44
- Track 5 : ILeeKay_48, Fushigi_42, Trouble_45, BluSpix_41, IgnatiusPatJac_43, Ajay_44, Kykar_44, Marco3_46, Seanderson_46, Petruchio_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, Smart_46
- Track 7 : Fajezeel_46, Greg_46, Pippin_46
- Track 8 : BigPaolini_44, Puppet_45
- Track 9 : Beatrix_43
- Track 10 : Alvin_43
- Track 11 : AFIS_59, Bruns_64, NEHalo_60, SpikeBT_61, Moose_64, SwissCheese_66, GageAP_64, Forsytheast_64
- Track 12 : BillKnuckles_44
- Track 13 : GMonster_70, IgnatiusPatJac_70
- Track 14 : Sanya_69
- Track 15 : Lesedi_65
- Track 16 : Aeneas_46
- Track 17 : Lopton_70
- Track 18 : Ciao_44
- Track 19 : Teodoridan_42, Ringer_45
- Track 20 : LibertyBell_73
- Track 21 : Peregrin_232
- Track 22 : 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 23 : VanDeWege_87
- Track 24 : Towmatter_90, Daredevil_91
- Track 25 : DatBoi_98
- Track 26 : Bantam_102, SpeedDemon_1040
- Track 27 : Mollymur_102
- Track 28 : Ibantik_17

- Track 29 : RunningOnE_27
- Track 30 : RunningOnE_8
- Track 31 : Ibantik_66
- Track 32 : 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 33 : MkaliMitinis3_97, Molivier_86, Underpass_87, DHan_98, OverPar_97, LilDestine_93, Archie_92, DanBing_94, Loadrie_94, Bazzle_92, Finemlucis_96, BigCheese_95, Claus_94, GuuelaD_92, Baoshan_95, Kahlid_94, Rossetti_95, Lewan_96, Zakai_96, Hafay_96, Nicholasp3_95, Hiraya_94, Crossroads_95, Vetrix_93, Sarshaun_96, Soap141_95, Wilder_96, BobsGarage_94, Lynnae_96, ZhongYanYuan_92, ChengKai98_94, Gardann_95, Rumpelstiltskin_91, SoJulia_97
- Track 34 : Breezona_95, Faith1_95, DrSeegs_94, Miley16_95, Wigglewiggle_95, Itos_95, Winky_95, Netyap_94, Gabriela_95
- Track 35 : Tourach_95
- Track 36 : BourbonZero_93, Ellson_91, KirDoubleO7_90, DuncansLeg_92, LiyuLake_91, Krypton555_94
- Track 37 : Jubie_91, Snenia_91, TriFive_93, Moostard_89, Jobypre_92, Red305_93, Finnry_92, Nicholas_90, MsGreen_92, Bellis_92, Kingsolomon_90, Samty_91, Clautastrophe_90, Lumos_92, Whirlwind_93
- Track 38 : MiniLon_96, MiniMac_96, Lolly9_91
- Track 39 : Bromden_96
- Track 40 : ChutneyChips_97, Chaser_95, FarmResident_97
- Track 41 : Douzhi_96, Sheng711_97, Douge_96, BrainDrainer_97, PYPDinur_96
- Track 42 : DyoEdafos_98, Kropertea_92
- Track 43 : Quby_96
- Track 44 : Baudelaire_98, Aegeus_98
- Track 45 : Samy_64
- Track 46 : Samy_62
- Track 47 : 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 36, it was called in 78 of the 178 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, ChengKai98_94, 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, Hiraya_94, 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, Molivier_86, 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, Wamburggrxpress_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:

-

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

- AFIS_59, AFIS_66, Aeneas_46, Ajay_44, Alvin_43, Arcanine_45, Arri_85, Bantam_102, Beatrix_43, Bexan_42, BigPaolini_44, Bigchungi_69, BillKnuckles_44, BluSpix_41, BluSpix_68, Bones_44, Bruns_64, CherryCola_84, Ciao_44, Crispicous1_60, Daredevil_91, DatBoi_98, Dexes_44, DreamCatcher_72, 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, KimmyK_83, Kykar_44, Lesedi_65, LibertyBell_73, Licorice_47, Lopton_70, Marco3_46, Marge_44, McGuire_71, McSinger_68, Mollymur_102, Moose_64, NEHalo_60, Naira_45, Niza_46, Peregrin_232, Petruchio_44, Phlop_82, PinkCoffee_86, Pippin_46, Portcullis_85, ProMouse_44, PullumCavea_83, Puppet_45, Rajelicia_45, Ringer_45, RogerDodger_88, RunningOnE_27, RunningOnE_8, Ruotula_47, Sagefire_47, Salvador_85, Samy_62, Samy_64, Sanya_69, SarFire_70, Savbucketdawg_80, Seanderson_46, Sendy_87, Shinji_84, Slagathor_46, Smairt_46, SmokingBunny_86, Snazzy_68, SpeedDemon_1040, SpikeBT_61, Squee_73, StrongArm_43, SwissCheese_66, Teodoridan_42, TheloniousMonk_45, Thor_70, TillyBobJoe_83, Togo_85, Towmatter_90, Trouble_45, Twister6_84, Valary_86, VanDeWege_87, Wizard_80, Wollypog_58,

Summary by start number:

Start 16:

- Found in 40 of 206 (19.4%) of genes in pham
- Manual Annotations of this start: 16 of 178
- Called 40.0% of time when present
- Phage (with cluster) where this start called: AFIS_66 (A1), Bigchungi_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), Sanya_69 (A1), SarFire_70 (A1), Snazzy_68 (A1), Squee_73 (A1), Thor_70 (A1), VanDeWege_87 (DC1),

Start 17:

- Found in 7 of 206 (3.4%) of genes in pham
- Manual Annotations of this start: 7 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_102 (DL), Daredevil_91 (DL), DatBoi_98 (DL), Mollymur_102 (DL), Samy_62 (singleton), SpeedDemon_1040 (DL), Towmatter_90 (DL),

Start 18:

- Found in 24 of 206 (11.7%) of genes in pham
- Manual Annotations of this start: 21 of 178

- Called 95.8% 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), Peregrin_232 (CB), 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 19:

- Found in 2 of 206 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ProMouse_44 (A1), RunningOnE_8 (JN),

Start 20:

- Found in 17 of 206 (8.3%) of genes in pham
- Manual Annotations of this start: 2 of 178
- Called 11.8% of time when present
- Phage (with cluster) where this start called: GMonster_70 (A1), IgnatiusPatJac_70 (A1),

Start 21:

- Found in 24 of 206 (11.7%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 4.2% of time when present
- Phage (with cluster) where this start called: RunningOnE_27 (JN),

Start 23:

- Found in 1 of 206 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik_66 (JN),

Start 24:

- Found in 1 of 206 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wollypog_58 (singleton),

Start 26:

- Found in 1 of 206 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LibertyBell_73 (BI3),

Start 28:

- Found in 28 of 206 (13.6%) of genes in pham
- Manual Annotations of this start: 23 of 178
- Called 82.1% 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), Samy_64 (singleton), Slagathor_46 (A1), Smairt_46 (A1), StrongArm_43 (A1), TheloniousMonk_45 (A1),

Start 29:

- Found in 1 of 206 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik_17 (JN),

Start 30:

- Found in 12 of 206 (5.8%) of genes in pham
- Manual Annotations of this start: 12 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ajay_44 (A1), Alvin_43 (A1), BillKnuckles_44 (A1), BluSpix_41 (A1), Fushigi_42 (A1), ILeeKay_48 (A1), IgnatiusPatJac_43 (A1), Kykar_44 (A1), Marco3_46 (A1), Petruchio_44 (A1), Seanderson_46 (A1), Trouble_45 (A1),

Start 31:

- Found in 9 of 206 (4.4%) of genes in pham
- Manual Annotations of this start: 9 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AFIS_59 (A1), Bruns_64 (A1), Crispicous1_60 (A1), Forsytheast_64 (A1), GageAP_64 (A1), Moose_64 (A1), NEHalo_60 (A1), SpikeBT_61 (A1), SwissCheese_66 (A1),

Start 36:

- Found in 102 of 206 (49.5%) of genes in pham
- Manual Annotations of this start: 78 of 178
- Called 100.0% 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), ChengKai98_94 (L2), 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), Hiraya_94 (L2), 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), MkaliMitinis3_97 (L2), Molivier_86 (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), Wamburggrxpress_90 (L1), Whirlwind_93 (L3), Wigglewiggles_95 (L2), Wilder_96 (L2), Winky_95 (L2), Wyatt2_92 (L1), Zakai_96 (L2), Zaria_91 (L1), ZhongYanYuan_92 (L2),

Start 41:

- Found in 35 of 206 (17.0%) of genes in pham
- Manual Annotations of this start: 3 of 178
- Called 8.6% of time when present
- Phage (with cluster) where this start called: BigPaolini_44 (A1), Ciao_44 (A1), Puppet_45 (A1),

Start 58:

- Found in 39 of 206 (18.9%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 5.1% of time when present
- Phage (with cluster) where this start called: Ringer_45 (A1), Teodoridan_42 (A1),

Summary by clusters:

There are 12 clusters represented in this pham: DL, CB, L4, A1, JN, L5, L2, L3, L1, singleton, BI3, DC1,

Info for manual annotations of cluster A1:

- Start number 16 was manually annotated 15 times for cluster A1.
- Start number 20 was manually annotated 2 times for cluster A1.
- Start number 28 was manually annotated 22 times for cluster A1.
- Start number 30 was manually annotated 12 times for cluster A1.
- Start number 31 was manually annotated 9 times for cluster A1.
- Start number 41 was manually annotated 3 times for cluster A1.
- Start number 58 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster BI3:

- Start number 26 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster CB:

- Start number 18 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster DC1:

- Start number 16 was manually annotated 1 time for cluster DC1.
- Start number 18 was manually annotated 20 times for cluster DC1.

Info for manual annotations of cluster DL:

- Start number 17 was manually annotated 6 times for cluster DL.

Info for manual annotations of cluster JN:

- Start number 19 was manually annotated 1 time for cluster JN.
- Start number 21 was manually annotated 1 time for cluster JN.
- Start number 23 was manually annotated 1 time for cluster JN.
- Start number 29 was manually annotated 1 time for cluster JN.

Info for manual annotations of cluster L1:

- Start number 36 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 36 was manually annotated 32 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 36 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 36 was manually annotated 6 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 36 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: AFIS_59 Start: 40536, Stop: 39979, Start Num: 31

Candidate Starts for AFIS_59:

(Start: 31 @40536 has 9 MA's), (Start: 41 @40494 has 3 MA's), (46, 40476), (73, 40392), (77, 40374), (90, 40323), (97, 40269), (114, 40167), (132, 39999),

Gene: AFIS_66 Start: 43840, Stop: 43262, Start Num: 16

Candidate Starts for AFIS_66:

(Start: 16 @43840 has 16 MA's), (Start: 20 @43828 has 2 MA's), (25, 43810), (63, 43669), (71, 43642), (79, 43603), (85, 43573), (123, 43360),

Gene: Acquire49_91 Start: 57365, Stop: 57775, Start Num: 36

Candidate Starts for Acquire49_91:

(Start: 36 @57365 has 78 MA's), (46, 57395), (48, 57398), (60, 57443), (78, 57521), (89, 57563), (94, 57599), (100, 57641), (101, 57647), (109, 57695), (116, 57740), (123, 57767),

Gene: Aegeus_98 Start: 59877, Stop: 60281, Start Num: 36

Candidate Starts for Aegeus_98:

(Start: 36 @59877 has 78 MA's), (70, 59988), (74, 60015), (76, 60024), (77, 60027), (78, 60030), (80, 60036), (87, 60066), (92, 60090), (97, 60132), (109, 60201), (118, 60255),

Gene: Aeneas_46 Start: 33206, Stop: 32721, Start Num: 28

Candidate Starts for Aeneas_46:

(15, 33245), (Start: 28 @33206 has 23 MA's), (Start: 41 @33164 has 3 MA's), (Start: 58 @33110 has 1 MA's), (77, 33035), (83, 33011), (85, 32999), (88, 32993), (89, 32990), (117, 32807), (129, 32750),

Gene: Ajay_44 Start: 32810, Stop: 32334, Start Num: 30

Candidate Starts for Ajay_44:

(Start: 30 @32810 has 12 MA's), (34, 32792), (40, 32771), (Start: 58 @32708 has 1 MA's), (63, 32687), (98, 32534), (111, 32456), (123, 32399), (124, 32390), (125, 32387), (129, 32363),

Gene: Alvin_43 Start: 33331, Stop: 32855, Start Num: 30

Candidate Starts for Alvin_43:

(Start: 30 @33331 has 12 MA's), (34, 33313), (40, 33292), (Start: 58 @33229 has 1 MA's), (63, 33208), (98, 33055), (111, 32977), (123, 32920), (124, 32911), (125, 32908), (129, 32884),

Gene: Appletree2_90 Start: 57125, Stop: 57535, Start Num: 36

Candidate Starts for Appletree2_90:

(Start: 36 @57125 has 78 MA's), (46, 57155), (48, 57158), (60, 57203), (78, 57281), (89, 57323), (94, 57359), (100, 57401), (101, 57407), (109, 57455), (116, 57500), (123, 57527),

Gene: Arcanine_45 Start: 32773, Stop: 32288, Start Num: 28

Candidate Starts for Arcanine_45:

(15, 32812), (Start: 28 @32773 has 23 MA's), (Start: 41 @32731 has 3 MA's), (Start: 58 @32677 has 1 MA's), (77, 32602), (83, 32578), (85, 32566), (88, 32560), (89, 32557), (111, 32410), (117, 32374), (129, 32317),

Gene: Archie_92 Start: 59049, Stop: 59462, Start Num: 36

Candidate Starts for Archie_92:

(Start: 36 @59049 has 78 MA's), (68, 59160), (75, 59199), (78, 59208), (94, 59286), (105, 59358), (118, 59436), (123, 59454),

Gene: Arri_85 Start: 56022, Stop: 55507, Start Num: 18

Candidate Starts for Arri_85:

(Start: 16 @56028 has 16 MA's), (Start: 18 @56022 has 21 MA's), (Start: 21 @56010 has 1 MA's), (33, 55974), (49, 55929), (54, 55914), (74, 55836), (82, 55809), (85, 55788), (91, 55764), (127, 55554), (129, 55542), (130, 55518),

Gene: AvadaKedavra_91 Start: 57477, Stop: 57887, Start Num: 36

Candidate Starts for AvadaKedavra_91:

(Start: 36 @57477 has 78 MA's), (46, 57507), (48, 57510), (60, 57555), (78, 57633), (89, 57675), (94, 57711), (100, 57753), (101, 57759), (109, 57807), (116, 57852), (123, 57879),

Gene: Bantam_102 Start: 67594, Stop: 68172, Start Num: 17

Candidate Starts for Bantam_102:

(4, 67276), (9, 67462), (Start: 17 @67594 has 7 MA's), (32, 67642), (38, 67660), (42, 67678), (53, 67711), (77, 67813), (88, 67864), (102, 67966), (124, 68092),

Gene: Baoshan_95 Start: 59704, Stop: 60117, Start Num: 36

Candidate Starts for Baoshan_95:

(Start: 36 @59704 has 78 MA's), (68, 59815), (75, 59854), (78, 59863), (94, 59941), (105, 60013), (118, 60091), (123, 60109),

Gene: Baudelaire_98 Start: 59877, Stop: 60281, Start Num: 36

Candidate Starts for Baudelaire_98:

(Start: 36 @59877 has 78 MA's), (70, 59988), (74, 60015), (76, 60024), (77, 60027), (78, 60030), (80, 60036), (87, 60066), (92, 60090), (97, 60132), (109, 60201), (118, 60255),

Gene: Bazzle_92 Start: 59605, Stop: 60018, Start Num: 36

Candidate Starts for Bazzle_92:

(Start: 36 @59605 has 78 MA's), (68, 59716), (75, 59755), (78, 59764), (94, 59842), (105, 59914), (118, 59992), (123, 60010),

Gene: Beatrix_43 Start: 34176, Stop: 33691, Start Num: 28

Candidate Starts for Beatrix_43:

(15, 34215), (Start: 28 @34176 has 23 MA's), (Start: 41 @34134 has 3 MA's), (Start: 58 @34080 has 1 MA's), (77, 34005), (83, 33981), (85, 33969), (88, 33963), (89, 33960), (93, 33927), (106, 33846), (111, 33813), (124, 33747), (125, 33744), (126, 33735), (129, 33720),

Gene: Bellis_92 Start: 59240, Stop: 59647, Start Num: 36

Candidate Starts for Bellis_92:

(Start: 36 @59240 has 78 MA's), (43, 59261), (77, 59390), (78, 59393), (94, 59471), (99, 59507), (113, 59594), (118, 59621),

Gene: Bexan_42 Start: 33854, Stop: 33369, Start Num: 28

Candidate Starts for Bexan_42:

(15, 33893), (Start: 28 @33854 has 23 MA's), (Start: 41 @33812 has 3 MA's), (Start: 58 @33758 has 1 MA's), (77, 33683), (83, 33659), (85, 33647), (88, 33641), (89, 33638), (111, 33491), (117, 33455), (129, 33398),

Gene: BigCheese_95 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for BigCheese_95:

(Start: 36 @59815 has 78 MA's), (68, 59926), (75, 59965), (78, 59974), (94, 60052), (105, 60124), (118, 60202), (123, 60220),

Gene: BigPaolini_44 Start: 31801, Stop: 31358, Start Num: 41

Candidate Starts for BigPaolini_44:

(15, 31882), (Start: 28 @31843 has 23 MA's), (Start: 41 @31801 has 3 MA's), (Start: 58 @31747 has 1 MA's), (77, 31672), (83, 31648), (85, 31636), (88, 31630), (89, 31627), (111, 31480), (117, 31444), (129, 31387),

Gene: Bigchungi_69 Start: 44593, Stop: 44015, Start Num: 16

Candidate Starts for Bigchungi_69:

(Start: 16 @44593 has 16 MA's), (Start: 20 @44581 has 2 MA's), (25, 44563), (63, 44422), (71, 44395), (79, 44356), (85, 44326), (123, 44113),

Gene: BillKnuckles_44 Start: 33515, Stop: 33039, Start Num: 30

Candidate Starts for BillKnuckles_44:

(Start: 30 @33515 has 12 MA's), (34, 33497), (40, 33476), (Start: 58 @33413 has 1 MA's), (98, 33239), (111, 33161), (123, 33104), (124, 33095), (125, 33092), (129, 33068),

Gene: BluSpix_41 Start: 28937, Stop: 28461, Start Num: 30

Candidate Starts for BluSpix_41:

(Start: 30 @28937 has 12 MA's), (34, 28919), (40, 28898), (Start: 58 @28835 has 1 MA's), (63, 28814), (98, 28661), (111, 28583), (123, 28526), (124, 28517), (125, 28514), (129, 28490),

Gene: BluSpix_68 Start: 40281, Stop: 39703, Start Num: 16

Candidate Starts for BluSpix_68:

(Start: 16 @40281 has 16 MA's), (Start: 20 @40269 has 2 MA's), (25, 40251), (63, 40110), (71, 40083), (79, 40044), (85, 40014), (123, 39801),

Gene: BobsGarage_94 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for BobsGarage_94:

(Start: 36 @59815 has 78 MA's), (68, 59926), (75, 59965), (78, 59974), (94, 60052), (105, 60124), (118, 60202), (123, 60220),

Gene: Bones_44 Start: 33339, Stop: 32854, Start Num: 28

Candidate Starts for Bones_44:

(15, 33378), (Start: 28 @33339 has 23 MA's), (Start: 41 @33297 has 3 MA's), (Start: 58 @33243 has 1 MA's), (77, 33168), (83, 33144), (85, 33132), (88, 33126), (89, 33123), (111, 32976), (117, 32940), (129, 32883),

Gene: BourbonZero_93 Start: 59266, Stop: 59673, Start Num: 36

Candidate Starts for BourbonZero_93:

(Start: 36 @59266 has 78 MA's), (43, 59287), (68, 59371), (77, 59416), (78, 59419), (94, 59497), (99, 59533), (113, 59620), (118, 59647),

Gene: BrainDrainer_97 Start: 59520, Stop: 59927, Start Num: 36

Candidate Starts for BrainDrainer_97:

(Start: 36 @59520 has 78 MA's), (43, 59541), (78, 59673), (96, 59769), (105, 59823), (113, 59874), (118, 59901), (119, 59904), (123, 59919),

Gene: Breezona_95 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for Breezona_95:

(Start: 36 @59815 has 78 MA's), (68, 59926), (77, 59971), (78, 59974), (96, 60070), (105, 60124), (118, 60202), (123, 60220),

Gene: Bromden_96 Start: 60413, Stop: 60820, Start Num: 36

Candidate Starts for Bromden_96:

(Start: 36 @60413 has 78 MA's), (43, 60434), (50, 60449), (77, 60563), (78, 60566), (105, 60716), (113, 60767), (118, 60794), (123, 60812),

Gene: Bruns_64 Start: 41012, Stop: 40455, Start Num: 31

Candidate Starts for Bruns_64:

(Start: 31 @41012 has 9 MA's), (Start: 41 @40970 has 3 MA's), (46, 40952), (73, 40868), (77, 40850), (90, 40799), (97, 40745), (114, 40643), (132, 40475),

Gene: Calm_92 Start: 57376, Stop: 57786, Start Num: 36

Candidate Starts for Calm_92:

(Start: 36 @57376 has 78 MA's), (46, 57406), (48, 57409), (60, 57454), (78, 57532), (89, 57574), (94, 57610), (100, 57652), (101, 57658), (109, 57706), (116, 57751), (123, 57778),

Gene: Chaser_95 Start: 58821, Stop: 59228, Start Num: 36

Candidate Starts for Chaser_95:

(Start: 36 @58821 has 78 MA's), (43, 58842), (50, 58857), (78, 58974), (96, 59070), (105, 59124), (113, 59175), (118, 59202), (119, 59205), (123, 59220),

Gene: ChengKai98_94 Start: 59289, Stop: 59702, Start Num: 36

Candidate Starts for ChengKai98_94:

(Start: 36 @59289 has 78 MA's), (68, 59400), (75, 59439), (78, 59448), (94, 59526), (105, 59598), (118, 59676), (123, 59694),

Gene: CherryCola_84 Start: 56435, Stop: 55920, Start Num: 18

Candidate Starts for CherryCola_84:

(Start: 16 @56441 has 16 MA's), (Start: 18 @56435 has 21 MA's), (Start: 21 @56423 has 1 MA's), (33, 56387), (49, 56342), (54, 56327), (74, 56249), (82, 56222), (85, 56201), (91, 56177), (127, 55967), (129, 55955), (130, 55931),

Gene: ChutneyChips_97 Start: 59567, Stop: 59974, Start Num: 36

Candidate Starts for ChutneyChips_97:

(Start: 36 @59567 has 78 MA's), (43, 59588), (50, 59603), (78, 59720), (96, 59816), (105, 59870), (113, 59921), (118, 59948), (119, 59951), (123, 59966),

Gene: Ciao_44 Start: 32944, Stop: 32501, Start Num: 41

Candidate Starts for Ciao_44:

(10, 33121), (15, 33025), (Start: 28 @32986 has 23 MA's), (Start: 41 @32944 has 3 MA's), (Start: 58 @32890 has 1 MA's), (77, 32815), (83, 32791), (85, 32779), (88, 32773), (89, 32770), (111, 32623), (117, 32587), (129, 32530),

Gene: CicholasNage_88 Start: 57029, Stop: 57439, Start Num: 36

Candidate Starts for CicholasNage_88:

(Start: 36 @57029 has 78 MA's), (46, 57059), (48, 57062), (60, 57107), (78, 57185), (89, 57227), (94, 57263), (100, 57305), (101, 57311), (109, 57359), (116, 57404), (123, 57431),

Gene: Claus_94 Start: 59528, Stop: 59941, Start Num: 36

Candidate Starts for Claus_94:

(Start: 36 @59528 has 78 MA's), (68, 59639), (75, 59678), (78, 59687), (94, 59765), (105, 59837), (118, 59915), (123, 59933),

Gene: Clautastrophe_90 Start: 59235, Stop: 59642, Start Num: 36

Candidate Starts for Clautastrophe_90:

(Start: 36 @59235 has 78 MA's), (43, 59256), (77, 59385), (78, 59388), (94, 59466), (99, 59502), (113, 59589), (118, 59616),

Gene: Crispicous1_60 Start: 40522, Stop: 39992, Start Num: 31

Candidate Starts for Crispicous1_60:

(Start: 31 @40522 has 9 MA's), (46, 40462), (81, 40348), (108, 40186), (111, 40168), (112, 40159), (131, 40051),

Gene: Crossroads_95 Start: 59527, Stop: 59940, Start Num: 36

Candidate Starts for Crossroads_95:

(Start: 36 @59527 has 78 MA's), (68, 59638), (75, 59677), (78, 59686), (94, 59764), (105, 59836), (118, 59914), (123, 59932),

Gene: DHan_98 Start: 59751, Stop: 60164, Start Num: 36

Candidate Starts for DHan_98:

(Start: 36 @59751 has 78 MA's), (68, 59862), (75, 59901), (78, 59910), (94, 59988), (105, 60060), (118, 60138), (123, 60156),

Gene: DanBing_94 Start: 59444, Stop: 59857, Start Num: 36

Candidate Starts for DanBing_94:

(Start: 36 @59444 has 78 MA's), (68, 59555), (75, 59594), (78, 59603), (94, 59681), (105, 59753), (118, 59831), (123, 59849),

Gene: Daredevil_91 Start: 63069, Stop: 63638, Start Num: 17

Candidate Starts for Daredevil_91:

(4, 62760), (6, 62871), (Start: 17 @63069 has 7 MA's), (53, 63186), (63, 63237), (77, 63291), (86, 63336), (108, 63480), (122, 63546),

Gene: DatBoi_98 Start: 66730, Stop: 67308, Start Num: 17

Candidate Starts for DatBoi_98:

(Start: 17 @66730 has 7 MA's), (32, 66778), (42, 66814), (51, 66838), (53, 66847), (93, 67036), (124, 67228),

Gene: Dexes_44 Start: 33602, Stop: 33117, Start Num: 28

Candidate Starts for Dexes_44:

(15, 33641), (Start: 28 @33602 has 23 MA's), (Start: 41 @33560 has 3 MA's), (Start: 58 @33506 has 1 MA's), (77, 33431), (83, 33407), (85, 33395), (88, 33389), (89, 33386), (111, 33239), (117, 33203),

(129, 33146),

Gene: DirkDirk_88 Start: 56705, Stop: 57115, Start Num: 36

Candidate Starts for DirkDirk_88:

(Start: 36 @56705 has 78 MA's), (46, 56735), (48, 56738), (60, 56783), (78, 56861), (89, 56903), (94, 56939), (100, 56981), (101, 56987), (109, 57035), (116, 57080), (123, 57107),

Gene: Douge_96 Start: 58940, Stop: 59347, Start Num: 36

Candidate Starts for Douge_96:

(Start: 36 @58940 has 78 MA's), (43, 58961), (78, 59093), (96, 59189), (105, 59243), (113, 59294), (118, 59321), (119, 59324), (123, 59339),

Gene: Douzhi_96 Start: 59209, Stop: 59616, Start Num: 36

Candidate Starts for Douzhi_96:

(Start: 36 @59209 has 78 MA's), (43, 59230), (78, 59362), (96, 59458), (105, 59512), (113, 59563), (118, 59590), (119, 59593), (123, 59608),

Gene: DrSeegs_94 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for DrSeegs_94:

(Start: 36 @59815 has 78 MA's), (68, 59926), (77, 59971), (78, 59974), (96, 60070), (105, 60124), (118, 60202), (123, 60220),

Gene: DreamCatcher_72 Start: 44845, Stop: 44267, Start Num: 16

Candidate Starts for DreamCatcher_72:

(Start: 16 @44845 has 16 MA's), (Start: 20 @44833 has 2 MA's), (25, 44815), (63, 44674), (71, 44647), (79, 44608), (85, 44578), (123, 44365),

Gene: DuncansLeg_92 Start: 59254, Stop: 59661, Start Num: 36

Candidate Starts for DuncansLeg_92:

(Start: 36 @59254 has 78 MA's), (43, 59275), (68, 59359), (77, 59404), (78, 59407), (94, 59485), (99, 59521), (113, 59608), (118, 59635),

Gene: DyoEdafos_98 Start: 59531, Stop: 59938, Start Num: 36

Candidate Starts for DyoEdafos_98:

(Start: 36 @59531 has 78 MA's), (43, 59552), (50, 59567), (78, 59684), (87, 59720), (96, 59780), (105, 59834), (113, 59885), (118, 59912), (123, 59930),

Gene: Egi03_83 Start: 55457, Stop: 54942, Start Num: 18

Candidate Starts for Egi03_83:

(Start: 16 @55463 has 16 MA's), (Start: 18 @55457 has 21 MA's), (Start: 21 @55445 has 1 MA's), (33, 55409), (49, 55364), (54, 55349), (74, 55271), (82, 55244), (85, 55223), (91, 55199), (127, 54989), (129, 54977), (130, 54953),

Gene: Ellson_91 Start: 59569, Stop: 59976, Start Num: 36

Candidate Starts for Ellson_91:

(Start: 36 @59569 has 78 MA's), (43, 59590), (68, 59674), (77, 59719), (78, 59722), (94, 59800), (99, 59836), (113, 59923), (118, 59950),

Gene: Enceladus_88 Start: 57406, Stop: 57816, Start Num: 36

Candidate Starts for Enceladus_88:

(Start: 36 @57406 has 78 MA's), (46, 57436), (48, 57439), (60, 57484), (78, 57562), (89, 57604), (94, 57640), (100, 57682), (101, 57688), (109, 57736), (116, 57781), (123, 57808),

Gene: Evamon_85 Start: 55834, Stop: 55319, Start Num: 18

Candidate Starts for Evamon_85:

(Start: 16 @55840 has 16 MA's), (Start: 18 @55834 has 21 MA's), (Start: 21 @55822 has 1 MA's), (33, 55786), (49, 55741), (54, 55726), (74, 55648), (82, 55621), (85, 55600), (91, 55576), (127, 55366), (129, 55354), (130, 55330),

Gene: Eyeball_45 Start: 33249, Stop: 32764, Start Num: 28

Candidate Starts for Eyeball_45:

(15, 33288), (Start: 28 @33249 has 23 MA's), (Start: 41 @33207 has 3 MA's), (Start: 58 @33153 has 1 MA's), (77, 33078), (83, 33054), (85, 33042), (88, 33036), (89, 33033), (111, 32886), (117, 32850), (129, 32793),

Gene: Faith1_95 Start: 59452, Stop: 59865, Start Num: 36

Candidate Starts for Faith1_95:

(Start: 36 @59452 has 78 MA's), (68, 59563), (77, 59608), (78, 59611), (96, 59707), (105, 59761), (118, 59839), (123, 59857),

Gene: Fajezeel_46 Start: 33359, Stop: 32874, Start Num: 28

Candidate Starts for Fajezeel_46:

(10, 33494), (15, 33398), (Start: 28 @33359 has 23 MA's), (Start: 41 @33317 has 3 MA's), (Start: 58 @33263 has 1 MA's), (77, 33188), (83, 33164), (85, 33152), (88, 33146), (89, 33143), (111, 32996), (117, 32960), (129, 32903),

Gene: FarmResident_97 Start: 59091, Stop: 59498, Start Num: 36

Candidate Starts for FarmResident_97:

(Start: 36 @59091 has 78 MA's), (43, 59112), (50, 59127), (78, 59244), (96, 59340), (105, 59394), (113, 59445), (118, 59472), (119, 59475), (123, 59490),

Gene: Fenn_45 Start: 34680, Stop: 34195, Start Num: 28

Candidate Starts for Fenn_45:

(15, 34719), (Start: 28 @34680 has 23 MA's), (Start: 41 @34638 has 3 MA's), (Start: 58 @34584 has 1 MA's), (77, 34509), (83, 34485), (85, 34473), (88, 34467), (89, 34464), (111, 34317), (117, 34281), (129, 34224),

Gene: Finemlucis_96 Start: 60566, Stop: 60979, Start Num: 36

Candidate Starts for Finemlucis_96:

(Start: 36 @60566 has 78 MA's), (68, 60677), (75, 60716), (78, 60725), (94, 60803), (105, 60875), (118, 60953), (123, 60971),

Gene: Finnry_92 Start: 59588, Stop: 59995, Start Num: 36

Candidate Starts for Finnry_92:

(Start: 36 @59588 has 78 MA's), (43, 59609), (77, 59738), (78, 59741), (94, 59819), (99, 59855), (113, 59942), (118, 59969),

Gene: Fireball_88 Start: 56296, Stop: 55781, Start Num: 18

Candidate Starts for Fireball_88:

(Start: 16 @56302 has 16 MA's), (Start: 18 @56296 has 21 MA's), (Start: 21 @56284 has 1 MA's), (33, 56248), (49, 56203), (54, 56188), (74, 56110), (82, 56083), (85, 56062), (91, 56038), (127, 55828), (129, 55816), (130, 55792),

Gene: Forsytheast_64 Start: 41180, Stop: 40623, Start Num: 31

Candidate Starts for Forsytheast_64:

(Start: 31 @41180 has 9 MA's), (Start: 41 @41138 has 3 MA's), (46, 41120), (73, 41036), (77, 41018), (90, 40967), (97, 40913), (114, 40811), (132, 40643),

Gene: Fushigi_42 Start: 30914, Stop: 30438, Start Num: 30

Candidate Starts for Fushigi_42:

(Start: 30 @30914 has 12 MA's), (34, 30896), (40, 30875), (Start: 58 @30812 has 1 MA's), (63, 30791), (98, 30638), (111, 30560), (123, 30503), (124, 30494), (125, 30491), (129, 30467),

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

Candidate Starts for GMonster_70:

(Start: 16 @44884 has 16 MA's), (Start: 20 @44872 has 2 MA's), (25, 44854), (63, 44713), (71, 44686), (79, 44647), (85, 44617), (123, 44404),

Gene: Gabriela_95 Start: 58798, Stop: 59211, Start Num: 36

Candidate Starts for Gabriela_95:

(Start: 36 @58798 has 78 MA's), (68, 58909), (77, 58954), (78, 58957), (96, 59053), (105, 59107), (118, 59185), (123, 59203),

Gene: GageAP_64 Start: 42203, Stop: 41646, Start Num: 31

Candidate Starts for GageAP_64:

(Start: 31 @42203 has 9 MA's), (Start: 41 @42161 has 3 MA's), (46, 42143), (73, 42059), (77, 42041), (90, 41990), (97, 41936), (114, 41834), (132, 41666),

Gene: Gardann_95 Start: 59299, Stop: 59712, Start Num: 36

Candidate Starts for Gardann_95:

(Start: 36 @59299 has 78 MA's), (68, 59410), (75, 59449), (78, 59458), (94, 59536), (105, 59608), (118, 59686), (123, 59704),

Gene: Gezellig_81 Start: 55680, Stop: 55165, Start Num: 18

Candidate Starts for Gezellig_81:

(Start: 16 @55686 has 16 MA's), (Start: 18 @55680 has 21 MA's), (Start: 21 @55668 has 1 MA's), (33, 55632), (49, 55587), (54, 55572), (74, 55494), (82, 55467), (85, 55446), (91, 55422), (127, 55212), (129, 55200), (130, 55176),

Gene: GrecoEtereo_71 Start: 44625, Stop: 44047, Start Num: 16

Candidate Starts for GrecoEtereo_71:

(Start: 16 @44625 has 16 MA's), (Start: 20 @44613 has 2 MA's), (25, 44595), (63, 44454), (71, 44427), (79, 44388), (85, 44358), (123, 44145),

Gene: Greg_46 Start: 33359, Stop: 32874, Start Num: 28

Candidate Starts for Greg_46:

(10, 33494), (15, 33398), (Start: 28 @33359 has 23 MA's), (Start: 41 @33317 has 3 MA's), (Start: 58 @33263 has 1 MA's), (77, 33188), (83, 33164), (85, 33152), (88, 33146), (89, 33143), (111, 32996), (117, 32960), (129, 32903),

Gene: GuuelaD_92 Start: 59411, Stop: 59824, Start Num: 36

Candidate Starts for GuuelaD_92:

(Start: 36 @59411 has 78 MA's), (68, 59522), (75, 59561), (78, 59570), (94, 59648), (105, 59720), (118, 59798), (123, 59816),

Gene: Hafay_96 Start: 59523, Stop: 59936, Start Num: 36

Candidate Starts for Hafay_96:

(Start: 36 @59523 has 78 MA's), (68, 59634), (75, 59673), (78, 59682), (94, 59760), (105, 59832), (118, 59910), (123, 59928),

Gene: Halena_88 Start: 56292, Stop: 56702, Start Num: 36

Candidate Starts for Halena_88:

(Start: 36 @56292 has 78 MA's), (46, 56322), (48, 56325), (60, 56370), (78, 56448), (89, 56490), (94, 56526), (100, 56568), (101, 56574), (109, 56622), (116, 56667), (123, 56694),

Gene: Hiraya_94 Start: 59377, Stop: 59790, Start Num: 36

Candidate Starts for Hiraya_94:

(Start: 36 @59377 has 78 MA's), (68, 59488), (75, 59527), (78, 59536), (94, 59614), (105, 59686), (118, 59764), (123, 59782),

Gene: ILeeKay_48 Start: 33858, Stop: 33382, Start Num: 30

Candidate Starts for ILeeKay_48:

(Start: 30 @33858 has 12 MA's), (34, 33840), (40, 33819), (Start: 58 @33756 has 1 MA's), (63, 33735), (98, 33582), (111, 33504), (123, 33447), (124, 33438), (125, 33435), (129, 33411),

Gene: Ibantik_17 Start: 6683, Stop: 6195, Start Num: 29

Candidate Starts for Ibantik_17:

(Start: 29 @6683 has 1 MA's), (55, 6599), (62, 6566), (69, 6548), (74, 6521), (108, 6335), (118, 6278),

Gene: Ibantik_66 Start: 28032, Stop: 28526, Start Num: 23

Candidate Starts for Ibantik_66:

(22, 28029), (Start: 23 @28032 has 1 MA's), (27, 28044), (35, 28062), (46, 28104), (85, 28245), (107, 28374), (124, 28464), (130, 28515),

Gene: Ichabod_74 Start: 45654, Stop: 45076, Start Num: 16

Candidate Starts for Ichabod_74:

(Start: 16 @45654 has 16 MA's), (Start: 20 @45642 has 2 MA's), (25, 45624), (63, 45483), (71, 45456), (79, 45417), (85, 45387), (123, 45174),

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

Candidate Starts for IgnatiusPatJac_70:

(Start: 16 @44226 has 16 MA's), (Start: 20 @44214 has 2 MA's), (25, 44196), (63, 44055), (71, 44028), (79, 43989), (85, 43959), (123, 43746),

Gene: IgnatiusPatJac_43 Start: 32882, Stop: 32406, Start Num: 30

Candidate Starts for IgnatiusPatJac_43:

(Start: 30 @32882 has 12 MA's), (34, 32864), (40, 32843), (Start: 58 @32780 has 1 MA's), (63, 32759), (98, 32606), (111, 32528), (123, 32471), (124, 32462), (125, 32459), (129, 32435),

Gene: Itos_95 Start: 58358, Stop: 58771, Start Num: 36

Candidate Starts for Itos_95:

(Start: 36 @58358 has 78 MA's), (68, 58469), (77, 58514), (78, 58517), (96, 58613), (105, 58667), (118, 58745), (123, 58763),

Gene: Jobypre_92 Start: 59235, Stop: 59642, Start Num: 36

Candidate Starts for Jobypre_92:

(Start: 36 @59235 has 78 MA's), (43, 59256), (77, 59385), (78, 59388), (94, 59466), (99, 59502), (113, 59589), (118, 59616),

Gene: JoeDirt_92 Start: 57967, Stop: 58377, Start Num: 36

Candidate Starts for JoeDirt_92:

(Start: 36 @57967 has 78 MA's), (46, 57997), (48, 58000), (60, 58045), (78, 58123), (89, 58165), (94, 58201), (100, 58243), (101, 58249), (109, 58297), (116, 58342), (123, 58369),

Gene: Jubie_91 Start: 59370, Stop: 59777, Start Num: 36

Candidate Starts for Jubie_91:

(Start: 36 @59370 has 78 MA's), (43, 59391), (77, 59520), (78, 59523), (94, 59601), (99, 59637), (113, 59724), (118, 59751),

Gene: Kahlid_94 Start: 59217, Stop: 59630, Start Num: 36

Candidate Starts for Kahlid_94:

(Start: 36 @59217 has 78 MA's), (68, 59328), (75, 59367), (78, 59376), (94, 59454), (105, 59526), (118, 59604), (123, 59622),

Gene: KimmyK_83 Start: 56127, Stop: 55612, Start Num: 18

Candidate Starts for KimmyK_83:

(Start: 16 @56133 has 16 MA's), (Start: 18 @56127 has 21 MA's), (Start: 21 @56115 has 1 MA's), (33, 56079), (49, 56034), (54, 56019), (74, 55941), (82, 55914), (85, 55893), (91, 55869), (127, 55659), (129, 55647), (130, 55623),

Gene: Kingsolomon_90 Start: 59344, Stop: 59751, Start Num: 36

Candidate Starts for Kingsolomon_90:

(Start: 36 @59344 has 78 MA's), (43, 59365), (77, 59494), (78, 59497), (94, 59575), (99, 59611), (113, 59698), (118, 59725),

Gene: KirDoubleO7_90 Start: 59256, Stop: 59663, Start Num: 36

Candidate Starts for KirDoubleO7_90:

(Start: 36 @59256 has 78 MA's), (43, 59277), (68, 59361), (77, 59406), (78, 59409), (94, 59487), (99, 59523), (113, 59610), (118, 59637),

Gene: Kropertea_92 Start: 58811, Stop: 59221, Start Num: 36

Candidate Starts for Kropertea_92:

(Start: 36 @58811 has 78 MA's), (43, 58832), (50, 58847), (78, 58967), (87, 59003), (96, 59063), (105, 59117), (113, 59168), (118, 59195), (123, 59213),

Gene: Krypton555_94 Start: 59747, Stop: 60154, Start Num: 36

Candidate Starts for Krypton555_94:

(Start: 36 @59747 has 78 MA's), (43, 59768), (68, 59852), (77, 59897), (78, 59900), (94, 59978), (99, 60014), (113, 60101), (118, 60128),

Gene: Kykar_44 Start: 32934, Stop: 32458, Start Num: 30

Candidate Starts for Kykar_44:

(Start: 30 @32934 has 12 MA's), (34, 32916), (40, 32895), (Start: 58 @32832 has 1 MA's), (63, 32811), (98, 32658), (111, 32580), (123, 32523), (124, 32514), (125, 32511), (129, 32487),

Gene: LeBron_90 Start: 56599, Stop: 57009, Start Num: 36

Candidate Starts for LeBron_90:

(Start: 36 @56599 has 78 MA's), (46, 56629), (48, 56632), (60, 56677), (78, 56755), (89, 56797), (94, 56833), (100, 56875), (101, 56881), (109, 56929), (116, 56974), (123, 57001),

Gene: Lesedi_65 Start: 42530, Stop: 41952, Start Num: 16

Candidate Starts for Lesedi_65:

(11, 42602), (Start: 16 @42530 has 16 MA's), (Start: 20 @42518 has 2 MA's), (25, 42500), (63, 42359), (71, 42332), (79, 42293), (85, 42263), (123, 42050),

Gene: Lewan_96 Start: 59451, Stop: 59864, Start Num: 36

Candidate Starts for Lewan_96:

(Start: 36 @59451 has 78 MA's), (68, 59562), (75, 59601), (78, 59610), (94, 59688), (105, 59760), (118, 59838), (123, 59856),

Gene: LibertyBell_73 Start: 45969, Stop: 46457, Start Num: 26

Candidate Starts for LibertyBell_73:

(Start: 26 @45969 has 1 MA's), (47, 46038), (77, 46152), (93, 46227), (105, 46308), (116, 46371),

Gene: Licorice_47 Start: 34445, Stop: 33960, Start Num: 28

Candidate Starts for Licorice_47:

(15, 34484), (Start: 28 @34445 has 23 MA's), (Start: 41 @34403 has 3 MA's), (Start: 58 @34349 has 1 MA's), (77, 34274), (83, 34250), (85, 34238), (88, 34232), (89, 34229), (111, 34082), (117, 34046), (129, 33989),

Gene: LilDestine_93 Start: 59128, Stop: 59541, Start Num: 36

Candidate Starts for LilDestine_93:

(Start: 36 @59128 has 78 MA's), (68, 59239), (75, 59278), (78, 59287), (94, 59365), (105, 59437), (118, 59515), (123, 59533),

Gene: LiyuLake_91 Start: 59329, Stop: 59736, Start Num: 36

Candidate Starts for LiyuLake_91:

(Start: 36 @59329 has 78 MA's), (43, 59350), (68, 59434), (77, 59479), (78, 59482), (94, 59560), (99, 59596), (113, 59683), (118, 59710),

Gene: Loadrie_94 Start: 59619, Stop: 60032, Start Num: 36

Candidate Starts for Loadrie_94:

(Start: 36 @59619 has 78 MA's), (68, 59730), (75, 59769), (78, 59778), (94, 59856), (105, 59928), (118, 60006), (123, 60024),

Gene: Lolly9_91 Start: 59420, Stop: 59827, Start Num: 36

Candidate Starts for Lolly9_91:

(Start: 36 @59420 has 78 MA's), (43, 59441), (68, 59525), (77, 59570), (94, 59651), (99, 59687), (113, 59774), (118, 59801),

Gene: Lopton_70 Start: 46302, Stop: 45724, Start Num: 16

Candidate Starts for Lopton_70:

(14, 46311), (Start: 16 @46302 has 16 MA's), (Start: 20 @46290 has 2 MA's), (25, 46272), (63, 46131), (71, 46104), (79, 46065), (85, 46035), (123, 45822),

Gene: Lumos_92 Start: 59232, Stop: 59639, Start Num: 36

Candidate Starts for Lumos_92:

(Start: 36 @59232 has 78 MA's), (43, 59253), (77, 59382), (78, 59385), (94, 59463), (99, 59499), (113, 59586), (118, 59613),

Gene: Lynnae_96 Start: 59229, Stop: 59642, Start Num: 36

Candidate Starts for Lynnae_96:

(Start: 36 @59229 has 78 MA's), (68, 59340), (75, 59379), (78, 59388), (94, 59466), (105, 59538), (118, 59616), (123, 59634),

Gene: MAckerman_89 Start: 56285, Stop: 56695, Start Num: 36

Candidate Starts for MAckerman_89:

(Start: 36 @56285 has 78 MA's), (46, 56315), (48, 56318), (60, 56363), (78, 56441), (89, 56483), (94, 56519), (100, 56561), (101, 56567), (109, 56615), (116, 56660), (123, 56687),

Gene: Marco3_46 Start: 33679, Stop: 33203, Start Num: 30

Candidate Starts for Marco3_46:

(Start: 30 @33679 has 12 MA's), (34, 33661), (40, 33640), (Start: 58 @33577 has 1 MA's), (63, 33556), (98, 33403), (111, 33325), (123, 33268), (124, 33259), (125, 33256), (129, 33232),

Gene: Marge_44 Start: 33477, Stop: 32992, Start Num: 28

Candidate Starts for Marge_44:

(15, 33516), (Start: 28 @33477 has 23 MA's), (Start: 41 @33435 has 3 MA's), (Start: 58 @33381 has 1 MA's), (77, 33306), (83, 33282), (85, 33270), (88, 33264), (89, 33261), (111, 33114), (117, 33078), (129, 33021),

Gene: McGuire_71 Start: 44174, Stop: 43596, Start Num: 16

Candidate Starts for McGuire_71:

(Start: 16 @44174 has 16 MA's), (Start: 20 @44162 has 2 MA's), (25, 44144), (63, 44003), (71, 43976), (79, 43937), (85, 43907), (123, 43694),

Gene: McSinger_68 Start: 43534, Stop: 42956, Start Num: 16

Candidate Starts for McSinger_68:

(Start: 16 @43534 has 16 MA's), (Start: 20 @43522 has 2 MA's), (25, 43504), (63, 43363), (71, 43336), (79, 43297), (85, 43267), (123, 43054),

Gene: Miley16_95 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for Miley16_95:

(Start: 36 @59815 has 78 MA's), (68, 59926), (77, 59971), (78, 59974), (96, 60070), (105, 60124), (118, 60202), (123, 60220),

Gene: MiniLon_96 Start: 59421, Stop: 59828, Start Num: 36

Candidate Starts for MiniLon_96:

(Start: 36 @59421 has 78 MA's), (43, 59442), (68, 59526), (77, 59571), (94, 59652), (99, 59688), (113, 59775), (118, 59802),

Gene: MiniMac_96 Start: 59416, Stop: 59823, Start Num: 36

Candidate Starts for MiniMac_96:

(Start: 36 @59416 has 78 MA's), (43, 59437), (68, 59521), (77, 59566), (94, 59647), (99, 59683), (113, 59770), (118, 59797),

Gene: MkaliMitinis3_97 Start: 59582, Stop: 59995, Start Num: 36

Candidate Starts for MkaliMitinis3_97:

(Start: 36 @59582 has 78 MA's), (68, 59693), (75, 59732), (78, 59741), (94, 59819), (105, 59891), (118, 59969), (123, 59987),

Gene: Molivier_86 Start: 54379, Stop: 54792, Start Num: 36

Candidate Starts for Molivier_86:

(Start: 36 @54379 has 78 MA's), (68, 54490), (75, 54529), (78, 54538), (94, 54616), (105, 54688), (118, 54766), (123, 54784),

Gene: Mollymur_102 Start: 68397, Stop: 68978, Start Num: 17

Candidate Starts for Mollymur_102:

(4, 68076), (8, 68211), (Start: 17 @68397 has 7 MA's), (53, 68514), (59, 68541), (63, 68565), (84, 68646), (100, 68757), (122, 68886), (127, 68916), (128, 68922),

Gene: Moose_64 Start: 41180, Stop: 40623, Start Num: 31

Candidate Starts for Moose_64:

(Start: 31 @41180 has 9 MA's), (Start: 41 @41138 has 3 MA's), (46, 41120), (73, 41036), (77, 41018), (90, 40967), (97, 40913), (114, 40811), (132, 40643),

Gene: Moostard_89 Start: 59339, Stop: 59746, Start Num: 36

Candidate Starts for Moostard_89:

(Start: 36 @59339 has 78 MA's), (43, 59360), (77, 59489), (78, 59492), (94, 59570), (99, 59606), (113, 59693), (118, 59720),

Gene: MsGreen_92 Start: 59234, Stop: 59641, Start Num: 36

Candidate Starts for MsGreen_92:

(Start: 36 @59234 has 78 MA's), (43, 59255), (77, 59384), (78, 59387), (94, 59465), (99, 59501), (113, 59588), (118, 59615),

Gene: NEHalo_60 Start: 41604, Stop: 41047, Start Num: 31

Candidate Starts for NEHalo_60:

(Start: 31 @41604 has 9 MA's), (Start: 41 @41562 has 3 MA's), (46, 41544), (73, 41460), (77, 41442), (90, 41391), (97, 41337), (114, 41235), (132, 41067),

Gene: Naira_45 Start: 34727, Stop: 34242, Start Num: 28

Candidate Starts for Naira_45:

(15, 34766), (Start: 28 @34727 has 23 MA's), (Start: 41 @34685 has 3 MA's), (Start: 58 @34631 has 1 MA's), (77, 34556), (83, 34532), (85, 34520), (88, 34514), (89, 34511), (111, 34364), (117, 34328), (129, 34271),

Gene: Netyap_94 Start: 59453, Stop: 59866, Start Num: 36

Candidate Starts for Netyap_94:

(Start: 36 @59453 has 78 MA's), (68, 59564), (77, 59609), (78, 59612), (96, 59708), (105, 59762), (118, 59840), (123, 59858),

Gene: Nicholas_90 Start: 59344, Stop: 59751, Start Num: 36

Candidate Starts for Nicholas_90:

(Start: 36 @59344 has 78 MA's), (43, 59365), (77, 59494), (78, 59497), (94, 59575), (99, 59611), (113, 59698), (118, 59725),

Gene: Nicholasp3_95 Start: 59299, Stop: 59712, Start Num: 36

Candidate Starts for Nicholasp3_95:

(Start: 36 @59299 has 78 MA's), (68, 59410), (75, 59449), (78, 59458), (94, 59536), (105, 59608), (118, 59686), (123, 59704),

Gene: Niza_46 Start: 34104, Stop: 33619, Start Num: 28

Candidate Starts for Niza_46:

(15, 34143), (Start: 28 @34104 has 23 MA's), (Start: 41 @34062 has 3 MA's), (Start: 58 @34008 has 1 MA's), (77, 33933), (83, 33909), (85, 33897), (88, 33891), (89, 33888), (111, 33741), (117, 33705), (129, 33648),

Gene: OhShagHennessy_87 Start: 56542, Stop: 56952, Start Num: 36

Candidate Starts for OhShagHennessy_87:

(Start: 36 @56542 has 78 MA's), (46, 56572), (48, 56575), (60, 56620), (78, 56698), (89, 56740), (94, 56776), (100, 56818), (101, 56824), (109, 56872), (116, 56917), (123, 56944),

Gene: OverPar_97 Start: 59619, Stop: 60032, Start Num: 36

Candidate Starts for OverPar_97:

(Start: 36 @59619 has 78 MA's), (68, 59730), (75, 59769), (78, 59778), (94, 59856), (105, 59928), (118, 60006), (123, 60024),

Gene: PYPDinur_96 Start: 59772, Stop: 60179, Start Num: 36

Candidate Starts for PYPDinur_96:

(Start: 36 @59772 has 78 MA's), (43, 59793), (78, 59925), (96, 60021), (105, 60075), (113, 60126), (118, 60153), (119, 60156), (123, 60171),

Gene: Peregrin_232 Start: 114891, Stop: 115472, Start Num: 18

Candidate Starts for Peregrin_232:

(Start: 18 @114891 has 21 MA's), (35, 114942), (44, 114978), (52, 115002), (56, 115023), (66, 115062), (95, 115197), (114, 115323), (115, 115329),

Gene: Petruchio_44 Start: 32947, Stop: 32471, Start Num: 30

Candidate Starts for Petruchio_44:

(Start: 30 @32947 has 12 MA's), (34, 32929), (40, 32908), (Start: 58 @32845 has 1 MA's), (63, 32824), (98, 32671), (111, 32593), (123, 32536), (124, 32527), (125, 32524), (129, 32500),

Gene: Phlop_82 Start: 55730, Stop: 55215, Start Num: 18

Candidate Starts for Phlop_82:

(Start: 16 @55736 has 16 MA's), (Start: 18 @55730 has 21 MA's), (Start: 21 @55718 has 1 MA's), (33, 55682), (49, 55637), (54, 55622), (74, 55544), (82, 55517), (85, 55496), (91, 55472), (127, 55262), (129, 55250), (130, 55226),

Gene: PinkCoffee_86 Start: 55594, Stop: 55079, Start Num: 18

Candidate Starts for PinkCoffee_86:

(Start: 16 @55600 has 16 MA's), (Start: 18 @55594 has 21 MA's), (Start: 21 @55582 has 1 MA's), (33, 55546), (49, 55501), (54, 55486), (74, 55408), (82, 55381), (85, 55360), (91, 55336), (127, 55126), (129, 55114), (130, 55090),

Gene: Pippin_46 Start: 33403, Stop: 32918, Start Num: 28

Candidate Starts for Pippin_46:

(10, 33538), (15, 33442), (Start: 28 @33403 has 23 MA's), (Start: 41 @33361 has 3 MA's), (Start: 58 @33307 has 1 MA's), (77, 33232), (83, 33208), (85, 33196), (88, 33190), (89, 33187), (111, 33040), (117, 33004), (129, 32947),

Gene: Poochiewood_89 Start: 57939, Stop: 58349, Start Num: 36

Candidate Starts for Poochiewood_89:

(Start: 36 @57939 has 78 MA's), (46, 57969), (48, 57972), (60, 58017), (78, 58095), (89, 58137), (94, 58173), (100, 58215), (101, 58221), (109, 58269), (116, 58314), (123, 58341),

Gene: Portcullis_85 Start: 55736, Stop: 55221, Start Num: 18

Candidate Starts for Portcullis_85:

(Start: 16 @55742 has 16 MA's), (Start: 18 @55736 has 21 MA's), (Start: 21 @55724 has 1 MA's), (33, 55688), (49, 55643), (54, 55628), (74, 55550), (82, 55523), (85, 55502), (91, 55478), (127, 55268), (129, 55256), (130, 55232),

Gene: ProMouse_44 Start: 33305, Stop: 32802, Start Num: 19

Candidate Starts for ProMouse_44:

(13, 33329), (Start: 19 @33305 has 1 MA's), (40, 33236), (46, 33215), (63, 33164), (67, 33158), (98, 33011), (124, 32867), (129, 32840),

Gene: PullumCavea_83 Start: 55907, Stop: 55392, Start Num: 18

Candidate Starts for PullumCavea_83:

(Start: 16 @55913 has 16 MA's), (Start: 18 @55907 has 21 MA's), (Start: 21 @55895 has 1 MA's), (33, 55859), (49, 55814), (54, 55799), (74, 55721), (82, 55694), (85, 55673), (91, 55649), (127, 55439), (129, 55427), (130, 55403),

Gene: Puppet_45 Start: 33477, Stop: 33034, Start Num: 41

Candidate Starts for Puppet_45:

(15, 33558), (Start: 28 @33519 has 23 MA's), (Start: 41 @33477 has 3 MA's), (Start: 58 @33423 has 1 MA's), (77, 33348), (83, 33324), (85, 33312), (88, 33306), (89, 33303), (111, 33156), (117, 33120), (129, 33063),

Gene: Quby_96 Start: 59183, Stop: 59590, Start Num: 36

Candidate Starts for Quby_96:

(Start: 36 @59183 has 78 MA's), (78, 59336), (96, 59432), (105, 59486), (113, 59537), (118, 59564), (119, 59567), (123, 59582),

Gene: Rajelicia_45 Start: 33435, Stop: 32950, Start Num: 28

Candidate Starts for Rajelicia_45:

(15, 33474), (Start: 28 @33435 has 23 MA's), (Start: 41 @33393 has 3 MA's), (Start: 58 @33339 has 1 MA's), (77, 33264), (83, 33240), (85, 33228), (88, 33222), (89, 33219), (111, 33072), (117, 33036), (129, 32979),

Gene: Red305_93 Start: 59235, Stop: 59642, Start Num: 36

Candidate Starts for Red305_93:

(Start: 36 @59235 has 78 MA's), (43, 59256), (77, 59385), (78, 59388), (94, 59466), (99, 59502), (113, 59589), (118, 59616),

Gene: Ringer_45 Start: 33671, Stop: 33282, Start Num: 58

Candidate Starts for Ringer_45:

(15, 33806), (Start: 28 @33767 has 23 MA's), (Start: 41 @33725 has 3 MA's), (Start: 58 @33671 has 1 MA's), (77, 33596), (83, 33572), (85, 33560), (88, 33554), (89, 33551), (111, 33404), (117, 33368), (129, 33311),

Gene: RogerDodger_88 Start: 56495, Stop: 55980, Start Num: 18

Candidate Starts for RogerDodger_88:

(Start: 16 @56501 has 16 MA's), (Start: 18 @56495 has 21 MA's), (Start: 21 @56483 has 1 MA's), (33, 56447), (49, 56402), (54, 56387), (74, 56309), (82, 56282), (85, 56261), (91, 56237), (127, 56027), (129, 56015), (130, 55991),

Gene: Rose5_92 Start: 57809, Stop: 58219, Start Num: 36

Candidate Starts for Rose5_92:

(Start: 36 @57809 has 78 MA's), (46, 57839), (48, 57842), (60, 57887), (78, 57965), (89, 58007), (94, 58043), (100, 58085), (101, 58091), (109, 58139), (116, 58184), (123, 58211),

Gene: Rossetti_95 Start: 59618, Stop: 60031, Start Num: 36

Candidate Starts for Rossetti_95:

(Start: 36 @59618 has 78 MA's), (68, 59729), (75, 59768), (78, 59777), (94, 59855), (105, 59927), (118, 60005), (123, 60023),

Gene: Rumpelstiltskin_91 Start: 59092, Stop: 59505, Start Num: 36

Candidate Starts for Rumpelstiltskin_91:

(Start: 36 @59092 has 78 MA's), (68, 59203), (75, 59242), (78, 59251), (94, 59329), (105, 59401), (118, 59479), (123, 59497),

Gene: RunningOnE_27 Start: 14405, Stop: 13887, Start Num: 21

Candidate Starts for RunningOnE_27:

(Start: 21 @14405 has 1 MA's), (37, 14357), (39, 14348), (45, 14327), (74, 14213), (77, 14201), (85, 14165), (93, 14123), (103, 14060), (108, 14027), (117, 13973),

Gene: RunningOnE_8 Start: 3940, Stop: 3410, Start Num: 19

Candidate Starts for RunningOnE_8:

(12, 3970), (Start: 19 @3940 has 1 MA's), (34, 3892), (57, 3817), (64, 3781), (65, 3778), (88, 3688), (110, 3541), (121, 3484),

Gene: Ruotula_47 Start: 34572, Stop: 34078, Start Num: 28

Candidate Starts for Ruotula_47:

(15, 34611), (Start: 28 @34572 has 23 MA's), (Start: 41 @34530 has 3 MA's), (Start: 58 @34476 has 1 MA's), (77, 34401), (83, 34377), (85, 34365), (88, 34359), (89, 34356), (111, 34200), (117, 34164), (129, 34107),

Gene: Sagefire_47 Start: 34321, Stop: 33836, Start Num: 28

Candidate Starts for Sagefire_47:

(15, 34360), (Start: 28 @34321 has 23 MA's), (Start: 41 @34279 has 3 MA's), (Start: 58 @34225 has 1 MA's), (77, 34150), (83, 34126), (85, 34114), (88, 34108), (89, 34105), (111, 33958), (117, 33922), (129, 33865),

Gene: Salvador_85 Start: 55832, Stop: 55317, Start Num: 18

Candidate Starts for Salvador_85:

(Start: 16 @55838 has 16 MA's), (Start: 18 @55832 has 21 MA's), (Start: 21 @55820 has 1 MA's), (33, 55784), (49, 55739), (54, 55724), (74, 55646), (82, 55619), (85, 55598), (91, 55574), (127, 55364), (129, 55352), (130, 55328),

Gene: Samty_91 Start: 59332, Stop: 59739, Start Num: 36

Candidate Starts for Samty_91:

(Start: 36 @59332 has 78 MA's), (43, 59353), (77, 59482), (78, 59485), (94, 59563), (99, 59599), (113, 59686), (118, 59713),

Gene: Samy_64 Start: 40970, Stop: 41473, Start Num: 28

Candidate Starts for Samy_64:

(1, 40451), (2, 40556), (3, 40580), (5, 40679), (7, 40739), (Start: 28 @40970 has 23 MA's), (55, 41057), (63, 41093), (73, 41126), (77, 41144), (104, 41297), (108, 41327), (120, 41390),

Gene: Samy_62 Start: 37969, Stop: 38490, Start Num: 17

Candidate Starts for Samy_62:

(Start: 17 @37969 has 7 MA's), (45, 38059), (83, 38200),

Gene: Sanya_69 Start: 45481, Stop: 44903, Start Num: 16

Candidate Starts for Sanya_69:

(Start: 16 @45481 has 16 MA's), (Start: 20 @45469 has 2 MA's), (25, 45451), (63, 45310), (71, 45283), (79, 45244), (85, 45214), (123, 45001),

Gene: SarFire_70 Start: 44563, Stop: 43985, Start Num: 16

Candidate Starts for SarFire_70:

(Start: 16 @44563 has 16 MA's), (Start: 20 @44551 has 2 MA's), (25, 44533), (63, 44392), (71, 44365), (79, 44326), (85, 44296), (123, 44083),

Gene: Sarshaun_96 Start: 60210, Stop: 60623, Start Num: 36

Candidate Starts for Sarshaun_96:

(Start: 36 @60210 has 78 MA's), (68, 60321), (75, 60360), (78, 60369), (94, 60447), (105, 60519), (118, 60597), (123, 60615),

Gene: Savbucketdawg_80 Start: 55174, Stop: 54659, Start Num: 18

Candidate Starts for Savbucketdawg_80:

(Start: 16 @55180 has 16 MA's), (Start: 18 @55174 has 21 MA's), (Start: 21 @55162 has 1 MA's), (33, 55126), (49, 55081), (54, 55066), (74, 54988), (82, 54961), (85, 54940), (91, 54916), (127, 54706), (129, 54694), (130, 54670),

Gene: Seanderson_46 Start: 33923, Stop: 33447, Start Num: 30

Candidate Starts for Seanderson_46:

(Start: 30 @33923 has 12 MA's), (34, 33905), (40, 33884), (Start: 58 @33821 has 1 MA's), (63, 33800), (98, 33647), (111, 33569), (123, 33512), (124, 33503), (125, 33500), (129, 33476),

Gene: Sendy_87 Start: 55912, Stop: 55397, Start Num: 18

Candidate Starts for Sendy_87:

(Start: 16 @55918 has 16 MA's), (Start: 18 @55912 has 21 MA's), (Start: 21 @55900 has 1 MA's), (33, 55864), (49, 55819), (54, 55804), (74, 55726), (82, 55699), (85, 55678), (91, 55654), (127, 55444), (129, 55432), (130, 55408),

Gene: Sheng711_97 Start: 59248, Stop: 59655, Start Num: 36

Candidate Starts for Sheng711_97:

(Start: 36 @59248 has 78 MA's), (43, 59269), (78, 59401), (96, 59497), (105, 59551), (113, 59602), (118, 59629), (119, 59632), (123, 59647),

Gene: Shinji_84 Start: 55913, Stop: 55398, Start Num: 18

Candidate Starts for Shinji_84:

(Start: 16 @55919 has 16 MA's), (Start: 18 @55913 has 21 MA's), (Start: 21 @55901 has 1 MA's), (33, 55865), (49, 55820), (54, 55805), (74, 55727), (82, 55700), (85, 55679), (91, 55655), (127, 55445), (129, 55433), (130, 55409),

Gene: Silverleaf_90 Start: 57305, Stop: 57715, Start Num: 36

Candidate Starts for Silverleaf_90:

(Start: 36 @57305 has 78 MA's), (46, 57335), (48, 57338), (60, 57383), (78, 57461), (89, 57503), (94, 57539), (100, 57581), (101, 57587), (109, 57635), (116, 57680), (123, 57707),

Gene: Slagathor_46 Start: 33360, Stop: 32875, Start Num: 28

Candidate Starts for Slagathor_46:

(15, 33399), (Start: 28 @33360 has 23 MA's), (Start: 41 @33318 has 3 MA's), (Start: 58 @33264 has 1 MA's), (77, 33189), (83, 33165), (85, 33153), (88, 33147), (89, 33144), (111, 32997), (117, 32961), (129, 32904),

Gene: Smairt_46 Start: 33659, Stop: 33174, Start Num: 28

Candidate Starts for Smairt_46:

(15, 33698), (Start: 28 @33659 has 23 MA's), (Start: 41 @33617 has 3 MA's), (Start: 58 @33563 has 1 MA's), (77, 33488), (83, 33464), (85, 33452), (88, 33446), (89, 33443), (111, 33296), (117, 33260),

(129, 33203),

Gene: SmokingBunny_86 Start: 56828, Stop: 56313, Start Num: 18

Candidate Starts for SmokingBunny_86:

(Start: 16 @56834 has 16 MA's), (Start: 18 @56828 has 21 MA's), (Start: 21 @56816 has 1 MA's), (33, 56780), (49, 56735), (54, 56720), (74, 56642), (82, 56615), (85, 56594), (91, 56570), (127, 56360), (129, 56348), (130, 56324),

Gene: Snazzy_68 Start: 43855, Stop: 43277, Start Num: 16

Candidate Starts for Snazzy_68:

(Start: 16 @43855 has 16 MA's), (Start: 20 @43843 has 2 MA's), (25, 43825), (63, 43684), (71, 43657), (79, 43618), (85, 43588), (123, 43375),

Gene: Snenia_91 Start: 59236, Stop: 59643, Start Num: 36

Candidate Starts for Snenia_91:

(Start: 36 @59236 has 78 MA's), (43, 59257), (77, 59386), (78, 59389), (94, 59467), (99, 59503), (113, 59590), (118, 59617),

Gene: SoJulia_97 Start: 60975, Stop: 61388, Start Num: 36

Candidate Starts for SoJulia_97:

(Start: 36 @60975 has 78 MA's), (68, 61086), (75, 61125), (78, 61134), (94, 61212), (105, 61284), (118, 61362), (123, 61380),

Gene: Soap141_95 Start: 60210, Stop: 60623, Start Num: 36

Candidate Starts for Soap141_95:

(Start: 36 @60210 has 78 MA's), (68, 60321), (75, 60360), (78, 60369), (94, 60447), (105, 60519), (118, 60597), (123, 60615),

Gene: SpeedDemon_1040 Start: 70108, Stop: 70686, Start Num: 17

Candidate Starts for SpeedDemon_1040:

(4, 69790), (9, 69976), (Start: 17 @70108 has 7 MA's), (32, 70156), (38, 70174), (42, 70192), (53, 70225), (77, 70327), (88, 70378), (102, 70480), (124, 70606),

Gene: SpikeBT_61 Start: 41461, Stop: 40904, Start Num: 31

Candidate Starts for SpikeBT_61:

(Start: 31 @41461 has 9 MA's), (Start: 41 @41419 has 3 MA's), (46, 41401), (73, 41317), (77, 41299), (90, 41248), (97, 41194), (114, 41092), (132, 40924),

Gene: Squee_73 Start: 44893, Stop: 44315, Start Num: 16

Candidate Starts for Squee_73:

(Start: 16 @44893 has 16 MA's), (Start: 20 @44881 has 2 MA's), (25, 44863), (63, 44722), (71, 44695), (79, 44656), (85, 44626), (123, 44413),

Gene: StrongArm_43 Start: 33982, Stop: 33497, Start Num: 28

Candidate Starts for StrongArm_43:

(15, 34021), (Start: 28 @33982 has 23 MA's), (Start: 41 @33940 has 3 MA's), (Start: 58 @33886 has 1 MA's), (77, 33811), (83, 33787), (85, 33775), (88, 33769), (89, 33766), (111, 33619), (117, 33583), (129, 33526),

Gene: SwissCheese_66 Start: 41680, Stop: 41123, Start Num: 31

Candidate Starts for SwissCheese_66:

(Start: 31 @41680 has 9 MA's), (Start: 41 @41638 has 3 MA's), (46, 41620), (73, 41536), (77, 41518), (90, 41467), (97, 41413), (114, 41311), (132, 41143),

Gene: Teodoridan_42 Start: 32338, Stop: 31949, Start Num: 58

Candidate Starts for Teodoridan_42:

(15, 32473), (Start: 28 @32434 has 23 MA's), (Start: 41 @32392 has 3 MA's), (Start: 58 @32338 has 1 MA's), (77, 32263), (83, 32239), (85, 32227), (88, 32221), (89, 32218), (111, 32071), (117, 32035), (129, 31978),

Gene: TheloniousMonk_45 Start: 34368, Stop: 33883, Start Num: 28

Candidate Starts for TheloniousMonk_45:

(15, 34407), (Start: 28 @34368 has 23 MA's), (Start: 41 @34326 has 3 MA's), (Start: 58 @34272 has 1 MA's), (77, 34197), (83, 34173), (85, 34161), (88, 34155), (89, 34152), (111, 34005), (117, 33969), (129, 33912),

Gene: Thor_70 Start: 43921, Stop: 43343, Start Num: 16

Candidate Starts for Thor_70:

(Start: 16 @43921 has 16 MA's), (Start: 20 @43909 has 2 MA's), (25, 43891), (63, 43750), (71, 43723), (79, 43684), (85, 43654), (123, 43441),

Gene: TillyBobJoe_83 Start: 55714, Stop: 55199, Start Num: 18

Candidate Starts for TillyBobJoe_83:

(Start: 16 @55720 has 16 MA's), (Start: 18 @55714 has 21 MA's), (Start: 21 @55702 has 1 MA's), (33, 55666), (49, 55621), (54, 55606), (74, 55528), (82, 55501), (85, 55480), (91, 55456), (127, 55246), (129, 55234), (130, 55210),

Gene: Togo_85 Start: 56828, Stop: 56313, Start Num: 18

Candidate Starts for Togo_85:

(Start: 16 @56834 has 16 MA's), (Start: 18 @56828 has 21 MA's), (Start: 21 @56816 has 1 MA's), (33, 56780), (49, 56735), (54, 56720), (74, 56642), (82, 56615), (85, 56594), (91, 56570), (127, 56360), (129, 56348), (130, 56324),

Gene: Tourach_95 Start: 60189, Stop: 60602, Start Num: 36

Candidate Starts for Tourach_95:

(Start: 36 @60189 has 78 MA's), (60, 60270), (68, 60300), (77, 60345), (78, 60348), (96, 60444), (105, 60498), (118, 60576), (123, 60594),

Gene: Towmatter_90 Start: 63151, Stop: 63720, Start Num: 17

Candidate Starts for Towmatter_90:

(4, 62842), (6, 62953), (Start: 17 @63151 has 7 MA's), (53, 63268), (63, 63319), (77, 63373), (86, 63418), (108, 63562), (122, 63628),

Gene: TriFive_93 Start: 59348, Stop: 59755, Start Num: 36

Candidate Starts for TriFive_93:

(Start: 36 @59348 has 78 MA's), (43, 59369), (77, 59498), (78, 59501), (94, 59579), (99, 59615), (113, 59702), (118, 59729),

Gene: Trouble_45 Start: 34048, Stop: 33572, Start Num: 30

Candidate Starts for Trouble_45:

(Start: 30 @34048 has 12 MA's), (34, 34030), (40, 34009), (Start: 58 @33946 has 1 MA's), (63, 33925), (98, 33772), (111, 33694), (123, 33637), (124, 33628), (125, 33625), (129, 33601),

Gene: Twister6_84 Start: 55177, Stop: 54662, Start Num: 18

Candidate Starts for Twister6_84:

(Start: 16 @55183 has 16 MA's), (Start: 18 @55177 has 21 MA's), (Start: 21 @55165 has 1 MA's), (33, 55129), (49, 55084), (54, 55069), (74, 54991), (82, 54964), (85, 54943), (91, 54919), (127, 54709), (129, 54697), (130, 54673),

Gene: Tyson_92 Start: 57702, Stop: 58112, Start Num: 36

Candidate Starts for Tyson_92:

(Start: 36 @57702 has 78 MA's), (46, 57732), (48, 57735), (60, 57780), (78, 57858), (89, 57900), (94, 57936), (100, 57978), (101, 57984), (109, 58032), (116, 58077), (123, 58104),

Gene: UPIE_90 Start: 57298, Stop: 57708, Start Num: 36

Candidate Starts for UPIE_90:

(Start: 36 @57298 has 78 MA's), (46, 57328), (48, 57331), (60, 57376), (78, 57454), (89, 57496), (94, 57532), (100, 57574), (101, 57580), (109, 57628), (116, 57673), (123, 57700),

Gene: Underpass_87 Start: 54335, Stop: 54748, Start Num: 36

Candidate Starts for Underpass_87:

(Start: 36 @54335 has 78 MA's), (68, 54446), (75, 54485), (78, 54494), (94, 54572), (105, 54644), (118, 54722), (123, 54740),

Gene: Valary_86 Start: 56820, Stop: 56305, Start Num: 18

Candidate Starts for Valary_86:

(Start: 16 @56826 has 16 MA's), (Start: 18 @56820 has 21 MA's), (Start: 21 @56808 has 1 MA's), (33, 56772), (49, 56727), (54, 56712), (74, 56634), (82, 56607), (85, 56586), (91, 56562), (127, 56352), (129, 56340), (130, 56316),

Gene: VanDeWege_87 Start: 56351, Stop: 55830, Start Num: 16

Candidate Starts for VanDeWege_87:

(Start: 16 @56351 has 16 MA's), (Start: 18 @56345 has 21 MA's), (Start: 21 @56333 has 1 MA's), (33, 56297), (49, 56252), (54, 56237), (74, 56159), (82, 56132), (85, 56111), (91, 56087), (127, 55877), (129, 55865), (130, 55841),

Gene: Vetrix_93 Start: 59073, Stop: 59486, Start Num: 36

Candidate Starts for Vetrix_93:

(Start: 36 @59073 has 78 MA's), (68, 59184), (75, 59223), (78, 59232), (94, 59310), (105, 59382), (118, 59460), (123, 59478),

Gene: Wamburgxpress_90 Start: 57426, Stop: 57836, Start Num: 36

Candidate Starts for Wamburgxpress_90:

(Start: 36 @57426 has 78 MA's), (46, 57456), (48, 57459), (60, 57504), (78, 57582), (89, 57624), (94, 57660), (100, 57702), (101, 57708), (109, 57756), (116, 57801), (123, 57828),

Gene: Whirlwind_93 Start: 59575, Stop: 59982, Start Num: 36

Candidate Starts for Whirlwind_93:

(Start: 36 @59575 has 78 MA's), (43, 59596), (77, 59725), (78, 59728), (94, 59806), (99, 59842), (113, 59929), (118, 59956),

Gene: Wigglewigggle_95 Start: 59375, Stop: 59788, Start Num: 36

Candidate Starts for Wigglewigggle_95:

(Start: 36 @59375 has 78 MA's), (68, 59486), (77, 59531), (78, 59534), (96, 59630), (105, 59684), (118, 59762), (123, 59780),

Gene: Wilder_96 Start: 59217, Stop: 59630, Start Num: 36

Candidate Starts for Wilder_96:

(Start: 36 @59217 has 78 MA's), (68, 59328), (75, 59367), (78, 59376), (94, 59454), (105, 59526), (118, 59604), (123, 59622),

Gene: Winky_95 Start: 59815, Stop: 60228, Start Num: 36

Candidate Starts for Winky_95:

(Start: 36 @59815 has 78 MA's), (68, 59926), (77, 59971), (78, 59974), (96, 60070), (105, 60124), (118, 60202), (123, 60220),

Gene: Wizard_80 Start: 55680, Stop: 55165, Start Num: 18

Candidate Starts for Wizard_80:

(Start: 16 @55686 has 16 MA's), (Start: 18 @55680 has 21 MA's), (Start: 21 @55668 has 1 MA's), (33, 55632), (49, 55587), (54, 55572), (74, 55494), (82, 55467), (85, 55446), (91, 55422), (127, 55212), (129, 55200), (130, 55176),

Gene: Wollypog_58 Start: 43704, Stop: 44234, Start Num: 24

Candidate Starts for Wollypog_58:

(Start: 24 @43704 has 1 MA's), (61, 43818), (72, 43863), (99, 44016), (116, 44124),

Gene: Wyatt2_92 Start: 57733, Stop: 58143, Start Num: 36

Candidate Starts for Wyatt2_92:

(Start: 36 @57733 has 78 MA's), (46, 57763), (48, 57766), (60, 57811), (78, 57889), (89, 57931), (94, 57967), (100, 58009), (101, 58015), (109, 58063), (116, 58108), (123, 58135),

Gene: Zakai_96 Start: 59860, Stop: 60273, Start Num: 36

Candidate Starts for Zakai_96:

(Start: 36 @59860 has 78 MA's), (68, 59971), (75, 60010), (78, 60019), (94, 60097), (105, 60169), (118, 60247), (123, 60265),

Gene: Zaria_91 Start: 56841, Stop: 57251, Start Num: 36

Candidate Starts for Zaria_91:

(Start: 36 @56841 has 78 MA's), (46, 56871), (48, 56874), (60, 56919), (78, 56997), (89, 57039), (94, 57075), (100, 57117), (101, 57123), (109, 57171), (116, 57216), (123, 57243),

Gene: ZhongYanYuan_92 Start: 59271, Stop: 59684, Start Num: 36

Candidate Starts for ZhongYanYuan_92:

(Start: 36 @59271 has 78 MA's), (68, 59382), (75, 59421), (78, 59430), (94, 59508), (105, 59580), (118, 59658), (123, 59676),