

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 311235 Report

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

Pham number 311235 has 209 members, 32 are drafts.

Phages represented in each track:

- Track 1 : KBurrousTX_37
- Track 2 : EdgarPoe_37, Tophat_37, Kabreeze_37, Chipper1996_370, Chubster_37, RosiePosie_37, Mordred_37, Conboy_37, JaNo_37, Linus_37, HumptyDumpty_37, Chocolat_37, Scavito_37, PrincessTrina_37, JayCookie_37, MoyaNatalis_37
- Track 3 : Colucci_37
- Track 4 : Lymara_37
- Track 5 : DrYang_38
- Track 6 : Amanises_27
- Track 7 : Galaxy_26
- Track 8 : Toad24_27, Orcanus_26
- Track 9 : Abidatro_27
- Track 10 : Vulpecula_25
- Track 11 : TaylorSipht_26
- Track 12 : Zixiang_26, Niblet_26, Chicken_26
- Track 13 : Basilisk_26
- Track 14 : Jamun_25
- Track 15 : Brynnie_25
- Track 16 : Cygnet_25, Antrice_26
- Track 17 : Kuleana_27
- Track 18 : AlexMinion_25
- Track 19 : Andrew_28
- Track 20 : Qyrzula_41, Arbiter_43, Rosebush_43
- Track 21 : Hosp_035
- Track 22 : KayaCho_37
- Track 23 : ForDig_37, Jolie1_037
- Track 24 : 40BC_037, 39HC_037
- Track 25 : Amo99_73, KingstonB_70, Grumio_72, DonTron_72, Jollymon_72, Purplicious_71, Stillion_72, ColdSoup_73, Soos_68
- Track 26 : Clawz_72, Makar_73
- Track 27 : Sting_71
- Track 28 : Catfish_31
- Track 29 : LonelyBoi_35
- Track 30 : Hugley_32
- Track 31 : Whiteclaw_30, Jalleen_30, Sahara_29, Ebert_31, Haley23_30, GemG_30, Clap_30, Sproutie_30, Yinzer_30, Mocha12_30, Savage_30, Cynthia_30, TuertoX_30, Gizermo_30
- Track 32 : RayTheFireFly_38

- Track 33 : Halo3_85, SmokingBunny_87, Salvador_86, Evamon_86, Togo_86
- Track 34 : VanDeWege_88, Gezellig_82, Twister6_85, Arri_86, Wizard_81, PullumCavea_84, Fireball_89, CherryCola_85, JohnPork_87, Savbucketdawg_81, KimmyK_84, Valary_87, RogerDodger_89, Sendy_88, Phlop_83, Portcullis_86, Shinji_85
- Track 35 : ClamChowder_88, Barb_89, Danyall_86, TillyBobJoe_84, YungMoney_85, Fugax_89, PinkCoffee_87, CoveyB_87, Mutzi_85
- Track 36 : Sixsevenium_87, Bakery_90
- Track 37 : Nubi_89
- Track 38 : SharkTale_89
- Track 39 : Egi03_84
- Track 40 : Jambalaya_83
- Track 41 : Bizzy_84, Stichling_80, Kroos_84, YorkOnyx_83, Ribeye_84, Tycho_84, Tangerine_84, Ashertheman_84, Derg_77, Flatwoods_84, LilHam_78, SchottB_83, JKSyngboy_81, Kwobi_86
- Track 42 : StorminNorm_85, Gaea_85, Gustavo_86, Saronaya_86
- Track 43 : Baumdotcom_83
- Track 44 : Belphegor_82
- Track 45 : EMOore_81
- Track 46 : GTE6_86, Twonlo_84, Tiamoceli_80, Kwekel_87, EdmundFerry_85, RoadKill_84, Dexdert_82, Chickadee_87
- Track 47 : BigHunkinEater_89, Zitch_90
- Track 48 : APunk_88
- Track 49 : ViaConlectus_87
- Track 50 : Lilbeanie_97
- Track 51 : Malisha_40
- Track 52 : Phistory_39, BENtherdunthat_38, Frickyeah_39, Apricot_38
- Track 53 : Squiddly_40, Spooky_39
- Track 54 : Crater_36
- Track 55 : Nicole72_64
- Track 56 : Megan_63
- Track 57 : Matzah_66, MementoMori_65, Cressida_67, Cinna_64
- Track 58 : Kozie_64
- Track 59 : Terij_64
- Track 60 : Margaery_63
- Track 61 : MicyPS_90, Taotie_112
- Track 62 : PSonyx_111
- Track 63 : Gallop_26
- Track 64 : ShroomBoi_22, Avani_28
- Track 65 : Madiba_23, ThetaBob_24
- Track 66 : Che9d_28, Ogopogo_25, Bipolar_22, Kenuha5_22, Demsculpinboyz_28, Kersh_23, Pollywog_25, Yoshi_28
- Track 67 : Mufasa8_29
- Track 68 : Sunshine23_32, Sonali_32
- Track 69 : Maruru_31
- Track 70 : Bolt007_71
- Track 71 : Klevey_74
- Track 72 : Prairie_70
- Track 73 : Bumble_69
- Track 74 : Lilmac1015_74, CalWood4100_74
- Track 75 : Circuit_68
- Track 76 : Nandito_73
- Track 77 : JanetJ_27

- Track 78 : NoSwimming_30
- Track 79 : Scotia_30
- Track 80 : Stuck_36
- Track 81 : Sbash_32
- Track 82 : Purky_30
- Track 83 : Purky_36
- Track 84 : Bubbykins_37
- Track 85 : Sleepyhead_33
- Track 86 : phiAsp2_39
- Track 87 : Tonitrus_59
- Track 88 : GMA4_36
- Track 89 : Cantare_50
- Track 90 : Whack_33
- Track 91 : Lukepolites_69
- Track 92 : Shambre1_30

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

The start number called the most often in the published annotations is 76, it was called in 30 of the 177 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arri_86, Barb_89, Bubbykins_37, CherryCola_85, ClamChowder_88, CoveyB_87, Danyall_86, Evamon_86, Fireball_89, Fugax_89, Gezellig_82, Halo3_85, Jambalaya_83, JohnPork_87, KimmyK_84, Mutzi_85, Nubi_89, Phlop_83, PinkCoffee_87, Portcullis_86, PullumCavea_84, RogerDodger_89, Salvador_86, Savbucketdawg_81, Sendy_88, SharkTale_89, Shinji_85, SmokingBunny_87, TillyBobJoe_84, Togo_86, Twister6_85, Valary_87, VanDeWege_88, Wizard_81, YungMoney_85,

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

- Bakery_90, Egi03_84, Kozi_64, Sixsevenium_87,

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

- 39HC_037, 40BC_037, APunk_88, Abidatro_27, AlexMinion_25, Amanises_27, Amo99_73, Andrew_28, Antrice_26, Apricot_38, Arbiter_43, Ashertheman_84, Avani_28, BENtherdunthat_38, Basilisk_26, Baumdotcom_83, Belphegor_82, BigHunkinEater_89, Bipolar_22, Bizzy_84, Bolt007_71, Brynnie_25, Bumble_69, CalWood4100_74, Cantare_50, Catfish_31, Che9d_28, Chickadee_87, Chicken_26, Chipper1996_370, Chocolat_37, Chubster_37, Cinna_64, Circuit_68, Clap_30, Clawz_72, ColdSoup_73, Colucci_37, Conboy_37, Crater_36, Cressida_67, Cygnet_25, Cynthia_30, Demsculpinboyz_28, Derg_77, Dextert_82, DonTron_72, DrYang_38, EMoore_81, Ebert_31, EdgarPoe_37, EdmundFerry_85, Flatwoods_84, ForDig_37, Frickyeah_39, GMA4_36, GTE6_86, Gaea_85, Galaxy_26, Gallop_26, GemG_30, Gizermo_30, Grumio_72, Gustavo_86, Haley23_30, Hosp_035, Hugley_32, HumptyDumpty_37, JKSyngboy_81, JaNo_37, Jalleen_30, Jamun_25, JanetJ_27, JayCookie_37, Jolie1_037, Jollymon_72, KBurrousTX_37, Kabreeze_37, KayaCho_37, Kenuha5_22, Kersh_23, KingstonB_70, Klevey_74, Kroos_84, Kuleana_27, Kwekel_87, Kwobi_86, LilHam_78, Lilbeanie_97, Lilmac1015_74, Linus_37, LonelyBoi_35, Lukepolites_69, Lymara_37, Madiba_23, Makar_73,

Malisha_40, Margaery_63, Maruru_31, Matzah_66, Megan_63, MementoMori_65, MicyPS_90, Mocha12_30, Mordred_37, MoyaNatalis_37, Mufasa8_29, Nandito_73, Niblet_26, Nicole72_64, NoSwimming_30, OgoPogo_25, Orcanus_26, PSonyx_111, Phistory_39, Pollywog_25, Prairie_70, PrincessTrina_37, Purky_30, Purky_36, Purplicious_71, Qyrzula_41, RayTheFireFly_38, Ribeye_84, RoadKill_84, Rosebush_43, RosiePosie_37, Sahara_29, Saronaya_86, Savage_30, Sbash_32, Scavito_37, SchottB_83, Scotia_30, Shambre1_30, ShroomBoi_22, Sleepyhead_33, Sonali_32, Soos_68, Spooky_39, Sproutie_30, Squiddly_40, Stichling_80, Stillion_72, Sting_71, StorminNorm_85, Stuck_36, Sunshine23_32, Tangerine_84, Taotie_112, TaylorSipt_26, Terij_64, ThetaBob_24, Tiamoceli_80, Toad24_27, Tonitrus_59, Tophat_37, TuertoX_30, Twonlo_84, Tycho_84, ViaConlectus_87, Vulpecula_25, Whack_33, Whiteclaw_30, Yinzer_30, YorkOnyx_83, Yoshi_28, Zitch_90, Zixiang_26, phiAsp2_39,

Summary by start number:

Start 53:

- Found in 2 of 209 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cantare_50 (singleton),

Start 55:

- Found in 6 of 209 (2.9%) of genes in pham
- Manual Annotations of this start: 5 of 177
- Called 83.3% of time when present
- Phage (with cluster) where this start called: APunk_88 (DE4), BigHunkinEater_89 (DE4), Nicole72_64 (EC), ViaConlectus_87 (DE4), Zitch_90 (DE4),

Start 56:

- Found in 1 of 209 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tonitrus_59 (singleton),

Start 57:

- Found in 20 of 209 (9.6%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Belphegor_82 (DE2), EMoore_81 (DE2),

Start 59:

- Found in 8 of 209 (3.8%) of genes in pham
- Manual Annotations of this start: 7 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chickadee_87 (DE3), Dextert_82 (DE3), EdmundFerry_85 (DE3), GTE6_86 (DE3), Kwekel_87 (DE3), RoadKill_84 (DE3), Tiamoceli_80 (DE3), Twonlo_84 (DE3),

Start 60:

- Found in 20 of 209 (9.6%) of genes in pham
- Manual Annotations of this start: 18 of 177
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Ashertheman_84 (DE1), Baumdotcom_83 (DE1), Bizzy_84 (DE1), Derg_77 (DE1), Flatwoods_84 (DE1), Gaea_85 (DE1), Gustavo_86 (DE1), JKSyngboy_81 (DE1), Kroos_84 (DE1), Kwobi_86 (DE1), LilHam_78 (DE1), Ribeye_84 (DE1), Saronaya_86 (DE1), SchottB_83 (DE1), Stichling_80 (DE1), StorminNorm_85 (DE1), Tangerine_84 (DE1), Tycho_84 (DE1), YorkOnyx_83 (DE1), phiAsp2_39 (singleton),

Start 62:

- Found in 1 of 209 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megan_63 (EC),

Start 66:

- Found in 3 of 209 (1.4%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MicyPS_90 (EQ), PSonyx_111 (EQ), Taotie_112 (EQ),

Start 67:

- Found in 13 of 209 (6.2%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Purky_36 (P6),

Start 68:

- Found in 3 of 209 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Malisha_40 (DN),

Start 70:

- Found in 15 of 209 (7.2%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Sleepyhead_33 (singleton), Whack_33 (singleton),

Start 73:

- Found in 3 of 209 (1.4%) of genes in pham
- Manual Annotations of this start: 3 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Brynnie_25 (AS1), Jamun_25 (AS1), Vulpecula_25 (AS1),

Start 74:

- Found in 12 of 209 (5.7%) of genes in pham
- Manual Annotations of this start: 6 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amo99_73 (CP), Clawz_72 (CP), ColdSoup_73 (CP), DonTron_72 (CP), Grumio_72 (CP), Jollymon_72 (CP), KingstonB_70 (CP), Makar_73 (CP), Purplicious_71 (CP), Soos_68 (CP), Stillion_72

(CP), Sting_71 (CP),

Start 76:

- Found in 39 of 209 (18.7%) of genes in pham
- Manual Annotations of this start: 30 of 177
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Arri_86 (DC1), Barb_89 (DC1), Bubbykins_37 (UNK), CherryCola_85 (DC1), ClamChowder_88 (DC1), CoveyB_87 (DC1), Danyall_86 (DC1), Evamon_86 (DC1), Fireball_89 (DC1), Fugax_89 (DC1), Gezellig_82 (DC1), Halo3_85 (DC1), Jambalaya_83 (DC1), JohnPork_87 (DC1), KimmyK_84 (DC1), Mutzi_85 (DC1), Nubi_89 (DC1), Phlop_83 (DC1), PinkCoffee_87 (DC1), Portcullis_86 (DC1), PullumCavea_84 (DC1), RogerDodger_89 (DC1), Salvador_86 (DC1), Savbucketdawg_81 (DC1), Sendy_88 (DC1), SharkTale_89 (DC1), Shinji_85 (DC1), SmokingBunny_87 (DC1), TillyBobJoe_84 (DC1), Togo_86 (DC1), Twister6_85 (DC1), Valary_87 (DC1), VanDeWege_88 (DC1), Wizard_81 (DC1), YungMoney_85 (DC1),

Start 77:

- Found in 11 of 209 (5.3%) of genes in pham
- Manual Annotations of this start: 7 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_037 (B6), 40BC_037 (B6), Bumble_69 (FH), Circuit_68 (FH), ForDig_37 (B6), Hosp_035 (B6), Jolie1_037 (B6), KayaCho_37 (B6), Purky_30 (P6), Sbash_32 (I2), Stuck_36 (I2),

Start 79:

- Found in 22 of 209 (10.5%) of genes in pham
- Manual Annotations of this start: 19 of 177
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Chipper1996_370 (AR), Chocolat_37 (AR), Chubster_37 (AR), Colucci_37 (AR), Conboy_37 (AR), DrYang_38 (AR), EdgarPoe_37 (AR), HumptyDumpty_37 (AR), JaNo_37 (AR), JayCookie_37 (AR), KBurrousTX_37 (AR), Kabreeze_37 (AR), Linus_37 (AR), Lymara_37 (AR), Mordred_37 (AR), MoyaNatalis_37 (AR), PrincessTrina_37 (AR), RosiePosie_37 (AR), Scavito_37 (AR), Tophat_37 (AR),

Start 81:

- Found in 15 of 209 (7.2%) of genes in pham
- Manual Annotations of this start: 13 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bolt007_71 (FH), Clap_30 (CZ2), Cynthia_30 (CZ2), Ebert_31 (CZ2), GemG_30 (CZ2), Gizermo_30 (CZ2), Haley23_30 (CZ2), Jalleen_30 (CZ2), Mocha12_30 (CZ2), Sahara_29 (CZ2), Savage_30 (CZ2), Sproutie_30 (CZ2), TuertoX_30 (CZ2), Whiteclaw_30 (CZ2), Yinzer_30 (CZ2),

Start 82:

- Found in 4 of 209 (1.9%) of genes in pham
- Manual Annotations of this start: 4 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro_27 (AS1), JanetJ_27 (FO), NoSwimming_30 (FO), Scotia_30 (FO),

Start 83:

- Found in 61 of 209 (29.2%) of genes in pham
- Manual Annotations of this start: 22 of 177
- Called 41.0% of time when present
- Phage (with cluster) where this start called: Avani_28 (F2), Bakery_90 (DC1), Bipolar_22 (F1), CalWood4100_74 (FH), Che9d_28 (F2), Cinna_64 (EI), Cressida_67 (EI), Demsculpinboyz_28 (F2), Egi03_84 (DC1), Kenuha5_22 (F1), Kersh_23 (F1), Klevey_74 (FH), Kozi_64 (EI), Lilmac1015_74 (FH), Margaery_63 (EI), Matzah_66 (EI), MementoMori_65 (EI), Nandito_73 (FH), Ogopogo_25 (F1), Pollywog_25 (F1), Prairie_70 (FH), ShroomBoi_22 (F1), Sixsevenium_87 (DC1), Terij_64 (EI), Yoshi_28 (F2),

Start 84:

- Found in 1 of 209 (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: GMA4_36 (singleton),

Start 85:

- Found in 4 of 209 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru_31 (FG), Mufasa8_29 (FG), Sonali_32 (FG), Sunshine23_32 (FG),

Start 86:

- Found in 7 of 209 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 28.6% of time when present
- Phage (with cluster) where this start called: LonelyBoi_35 (CY7), Lukepolites_69 (singleton),

Start 87:

- Found in 33 of 209 (15.8%) of genes in pham
- Manual Annotations of this start: 19 of 177
- Called 60.6% of time when present
- Phage (with cluster) where this start called: AlexMinion_25 (AS3), Amanises_27 (AS1), Andrew_28 (AS3), Antrice_26 (AS2), Basilisk_26 (AS1), Catfish_31 (CU5), Chicken_26 (AS1), Cygnet_25 (AS2), Galaxy_26 (AS1), Kuleana_27 (AS2), Madiba_23 (F1), Niblet_26 (AS1), Orcanus_26 (AS1), Shambre1_30 (singleton), Spooky_39 (DN2), Squiddly_40 (DN2), TaylorSipt_26 (AS1), ThetaBob_24 (F4), Toad24_27 (AS1), Zixiang_26 (AS1),

Start 88:

- Found in 8 of 209 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 177
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Arbiter_43 (B2), Qyrzula_41 (B2), Rosebush_43 (B2),

Start 93:

- Found in 5 of 209 (2.4%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 20.0% of time when present

- Phage (with cluster) where this start called: RayTheFireFly_38 (DB),

Start 94:

- Found in 38 of 209 (18.2%) of genes in pham
- Manual Annotations of this start: 4 of 177
- Called 15.8% of time when present
- Phage (with cluster) where this start called: Apricot_38 (DN3), BENtherdunthat_38 (DN1), Crater_36 (DN3), Frickyeah_39 (DN1), Hugley_32 (CZ1), Phistory_39 (DN1),

Start 115:

- Found in 13 of 209 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Gallop_26 (ES),

Start 144:

- Found in 1 of 209 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbeanie_97 (DE5),

Summary by clusters:

There are 36 clusters represented in this pham: DN, singleton, CZ2, CZ1, DB, FG, FH, CY7, FO, CU5, UNK, I2, DN1, DN3, DN2, AS3, AS2, AS1, EI, EC, AR, CP, EQ, ES, DC1, F1, F2, F4, DE1, DE2, DE3, DE4, DE5, B6, B2, P6,

Info for manual annotations of cluster AR:

- Start number 79 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster AS1:

- Start number 73 was manually annotated 3 times for cluster AS1.
- Start number 82 was manually annotated 1 time for cluster AS1.
- Start number 87 was manually annotated 9 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 87 was manually annotated 3 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 87 was manually annotated 1 time for cluster AS3.

Info for manual annotations of cluster B2:

- Start number 88 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B6:

- Start number 77 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster CP:

- Start number 74 was manually annotated 6 times for cluster CP.

Info for manual annotations of cluster CU5:

- Start number 87 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY7:

- Start number 86 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ2:

- Start number 81 was manually annotated 12 times for cluster CZ2.

Info for manual annotations of cluster DB:

- Start number 93 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 76 was manually annotated 30 times for cluster DC1.
- Start number 83 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DE1:

- Start number 60 was manually annotated 18 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 57 was manually annotated 2 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 59 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 55 was manually annotated 4 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 144 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DN:

- Start number 68 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 94 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 87 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 94 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster EC:

- Start number 55 was manually annotated 1 time for cluster EC.
- Start number 62 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:

- Start number 83 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster EQ:

- Start number 66 was manually annotated 2 times for cluster EQ.

Info for manual annotations of cluster F1:

- Start number 83 was manually annotated 6 times for cluster F1.
- Start number 87 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 83 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 87 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FG:

- Start number 85 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FH:

- Start number 77 was manually annotated 2 times for cluster FH.
- Start number 81 was manually annotated 1 time for cluster FH.
- Start number 83 was manually annotated 3 times for cluster FH.

Info for manual annotations of cluster FO:

- Start number 82 was manually annotated 3 times for cluster FO.

Info for manual annotations of cluster I2:

- Start number 77 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster P6:

- Start number 67 was manually annotated 1 time for cluster P6.
- Start number 77 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: 39HC_037 Start: 36987, Stop: 36790, Start Num: 77

Candidate Starts for 39HC_037:

(Start: 77 @36987 has 7 MA's), (Start: 86 @36975 has 1 MA's), (Start: 94 @36948 has 4 MA's), (97, 36930), (106, 36897),

Gene: 40BC_037 Start: 36987, Stop: 36790, Start Num: 77

Candidate Starts for 40BC_037:

(Start: 77 @36987 has 7 MA's), (Start: 86 @36975 has 1 MA's), (Start: 94 @36948 has 4 MA's), (97, 36930), (106, 36897),

Gene: APunk_88 Start: 58714, Stop: 58983, Start Num: 55

Candidate Starts for APunk_88:

(41, 58669), (Start: 55 @58714 has 5 MA's), (64, 58732), (92, 58783), (114, 58861),

Gene: Abidatro_27 Start: 19710, Stop: 19528, Start Num: 82

Candidate Starts for Abidatro_27:

(58, 19749), (Start: 82 @19710 has 4 MA's),

Gene: AlexMinion_25 Start: 18294, Stop: 18103, Start Num: 87

Candidate Starts for AlexMinion_25:

(22, 18519), (32, 18441), (34, 18429), (78, 18306), (Start: 87 @18294 has 19 MA's),

Gene: Amanises_27 Start: 20160, Stop: 19957, Start Num: 87
Candidate Starts for Amanises_27:
(Start: 87 @20160 has 19 MA's),

Gene: Amo99_73 Start: 48277, Stop: 48501, Start Num: 74
Candidate Starts for Amo99_73:
(Start: 74 @48277 has 6 MA's), (100, 48349), (102, 48355), (115, 48391), (120, 48415), (122, 48424),
(140, 48493),

Gene: Andrew_28 Start: 19161, Stop: 18955, Start Num: 87
Candidate Starts for Andrew_28:
(Start: 87 @19161 has 19 MA's),

Gene: Antrice_26 Start: 19359, Stop: 19168, Start Num: 87
Candidate Starts for Antrice_26:
(45, 19434), (48, 19431), (Start: 87 @19359 has 19 MA's),

Gene: Apricot_38 Start: 28904, Stop: 28710, Start Num: 94
Candidate Starts for Apricot_38:
(Start: 70 @28946 has 2 MA's), (Start: 94 @28904 has 4 MA's), (98, 28883), (111, 28841), (123,
28793),

Gene: Arbiter_43 Start: 39491, Stop: 39312, Start Num: 88
Candidate Starts for Arbiter_43:
(Start: 70 @39518 has 2 MA's), (Start: 88 @39491 has 3 MA's), (89, 39488), (101, 39434), (112,
39401),

Gene: Arri_86 Start: 56263, Stop: 56015, Start Num: 76
Candidate Starts for Arri_86:
(11, 56575), (16, 56497), (19, 56476), (30, 56404), (63, 56290), (Start: 76 @56263 has 30 MA's),
(Start: 83 @56254 has 22 MA's), (91, 56236), (103, 56179), (124, 56104), (136, 56056),

Gene: Ashertheman_84 Start: 56563, Stop: 56823, Start Num: 60
Candidate Starts for Ashertheman_84:
(Start: 60 @56563 has 18 MA's), (92, 56626), (114, 56707), (125, 56746),

Gene: Avani_28 Start: 24082, Stop: 23903, Start Num: 83
Candidate Starts for Avani_28:
(Start: 67 @24106 has 1 MA's), (Start: 83 @24082 has 22 MA's), (Start: 87 @24076 has 19 MA's), (91,
24064), (Start: 94 @24049 has 4 MA's), (101, 24016), (134, 23920),

Gene: BENtherdunthat_38 Start: 28707, Stop: 28513, Start Num: 94
Candidate Starts for BENtherdunthat_38:
(Start: 70 @28749 has 2 MA's), (Start: 94 @28707 has 4 MA's), (98, 28686), (111, 28644), (123,
28596),

Gene: Bakery_90 Start: 58633, Stop: 58391, Start Num: 83
Candidate Starts for Bakery_90:
(5, 59074), (13, 58915), (23, 58846), (26, 58822), (28, 58819), (61, 58666), (Start: 76 @58639 has 30
MA's), (Start: 79 @58636 has 19 MA's), (Start: 83 @58633 has 22 MA's), (91, 58615), (103, 58558),
(136, 58435),

Gene: Barb_89 Start: 56790, Stop: 56539, Start Num: 76

Candidate Starts for Barb_89:

(8, 57147), (10, 57120), (17, 57021), (20, 56997), (21, 56994), (30, 56931), (63, 56817), (Start: 76 @56790 has 30 MA's), (Start: 83 @56781 has 22 MA's), (91, 56763), (103, 56706), (124, 56631), (136, 56583),

Gene: Basilisk_26 Start: 20189, Stop: 19986, Start Num: 87

Candidate Starts for Basilisk_26:

(Start: 87 @20189 has 19 MA's),

Gene: Baumdotcom_83 Start: 56963, Stop: 57223, Start Num: 60

Candidate Starts for Baumdotcom_83:

(Start: 60 @56963 has 18 MA's), (92, 57026), (114, 57107), (125, 57146),

Gene: Belphegor_82 Start: 58991, Stop: 59245, Start Num: 57

Candidate Starts for Belphegor_82:

(Start: 57 @58991 has 2 MA's), (92, 59057), (114, 59135), (123, 59168),

Gene: BigHunkinEater_89 Start: 58349, Stop: 58618, Start Num: 55

Candidate Starts for BigHunkinEater_89:

(Start: 55 @58349 has 5 MA's), (64, 58367), (92, 58418), (114, 58496),

Gene: Bipolar_22 Start: 24352, Stop: 24173, Start Num: 83

Candidate Starts for Bipolar_22:

(Start: 67 @24376 has 1 MA's), (Start: 83 @24352 has 22 MA's), (Start: 87 @24346 has 19 MA's), (Start: 94 @24319 has 4 MA's), (101, 24286), (134, 24190),

Gene: Bizzy_84 Start: 56320, Stop: 56580, Start Num: 60

Candidate Starts for Bizzy_84:

(Start: 60 @56320 has 18 MA's), (92, 56383), (114, 56464), (125, 56503),

Gene: Bolt007_71 Start: 45075, Stop: 44833, Start Num: 81

Candidate Starts for Bolt007_71:

(Start: 81 @45075 has 13 MA's),

Gene: Brynnie_25 Start: 19788, Stop: 19591, Start Num: 73

Candidate Starts for Brynnie_25:

(Start: 73 @19788 has 3 MA's),

Gene: Bubbykins_37 Start: 28274, Stop: 28059, Start Num: 76

Candidate Starts for Bubbykins_37:

(35, 28391), (36, 28385), (37, 28382), (38, 28376), (40, 28361), (44, 28346), (Start: 53 @28322 has 1 MA's), (Start: 76 @28274 has 30 MA's), (97, 28214), (105, 28184), (117, 28154), (118, 28151),

Gene: Bumble_69 Start: 44314, Stop: 44069, Start Num: 77

Candidate Starts for Bumble_69:

(Start: 77 @44314 has 7 MA's), (135, 44116),

Gene: CalWood4100_74 Start: 45377, Stop: 45132, Start Num: 83

Candidate Starts for CalWood4100_74:

(33, 45521), (Start: 83 @45377 has 22 MA's),

Gene: Cantare_50 Start: 45879, Stop: 46109, Start Num: 53

Candidate Starts for Cantare_50:

(Start: 53 @45879 has 1 MA's), (89, 45933), (91, 45936), (Start: 93 @45942 has 1 MA's),

Gene: Catfish_31 Start: 25984, Stop: 25784, Start Num: 87

Candidate Starts for Catfish_31:

(15, 26254), (Start: 55 @26041 has 5 MA's), (Start: 87 @25984 has 19 MA's), (91, 25972), (110, 25897),

Gene: Che9d_28 Start: 24090, Stop: 23911, Start Num: 83

Candidate Starts for Che9d_28:

(Start: 67 @24114 has 1 MA's), (Start: 83 @24090 has 22 MA's), (Start: 87 @24084 has 19 MA's), (Start: 94 @24057 has 4 MA's), (101, 24024), (134, 23928),

Gene: CherryCola_85 Start: 56676, Stop: 56428, Start Num: 76

Candidate Starts for CherryCola_85:

(11, 56988), (16, 56910), (19, 56889), (30, 56817), (63, 56703), (Start: 76 @56676 has 30 MA's), (Start: 83 @56667 has 22 MA's), (91, 56649), (103, 56592), (124, 56517), (136, 56469),

Gene: Chickadee_87 Start: 56050, Stop: 56301, Start Num: 59

Candidate Starts for Chickadee_87:

(Start: 59 @56050 has 7 MA's), (80, 56089), (92, 56113), (107, 56173), (132, 56248),

Gene: Chicken_26 Start: 20027, Stop: 19824, Start Num: 87

Candidate Starts for Chicken_26:

(Start: 87 @20027 has 19 MA's),

Gene: Chipper1996_370 Start: 30385, Stop: 30167, Start Num: 79

Candidate Starts for Chipper1996_370:

(30, 30535), (36, 30490), (37, 30487), (46, 30448), (Start: 57 @30415 has 2 MA's), (Start: 79 @30385 has 19 MA's), (90, 30364), (97, 30328), (100, 30313), (105, 30298), (110, 30286),

Gene: Chocolat_37 Start: 30385, Stop: 30167, Start Num: 79

Candidate Starts for Chocolat_37:

(30, 30535), (36, 30490), (37, 30487), (46, 30448), (Start: 57 @30415 has 2 MA's), (Start: 79 @30385 has 19 MA's), (90, 30364), (97, 30328), (100, 30313), (105, 30298), (110, 30286),

Gene: Chubster_37 Start: 30157, Stop: 29939, Start Num: 79

Candidate Starts for Chubster_37:

(30, 30307), (36, 30262), (37, 30259), (46, 30220), (Start: 57 @30187 has 2 MA's), (Start: 79 @30157 has 19 MA's), (90, 30136), (97, 30100), (100, 30085), (105, 30070), (110, 30058),

Gene: Cinna_64 Start: 43061, Stop: 43273, Start Num: 83

Candidate Starts for Cinna_64:

(Start: 83 @43061 has 22 MA's), (95, 43103), (119, 43190), (131, 43226),

Gene: Circuit_68 Start: 44623, Stop: 44378, Start Num: 77

Candidate Starts for Circuit_68:

(24, 44824), (29, 44797), (Start: 77 @44623 has 7 MA's), (135, 44425),

Gene: ClamChowder_88 Start: 56790, Stop: 56539, Start Num: 76

Candidate Starts for ClamChowder_88:

(8, 57147), (10, 57120), (17, 57021), (20, 56997), (21, 56994), (30, 56931), (63, 56817), (Start: 76 @56790 has 30 MA's), (Start: 83 @56781 has 22 MA's), (91, 56763), (103, 56706), (124, 56631), (136,

56583),

Gene: Clap_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Clap_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Clawz_72 Start: 48155, Stop: 48379, Start Num: 74

Candidate Starts for Clawz_72:

(51, 48107), (Start: 74 @48155 has 6 MA's), (100, 48227), (102, 48233), (109, 48251), (110, 48254), (115, 48269), (120, 48293), (140, 48371),

Gene: ColdSoup_73 Start: 48358, Stop: 48582, Start Num: 74

Candidate Starts for ColdSoup_73:

(Start: 74 @48358 has 6 MA's), (100, 48430), (102, 48436), (115, 48472), (120, 48496), (122, 48505), (140, 48574),

Gene: Colucci_37 Start: 29963, Stop: 29742, Start Num: 79

Candidate Starts for Colucci_37:

(12, 30272), (14, 30215), (18, 30194), (46, 30026), (50, 30020), (65, 29981), (Start: 79 @29963 has 19 MA's), (100, 29891), (105, 29876), (110, 29864), (118, 29843),

Gene: Conboy_37 Start: 30384, Stop: 30166, Start Num: 79

Candidate Starts for Conboy_37:

(30, 30534), (36, 30489), (37, 30486), (46, 30447), (Start: 57 @30414 has 2 MA's), (Start: 79 @30384 has 19 MA's), (90, 30363), (97, 30327), (100, 30312), (105, 30297), (110, 30285),

Gene: CoveyB_87 Start: 56277, Stop: 56026, Start Num: 76

Candidate Starts for CoveyB_87:

(8, 56634), (10, 56607), (17, 56508), (20, 56484), (21, 56481), (30, 56418), (63, 56304), (Start: 76 @56277 has 30 MA's), (Start: 83 @56268 has 22 MA's), (91, 56250), (103, 56193), (124, 56118), (136, 56070),

Gene: Crater_36 Start: 28423, Stop: 28229, Start Num: 94

Candidate Starts for Crater_36:

(Start: 70 @28465 has 2 MA's), (Start: 94 @28423 has 4 MA's), (97, 28405), (98, 28402), (111, 28360), (123, 28312), (128, 28300), (141, 28240),

Gene: Cressida_67 Start: 42667, Stop: 42879, Start Num: 83

Candidate Starts for Cressida_67:

(Start: 83 @42667 has 22 MA's), (95, 42709), (119, 42796), (131, 42832),

Gene: Cygnet_25 Start: 19348, Stop: 19154, Start Num: 87

Candidate Starts for Cygnet_25:

(45, 19423), (48, 19420), (Start: 87 @19348 has 19 MA's),

Gene: Cynthia_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Cynthia_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Danyall_86 Start: 55971, Stop: 55720, Start Num: 76

Candidate Starts for Danyall_86:

(8, 56328), (10, 56301), (17, 56202), (20, 56178), (21, 56175), (30, 56112), (63, 55998), (Start: 76 @55971 has 30 MA's), (Start: 83 @55962 has 22 MA's), (91, 55944), (103, 55887), (124, 55812), (136, 55764),

Gene: Demsculpinboyz_28 Start: 24075, Stop: 23896, Start Num: 83

Candidate Starts for Demsculpinboyz_28:

(Start: 67 @24099 has 1 MA's), (Start: 83 @24075 has 22 MA's), (Start: 87 @24069 has 19 MA's), (Start: 94 @24042 has 4 MA's), (101, 24009), (134, 23913),

Gene: Derg_77 Start: 55217, Stop: 55477, Start Num: 60

Candidate Starts for Derg_77:

(Start: 60 @55217 has 18 MA's), (92, 55280), (114, 55361), (125, 55400),

Gene: Dxdert_82 Start: 54559, Stop: 54810, Start Num: 59

Candidate Starts for Dxdert_82:

(Start: 59 @54559 has 7 MA's), (80, 54598), (92, 54622), (107, 54682), (132, 54757),

Gene: DonTron_72 Start: 48395, Stop: 48619, Start Num: 74

Candidate Starts for DonTron_72:

(Start: 74 @48395 has 6 MA's), (100, 48467), (102, 48473), (115, 48509), (120, 48533), (122, 48542), (140, 48611),

Gene: DrYang_38 Start: 31723, Stop: 31505, Start Num: 79

Candidate Starts for DrYang_38:

(Start: 79 @31723 has 19 MA's), (95, 31675), (97, 31666), (100, 31651), (105, 31636), (110, 31624), (133, 31549),

Gene: EMoore_81 Start: 58164, Stop: 58421, Start Num: 57

Candidate Starts for EMoore_81:

(Start: 57 @58164 has 2 MA's), (64, 58179), (92, 58230), (114, 58308), (123, 58341),

Gene: Ebert_31 Start: 25587, Stop: 25387, Start Num: 81

Candidate Starts for Ebert_31:

(Start: 81 @25587 has 13 MA's), (91, 25566), (Start: 94 @25551 has 4 MA's), (96, 25539), (106, 25503),

Gene: EdgarPoe_37 Start: 30384, Stop: 30166, Start Num: 79

Candidate Starts for EdgarPoe_37:

(30, 30534), (36, 30489), (37, 30486), (46, 30447), (Start: 57 @30414 has 2 MA's), (Start: 79 @30384 has 19 MA's), (90, 30363), (97, 30327), (100, 30312), (105, 30297), (110, 30285),

Gene: EdmundFerry_85 Start: 55426, Stop: 55677, Start Num: 59

Candidate Starts for EdmundFerry_85:

(Start: 59 @55426 has 7 MA's), (80, 55465), (92, 55489), (107, 55549), (132, 55624),

Gene: Egi03_84 Start: 55689, Stop: 55450, Start Num: 83

Candidate Starts for Egi03_84:

(11, 56010), (16, 55932), (19, 55911), (30, 55839), (63, 55725), (Start: 76 @55698 has 30 MA's), (Start: 83 @55689 has 22 MA's), (91, 55671), (103, 55614), (124, 55539), (136, 55491),

Gene: Evamon_86 Start: 56075, Stop: 55827, Start Num: 76

Candidate Starts for Evamon_86:

(11, 56387), (16, 56309), (30, 56216), (63, 56102), (Start: 76 @56075 has 30 MA's), (Start: 83 @56066 has 22 MA's), (91, 56048), (103, 55991), (124, 55916), (136, 55868),

Gene: Fireball_89 Start: 56537, Stop: 56289, Start Num: 76

Candidate Starts for Fireball_89:

(11, 56849), (16, 56771), (19, 56750), (30, 56678), (63, 56564), (Start: 76 @56537 has 30 MA's), (Start: 83 @56528 has 22 MA's), (91, 56510), (103, 56453), (124, 56378), (136, 56330),

Gene: Flatwoods_84 Start: 56131, Stop: 56391, Start Num: 60

Candidate Starts for Flatwoods_84:

(Start: 60 @56131 has 18 MA's), (92, 56194), (114, 56275), (125, 56314),

Gene: ForDig_37 Start: 36976, Stop: 36779, Start Num: 77

Candidate Starts for ForDig_37:

(Start: 77 @36976 has 7 MA's), (Start: 86 @36964 has 1 MA's), (89, 36958), (Start: 94 @36937 has 4 MA's), (97, 36919),

Gene: Frickyeah_39 Start: 28597, Stop: 28403, Start Num: 94

Candidate Starts for Frickyeah_39:

(Start: 70 @28639 has 2 MA's), (Start: 94 @28597 has 4 MA's), (98, 28576), (111, 28534), (123, 28486),

Gene: Fugax_89 Start: 56782, Stop: 56531, Start Num: 76

Candidate Starts for Fugax_89:

(8, 57139), (10, 57112), (17, 57013), (20, 56989), (21, 56986), (30, 56923), (63, 56809), (Start: 76 @56782 has 30 MA's), (Start: 83 @56773 has 22 MA's), (91, 56755), (103, 56698), (124, 56623), (136, 56575),

Gene: GMA4_36 Start: 29103, Stop: 29303, Start Num: 84

Candidate Starts for GMA4_36:

(31, 28944), (84, 29103), (111, 29199),

Gene: GTE6_86 Start: 56599, Stop: 56850, Start Num: 59

Candidate Starts for GTE6_86:

(Start: 59 @56599 has 7 MA's), (80, 56638), (92, 56662), (107, 56722), (132, 56797),

Gene: Gaea_85 Start: 56481, Stop: 56741, Start Num: 60

Candidate Starts for Gaea_85:

(Start: 60 @56481 has 18 MA's), (92, 56544), (114, 56625),

Gene: Galaxy_26 Start: 19656, Stop: 19465, Start Num: 87

Candidate Starts for Galaxy_26:

(Start: 87 @19656 has 19 MA's),

Gene: Gallop_26 Start: 24284, Stop: 24048, Start Num: 115

Candidate Starts for Gallop_26:

(115, 24284), (126, 24257),

Gene: GemG_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for GemG_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Gezellig_82 Start: 55921, Stop: 55673, Start Num: 76
Candidate Starts for Gezellig_82:
(11, 56233), (16, 56155), (19, 56134), (30, 56062), (63, 55948), (Start: 76 @55921 has 30 MA's),
(Start: 83 @55912 has 22 MA's), (91, 55894), (103, 55837), (124, 55762), (136, 55714),

Gene: Gizermo_30 Start: 25663, Stop: 25463, Start Num: 81
Candidate Starts for Gizermo_30:
(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106,
25579),

Gene: Grumio_72 Start: 47836, Stop: 48060, Start Num: 74
Candidate Starts for Grumio_72:
(Start: 74 @47836 has 6 MA's), (100, 47908), (102, 47914), (115, 47950), (120, 47974), (122, 47983),
(140, 48052),

Gene: Gustavo_86 Start: 57313, Stop: 57573, Start Num: 60
Candidate Starts for Gustavo_86:
(Start: 60 @57313 has 18 MA's), (92, 57376), (114, 57457),

Gene: Haley23_30 Start: 25663, Stop: 25463, Start Num: 81
Candidate Starts for Haley23_30:
(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106,
25579),

Gene: Halo3_85 Start: 56796, Stop: 56545, Start Num: 76
Candidate Starts for Halo3_85:
(11, 57108), (16, 57030), (30, 56937), (63, 56823), (Start: 76 @56796 has 30 MA's), (Start: 83 @56787
has 22 MA's), (91, 56769), (103, 56712), (124, 56637), (136, 56589),

Gene: Hosp_035 Start: 35180, Stop: 34983, Start Num: 77
Candidate Starts for Hosp_035:
(Start: 77 @35180 has 7 MA's), (Start: 86 @35168 has 1 MA's), (Start: 94 @35141 has 4 MA's), (97,
35123),

Gene: Hugley_32 Start: 29478, Stop: 29284, Start Num: 94
Candidate Starts for Hugley_32:
(Start: 70 @29520 has 2 MA's), (Start: 94 @29478 has 4 MA's), (111, 29415), (123, 29367), (128,
29355),

Gene: HumptyDumpty_37 Start: 30383, Stop: 30165, Start Num: 79
Candidate Starts for HumptyDumpty_37:
(30, 30533), (36, 30488), (37, 30485), (46, 30446), (Start: 57 @30413 has 2 MA's), (Start: 79 @30383
has 19 MA's), (90, 30362), (97, 30326), (100, 30311), (105, 30296), (110, 30284),

Gene: JKSyngboy_81 Start: 56985, Stop: 57245, Start Num: 60
Candidate Starts for JKSyngboy_81:
(Start: 60 @56985 has 18 MA's), (92, 57048), (114, 57129), (125, 57168),

Gene: JaNo_37 Start: 30383, Stop: 30165, Start Num: 79
Candidate Starts for JaNo_37:
(30, 30533), (36, 30488), (37, 30485), (46, 30446), (Start: 57 @30413 has 2 MA's), (Start: 79 @30383
has 19 MA's), (90, 30362), (97, 30326), (100, 30311), (105, 30296), (110, 30284),

Gene: Jalleen_30 Start: 25302, Stop: 25102, Start Num: 81
Candidate Starts for Jalleen_30:
(Start: 81 @25302 has 13 MA's), (91, 25281), (Start: 94 @25266 has 4 MA's), (96, 25254), (106, 25218),

Gene: Jambalaya_83 Start: 55378, Stop: 55127, Start Num: 76
Candidate Starts for Jambalaya_83:
(6, 55774), (16, 55612), (30, 55519), (63, 55405), (Start: 76 @55378 has 30 MA's), (Start: 83 @55369 has 22 MA's), (90, 55354), (91, 55351), (103, 55294), (121, 55228), (124, 55219), (136, 55171),

Gene: Jamun_25 Start: 19385, Stop: 19188, Start Num: 73
Candidate Starts for Jamun_25:
(1, 20447), (2, 20237), (3, 19964), (6, 19799), (Start: 73 @19385 has 3 MA's),

Gene: JanetJ_27 Start: 24007, Stop: 23804, Start Num: 82
Candidate Starts for JanetJ_27:
(Start: 82 @24007 has 4 MA's),

Gene: JayCookie_37 Start: 30387, Stop: 30169, Start Num: 79
Candidate Starts for JayCookie_37:
(30, 30537), (36, 30492), (37, 30489), (46, 30450), (Start: 57 @30417 has 2 MA's), (Start: 79 @30387 has 19 MA's), (90, 30366), (97, 30330), (100, 30315), (105, 30300), (110, 30288),

Gene: JohnPork_87 Start: 55977, Stop: 55729, Start Num: 76
Candidate Starts for JohnPork_87:
(11, 56289), (16, 56211), (19, 56190), (30, 56118), (63, 56004), (Start: 76 @55977 has 30 MA's), (Start: 83 @55968 has 22 MA's), (91, 55950), (103, 55893), (124, 55818), (136, 55770),

Gene: Jolie1_037 Start: 36967, Stop: 36770, Start Num: 77
Candidate Starts for Jolie1_037:
(Start: 77 @36967 has 7 MA's), (Start: 86 @36955 has 1 MA's), (89, 36949), (Start: 94 @36928 has 4 MA's), (97, 36910),

Gene: Jollymon_72 Start: 48358, Stop: 48582, Start Num: 74
Candidate Starts for Jollymon_72:
(Start: 74 @48358 has 6 MA's), (100, 48430), (102, 48436), (115, 48472), (120, 48496), (122, 48505), (140, 48574),

Gene: KBurrousTX_37 Start: 31486, Stop: 31268, Start Num: 79
Candidate Starts for KBurrousTX_37:
(Start: 57 @31513 has 2 MA's), (Start: 79 @31486 has 19 MA's), (91, 31462), (97, 31429), (100, 31414), (105, 31399), (110, 31387), (113, 31381),

Gene: Kabreeze_37 Start: 30383, Stop: 30165, Start Num: 79
Candidate Starts for Kabreeze_37:
(30, 30533), (36, 30488), (37, 30485), (46, 30446), (Start: 57 @30413 has 2 MA's), (Start: 79 @30383 has 19 MA's), (90, 30362), (97, 30326), (100, 30311), (105, 30296), (110, 30284),

Gene: KayaCho_37 Start: 36966, Stop: 36766, Start Num: 77
Candidate Starts for KayaCho_37:
(Start: 77 @36966 has 7 MA's), (Start: 87 @36951 has 19 MA's), (Start: 94 @36924 has 4 MA's), (97, 36906),

Gene: Kenuha5_22 Start: 24468, Stop: 24289, Start Num: 83

Candidate Starts for Kenuha5_22:

(Start: 67 @24492 has 1 MA's), (Start: 83 @24468 has 22 MA's), (Start: 87 @24462 has 19 MA's),
(Start: 94 @24435 has 4 MA's), (101, 24402), (134, 24306),

Gene: Kersh_23 Start: 24511, Stop: 24332, Start Num: 83

Candidate Starts for Kersh_23:

(Start: 67 @24535 has 1 MA's), (Start: 83 @24511 has 22 MA's), (Start: 87 @24505 has 19 MA's),
(Start: 94 @24478 has 4 MA's), (101, 24445), (134, 24349),

Gene: KimmyK_84 Start: 56368, Stop: 56120, Start Num: 76

Candidate Starts for KimmyK_84:

(11, 56680), (16, 56602), (19, 56581), (30, 56509), (63, 56395), (Start: 76 @56368 has 30 MA's),
(Start: 83 @56359 has 22 MA's), (91, 56341), (103, 56284), (124, 56209), (136, 56161),

Gene: KingstonB_70 Start: 47833, Stop: 48057, Start Num: 74

Candidate Starts for KingstonB_70:

(Start: 74 @47833 has 6 MA's), (100, 47905), (102, 47911), (115, 47947), (120, 47971), (122, 47980),
(140, 48049),

Gene: Klevey_74 Start: 45284, Stop: 45039, Start Num: 83

Candidate Starts for Klevey_74:

(33, 45428), (Start: 83 @45284 has 22 MA's),

Gene: Kozie_64 Start: 42302, Stop: 42514, Start Num: 83

Candidate Starts for Kozie_64:

(Start: 76 @42293 has 30 MA's), (Start: 83 @42302 has 22 MA's), (95, 42344), (119, 42431),

Gene: Kroos_84 Start: 56981, Stop: 57241, Start Num: 60

Candidate Starts for Kroos_84:

(Start: 60 @56981 has 18 MA's), (92, 57044), (114, 57125), (125, 57164),

Gene: Kuleana_27 Start: 19065, Stop: 18880, Start Num: 87

Candidate Starts for Kuleana_27:

(78, 19077), (Start: 87 @19065 has 19 MA's),

Gene: Kwekel_87 Start: 55963, Stop: 56214, Start Num: 59

Candidate Starts for Kwekel_87:

(Start: 59 @55963 has 7 MA's), (80, 56002), (92, 56026), (107, 56086), (132, 56161),

Gene: Kwobi_86 Start: 57490, Stop: 57750, Start Num: 60

Candidate Starts for Kwobi_86:

(Start: 60 @57490 has 18 MA's), (92, 57553), (114, 57634), (125, 57673),

Gene: LilHam_78 Start: 54602, Stop: 54862, Start Num: 60

Candidate Starts for LilHam_78:

(Start: 60 @54602 has 18 MA's), (92, 54665), (114, 54746), (125, 54785),

Gene: Lilbeanie_97 Start: 58823, Stop: 59047, Start Num: 144

Candidate Starts for Lilbeanie_97:

(Start: 144 @58823 has 1 MA's), (145, 58886), (146, 59015),

Gene: Lilmac1015_74 Start: 45377, Stop: 45132, Start Num: 83

Candidate Starts for Lilmac1015_74:
(33, 45521), (Start: 83 @45377 has 22 MA's),

Gene: Linus_37 Start: 30384, Stop: 30166, Start Num: 79
Candidate Starts for Linus_37:
(30, 30534), (36, 30489), (37, 30486), (46, 30447), (Start: 57 @30414 has 2 MA's), (Start: 79 @30384 has 19 MA's), (90, 30363), (97, 30327), (100, 30312), (105, 30297), (110, 30285),

Gene: LonelyBoi_35 Start: 30866, Stop: 30690, Start Num: 86
Candidate Starts for LonelyBoi_35:
(Start: 86 @30866 has 1 MA's), (91, 30851), (96, 30824),

Gene: Lukepolites_69 Start: 44405, Stop: 44190, Start Num: 86
Candidate Starts for Lukepolites_69:
(Start: 86 @44405 has 1 MA's),

Gene: Lymara_37 Start: 30202, Stop: 29981, Start Num: 79
Candidate Starts for Lymara_37:
(30, 30352), (36, 30307), (46, 30265), (Start: 57 @30232 has 2 MA's), (Start: 79 @30202 has 19 MA's), (95, 30154), (100, 30130), (105, 30115), (110, 30103),

Gene: Madiba_23 Start: 24209, Stop: 24036, Start Num: 87
Candidate Starts for Madiba_23:
(Start: 67 @24239 has 1 MA's), (Start: 83 @24215 has 22 MA's), (Start: 87 @24209 has 19 MA's), (Start: 94 @24182 has 4 MA's), (101, 24149), (134, 24053),

Gene: Makar_73 Start: 48182, Stop: 48406, Start Num: 74
Candidate Starts for Makar_73:
(51, 48134), (Start: 74 @48182 has 6 MA's), (100, 48254), (102, 48260), (109, 48278), (110, 48281), (115, 48296), (120, 48320), (140, 48398),

Gene: Malisha_40 Start: 30125, Stop: 29862, Start Num: 68
Candidate Starts for Malisha_40:
(54, 30155), (Start: 68 @30125 has 1 MA's), (Start: 87 @30095 has 19 MA's), (Start: 88 @30092 has 3 MA's), (Start: 93 @30077 has 1 MA's), (137, 29903), (138, 29897),

Gene: Margaery_63 Start: 42267, Stop: 42482, Start Num: 83
Candidate Starts for Margaery_63:
(Start: 83 @42267 has 22 MA's), (96, 42309), (102, 42336), (117, 42381), (119, 42396),

Gene: Maruru_31 Start: 29698, Stop: 29486, Start Num: 85
Candidate Starts for Maruru_31:
(25, 29905), (71, 29716), (Start: 85 @29698 has 3 MA's),

Gene: Matzah_66 Start: 43128, Stop: 43340, Start Num: 83
Candidate Starts for Matzah_66:
(Start: 83 @43128 has 22 MA's), (95, 43170), (119, 43257), (131, 43293),

Gene: Megan_63 Start: 45613, Stop: 45837, Start Num: 62
Candidate Starts for Megan_63:
(39, 45556), (Start: 62 @45613 has 1 MA's), (Start: 88 @45652 has 3 MA's), (91, 45661), (112, 45739), (139, 45814),

Gene: MementoMori_65 Start: 42723, Stop: 42935, Start Num: 83
Candidate Starts for MementoMori_65:
(Start: 83 @42723 has 22 MA's), (95, 42765), (119, 42852), (131, 42888),

Gene: MicyPS_90 Start: 54573, Stop: 54337, Start Num: 66
Candidate Starts for MicyPS_90:
(Start: 66 @54573 has 2 MA's), (139, 54363),

Gene: Mocha12_30 Start: 25663, Stop: 25463, Start Num: 81
Candidate Starts for Mocha12_30:
(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Mordred_37 Start: 30383, Stop: 30165, Start Num: 79
Candidate Starts for Mordred_37:
(30, 30533), (36, 30488), (37, 30485), (46, 30446), (Start: 57 @30413 has 2 MA's), (Start: 79 @30383 has 19 MA's), (90, 30362), (97, 30326), (100, 30311), (105, 30296), (110, 30284),

Gene: MoyaNatalis_37 Start: 30387, Stop: 30169, Start Num: 79
Candidate Starts for MoyaNatalis_37:
(30, 30537), (36, 30492), (37, 30489), (46, 30450), (Start: 57 @30417 has 2 MA's), (Start: 79 @30387 has 19 MA's), (90, 30366), (97, 30330), (100, 30315), (105, 30300), (110, 30288),

Gene: Mufasa8_29 Start: 27032, Stop: 26823, Start Num: 85
Candidate Starts for Mufasa8_29:
(Start: 85 @27032 has 3 MA's),

Gene: Mutzi_85 Start: 56931, Stop: 56680, Start Num: 76
Candidate Starts for Mutzi_85:
(8, 57288), (10, 57261), (17, 57162), (20, 57138), (21, 57135), (30, 57072), (63, 56958), (Start: 76 @56931 has 30 MA's), (Start: 83 @56922 has 22 MA's), (91, 56904), (103, 56847), (124, 56772), (136, 56724),

Gene: Nandito_73 Start: 45609, Stop: 45370, Start Num: 83
Candidate Starts for Nandito_73:
(4, 46188), (7, 45990), (Start: 83 @45609 has 22 MA's),

Gene: Niblet_26 Start: 20027, Stop: 19824, Start Num: 87
Candidate Starts for Niblet_26:
(Start: 87 @20027 has 19 MA's),

Gene: Nicole72_64 Start: 46099, Stop: 46344, Start Num: 55
Candidate Starts for Nicole72_64:
(Start: 55 @46099 has 5 MA's), (72, 46132), (101, 46213), (106, 46228), (141, 46330),

Gene: NoSwimming_30 Start: 25642, Stop: 25406, Start Num: 82
Candidate Starts for NoSwimming_30:
(Start: 82 @25642 has 4 MA's),

Gene: Nubi_89 Start: 56334, Stop: 56083, Start Num: 76
Candidate Starts for Nubi_89:
(9, 56661), (11, 56646), (16, 56568), (30, 56475), (63, 56361), (Start: 76 @56334 has 30 MA's), (Start: 83 @56325 has 22 MA's), (91, 56307), (103, 56250), (124, 56175), (136, 56127),

Gene: Ogotogo_25 Start: 24675, Stop: 24496, Start Num: 83

Candidate Starts for Ogotogo_25:

(Start: 67 @24699 has 1 MA's), (Start: 83 @24675 has 22 MA's), (Start: 87 @24669 has 19 MA's),
(Start: 94 @24642 has 4 MA's), (101, 24609), (134, 24513),

Gene: Orcanus_26 Start: 19951, Stop: 19748, Start Num: 87

Candidate Starts for Orcanus_26:

(Start: 87 @19951 has 19 MA's),

Gene: PSonyx_111 Start: 59498, Stop: 59262, Start Num: 66

Candidate Starts for PSonyx_111:

(Start: 66 @59498 has 2 MA's), (139, 59288),

Gene: Phistory_39 Start: 29860, Stop: 29666, Start Num: 94

Candidate Starts for Phistory_39:

(Start: 70 @29902 has 2 MA's), (Start: 94 @29860 has 4 MA's), (98, 29839), (111, 29797), (123,
29749),

Gene: Phlop_83 Start: 55971, Stop: 55723, Start Num: 76

Candidate Starts for Phlop_83:

(11, 56283), (16, 56205), (19, 56184), (30, 56112), (63, 55998), (Start: 76 @55971 has 30 MA's),
(Start: 83 @55962 has 22 MA's), (91, 55944), (103, 55887), (124, 55812), (136, 55764),

Gene: PinkCoffee_87 Start: 55835, Stop: 55587, Start Num: 76

Candidate Starts for PinkCoffee_87:

(8, 56192), (10, 56165), (17, 56066), (20, 56042), (21, 56039), (30, 55976), (63, 55862), (Start: 76
@55835 has 30 MA's), (Start: 83 @55826 has 22 MA's), (91, 55808), (103, 55751), (124, 55676), (136,
55628),

Gene: Pollywog_25 Start: 25545, Stop: 25366, Start Num: 83

Candidate Starts for Pollywog_25:

(Start: 67 @25569 has 1 MA's), (Start: 83 @25545 has 22 MA's), (Start: 87 @25539 has 19 MA's),
(Start: 94 @25512 has 4 MA's), (101, 25479), (134, 25383),

Gene: Portcullis_86 Start: 55977, Stop: 55729, Start Num: 76

Candidate Starts for Portcullis_86:

(11, 56289), (16, 56211), (19, 56190), (30, 56118), (63, 56004), (Start: 76 @55977 has 30 MA's),
(Start: 83 @55968 has 22 MA's), (91, 55950), (103, 55893), (124, 55818), (136, 55770),

Gene: Prairie_70 Start: 44683, Stop: 44438, Start Num: 83

Candidate Starts for Prairie_70:

(33, 44827), (Start: 83 @44683 has 22 MA's), (130, 44518),

Gene: PrincessTrina_37 Start: 30387, Stop: 30169, Start Num: 79

Candidate Starts for PrincessTrina_37:

(30, 30537), (36, 30492), (37, 30489), (46, 30450), (Start: 57 @30417 has 2 MA's), (Start: 79 @30387
has 19 MA's), (90, 30366), (97, 30330), (100, 30315), (105, 30300), (110, 30288),

Gene: PullumCavea_84 Start: 56148, Stop: 55900, Start Num: 76

Candidate Starts for PullumCavea_84:

(11, 56460), (16, 56382), (19, 56361), (30, 56289), (63, 56175), (Start: 76 @56148 has 30 MA's),
(Start: 83 @56139 has 22 MA's), (91, 56121), (103, 56064), (124, 55989), (136, 55941),

Gene: Purky_30 Start: 26584, Stop: 26351, Start Num: 77

Candidate Starts for Purky_30:

(43, 26659), (45, 26656), (49, 26650), (Start: 70 @26593 has 2 MA's), (Start: 77 @26584 has 7 MA's), (91, 26560), (101, 26512), (123, 26434), (129, 26419),

Gene: Purky_36 Start: 28450, Stop: 28653, Start Num: 67

Candidate Starts for Purky_36:

(Start: 67 @28450 has 1 MA's), (75, 28462), (Start: 87 @28480 has 19 MA's), (117, 28588), (123, 28600),

Gene: Purplicious_71 Start: 47601, Stop: 47825, Start Num: 74

Candidate Starts for Purplicious_71:

(Start: 74 @47601 has 6 MA's), (100, 47673), (102, 47679), (115, 47715), (120, 47739), (122, 47748), (140, 47817),

Gene: Qyrzula_41 Start: 39560, Stop: 39381, Start Num: 88

Candidate Starts for Qyrzula_41:

(Start: 70 @39587 has 2 MA's), (Start: 88 @39560 has 3 MA's), (89, 39557), (101, 39503), (112, 39470),

Gene: RayTheFireFly_38 Start: 29870, Stop: 29667, Start Num: 93

Candidate Starts for RayTheFireFly_38:

(Start: 70 @29903 has 2 MA's), (Start: 93 @29870 has 1 MA's), (98, 29840), (108, 29807), (111, 29798), (123, 29750),

Gene: Ribeye_84 Start: 56456, Stop: 56716, Start Num: 60

Candidate Starts for Ribeye_84:

(Start: 60 @56456 has 18 MA's), (92, 56519), (114, 56600), (125, 56639),

Gene: RoadKill_84 Start: 55492, Stop: 55743, Start Num: 59

Candidate Starts for RoadKill_84:

(Start: 59 @55492 has 7 MA's), (80, 55531), (92, 55555), (107, 55615), (132, 55690),

Gene: RogerDodger_89 Start: 56736, Stop: 56488, Start Num: 76

Candidate Starts for RogerDodger_89:

(11, 57048), (16, 56970), (19, 56949), (30, 56877), (63, 56763), (Start: 76 @56736 has 30 MA's), (Start: 83 @56727 has 22 MA's), (91, 56709), (103, 56652), (124, 56577), (136, 56529),

Gene: Rosebush_43 Start: 39530, Stop: 39351, Start Num: 88

Candidate Starts for Rosebush_43:

(Start: 70 @39557 has 2 MA's), (Start: 88 @39530 has 3 MA's), (89, 39527), (101, 39473), (112, 39440),

Gene: RosiePosie_37 Start: 30386, Stop: 30168, Start Num: 79

Candidate Starts for RosiePosie_37:

(30, 30536), (36, 30491), (37, 30488), (46, 30449), (Start: 57 @30416 has 2 MA's), (Start: 79 @30386 has 19 MA's), (90, 30365), (97, 30329), (100, 30314), (105, 30299), (110, 30287),

Gene: Sahara_29 Start: 25333, Stop: 25133, Start Num: 81

Candidate Starts for Sahara_29:

(Start: 81 @25333 has 13 MA's), (91, 25312), (Start: 94 @25297 has 4 MA's), (96, 25285), (106, 25249),

Gene: Salvador_86 Start: 56073, Stop: 55825, Start Num: 76

Candidate Starts for Salvador_86:

(11, 56385), (16, 56307), (30, 56214), (63, 56100), (Start: 76 @56073 has 30 MA's), (Start: 83 @56064 has 22 MA's), (91, 56046), (103, 55989), (124, 55914), (136, 55866),

Gene: Saronaya_86 Start: 57313, Stop: 57573, Start Num: 60

Candidate Starts for Saronaya_86:

(Start: 60 @57313 has 18 MA's), (92, 57376), (114, 57457),

Gene: Savage_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Savage_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Savbucketdawg_81 Start: 55415, Stop: 55167, Start Num: 76

Candidate Starts for Savbucketdawg_81:

(11, 55727), (16, 55649), (19, 55628), (30, 55556), (63, 55442), (Start: 76 @55415 has 30 MA's), (Start: 83 @55406 has 22 MA's), (91, 55388), (103, 55331), (124, 55256), (136, 55208),

Gene: Sbash_32 Start: 28849, Stop: 28601, Start Num: 77

Candidate Starts for Sbash_32:

(43, 28924), (45, 28921), (49, 28915), (Start: 70 @28858 has 2 MA's), (Start: 77 @28849 has 7 MA's), (91, 28825), (123, 28699), (129, 28684), (143, 28609),

Gene: Scavito_37 Start: 30384, Stop: 30166, Start Num: 79

Candidate Starts for Scavito_37:

(30, 30534), (36, 30489), (37, 30486), (46, 30447), (Start: 57 @30414 has 2 MA's), (Start: 79 @30384 has 19 MA's), (90, 30363), (97, 30327), (100, 30312), (105, 30297), (110, 30285),

Gene: SchottB_83 Start: 57376, Stop: 57636, Start Num: 60

Candidate Starts for SchottB_83:

(Start: 60 @57376 has 18 MA's), (92, 57439), (114, 57520), (125, 57559),

Gene: Scotia_30 Start: 25627, Stop: 25391, Start Num: 82

Candidate Starts for Scotia_30:

(27, 25822), (Start: 82 @25627 has 4 MA's),

Gene: Sendy_88 Start: 56153, Stop: 55905, Start Num: 76

Candidate Starts for Sendy_88:

(11, 56465), (16, 56387), (19, 56366), (30, 56294), (63, 56180), (Start: 76 @56153 has 30 MA's), (Start: 83 @56144 has 22 MA's), (91, 56126), (103, 56069), (124, 55994), (136, 55946),

Gene: Shambre1_30 Start: 22778, Stop: 22578, Start Num: 87

Candidate Starts for Shambre1_30:

(Start: 87 @22778 has 19 MA's), (138, 22595),

Gene: SharkTale_89 Start: 57477, Stop: 57226, Start Num: 76

Candidate Starts for SharkTale_89:

(30, 57618), (63, 57504), (Start: 76 @57477 has 30 MA's), (Start: 83 @57468 has 22 MA's), (90, 57453), (91, 57450), (103, 57393), (124, 57318), (136, 57270),

Gene: Shinji_85 Start: 56154, Stop: 55906, Start Num: 76

Candidate Starts for Shinji_85:

(11, 56466), (16, 56388), (19, 56367), (30, 56295), (63, 56181), (Start: 76 @56154 has 30 MA's),
(Start: 83 @56145 has 22 MA's), (91, 56127), (103, 56070), (124, 55995), (136, 55947),

Gene: ShroomBoi_22 Start: 24354, Stop: 24175, Start Num: 83

Candidate Starts for ShroomBoi_22:

(Start: 67 @24378 has 1 MA's), (Start: 83 @24354 has 22 MA's), (Start: 87 @24348 has 19 MA's), (91,
24336), (Start: 94 @24321 has 4 MA's), (101, 24288), (134, 24192),

Gene: Sixsevenium_87 Start: 57614, Stop: 57372, Start Num: 83

Candidate Starts for Sixsevenium_87:

(5, 58055), (13, 57896), (23, 57827), (26, 57803), (28, 57800), (61, 57647), (Start: 76 @57620 has 30
MA's), (Start: 79 @57617 has 19 MA's), (Start: 83 @57614 has 22 MA's), (91, 57596), (103, 57539),
(136, 57416),

Gene: Sleepyhead_33 Start: 26741, Stop: 26493, Start Num: 70

Candidate Starts for Sleepyhead_33:

(42, 26798), (Start: 70 @26741 has 2 MA's), (Start: 88 @26723 has 3 MA's), (106, 26651), (111,
26636),

Gene: SmokingBunny_87 Start: 57069, Stop: 56821, Start Num: 76

Candidate Starts for SmokingBunny_87:

(11, 57381), (16, 57303), (30, 57210), (63, 57096), (Start: 76 @57069 has 30 MA's), (Start: 83 @57060
has 22 MA's), (91, 57042), (103, 56985), (124, 56910), (136, 56862),

Gene: Sonali_32 Start: 30335, Stop: 30120, Start Num: 85

Candidate Starts for Sonali_32:

(Start: 85 @30335 has 3 MA's),

Gene: Soos_68 Start: 47562, Stop: 47786, Start Num: 74

Candidate Starts for Soos_68:

(Start: 74 @47562 has 6 MA's), (100, 47634), (102, 47640), (115, 47676), (120, 47700), (122, 47709),
(140, 47778),

Gene: Spooky_39 Start: 29741, Stop: 29508, Start Num: 87

Candidate Starts for Spooky_39:

(54, 29801), (Start: 68 @29771 has 1 MA's), (Start: 87 @29741 has 19 MA's), (Start: 88 @29738 has 3
MA's), (Start: 93 @29723 has 1 MA's), (137, 29549), (138, 29543),

Gene: Sproutie_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Sproutie_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106,
25579),

Gene: Squiddly_40 Start: 31125, Stop: 30892, Start Num: 87

Candidate Starts for Squiddly_40:

(54, 31185), (Start: 68 @31155 has 1 MA's), (Start: 87 @31125 has 19 MA's), (Start: 88 @31122 has 3
MA's), (Start: 93 @31107 has 1 MA's), (137, 30933), (138, 30927),

Gene: Stichling_80 Start: 55984, Stop: 56244, Start Num: 60

Candidate Starts for Stichling_80:

(Start: 60 @55984 has 18 MA's), (92, 56047), (114, 56128), (125, 56167),

Gene: Stillion_72 Start: 48159, Stop: 48383, Start Num: 74
Candidate Starts for Stillion_72:
(Start: 74 @48159 has 6 MA's), (100, 48231), (102, 48237), (115, 48273), (120, 48297), (122, 48306),
(140, 48375),

Gene: Sting_71 Start: 48001, Stop: 48225, Start Num: 74
Candidate Starts for Sting_71:
(Start: 74 @48001 has 6 MA's), (99, 48064), (100, 48073), (102, 48079), (115, 48115), (120, 48139),
(122, 48148), (140, 48217),

Gene: StorminNorm_85 Start: 57257, Stop: 57517, Start Num: 60
Candidate Starts for StorminNorm_85:
(Start: 60 @57257 has 18 MA's), (92, 57320), (114, 57401),

Gene: Stuck_36 Start: 31182, Stop: 30949, Start Num: 77
Candidate Starts for Stuck_36:
(43, 31257), (45, 31254), (49, 31248), (Start: 70 @31191 has 2 MA's), (Start: 77 @31182 has 7 MA's),
(91, 31158), (101, 31110), (123, 31032),

Gene: Sunshine23_32 Start: 29942, Stop: 29730, Start Num: 85
Candidate Starts for Sunshine23_32:
(Start: 85 @29942 has 3 MA's),

Gene: Tangerine_84 Start: 56314, Stop: 56574, Start Num: 60
Candidate Starts for Tangerine_84:
(Start: 60 @56314 has 18 MA's), (92, 56377), (114, 56458), (125, 56497),

Gene: Taotie_112 Start: 57499, Stop: 57263, Start Num: 66
Candidate Starts for Taotie_112:
(Start: 66 @57499 has 2 MA's), (139, 57289),

Gene: TaylorSipht_26 Start: 18969, Stop: 18775, Start Num: 87
Candidate Starts for TaylorSipht_26:
(Start: 87 @18969 has 19 MA's),

Gene: Terij_64 Start: 41499, Stop: 41717, Start Num: 83
Candidate Starts for Terij_64:
(Start: 83 @41499 has 22 MA's), (95, 41541), (96, 41544), (102, 41571), (119, 41631), (123, 41646),

Gene: ThetaBob_24 Start: 24665, Stop: 24492, Start Num: 87
Candidate Starts for ThetaBob_24:
(Start: 67 @24695 has 1 MA's), (Start: 83 @24671 has 22 MA's), (Start: 87 @24665 has 19 MA's),
(Start: 94 @24638 has 4 MA's), (101, 24605), (134, 24509),

Gene: Tiamoceli_80 Start: 55382, Stop: 55633, Start Num: 59
Candidate Starts for Tiamoceli_80:
(Start: 59 @55382 has 7 MA's), (80, 55421), (92, 55445), (107, 55505), (132, 55580),

Gene: TillyBobJoe_84 Start: 55955, Stop: 55707, Start Num: 76
Candidate Starts for TillyBobJoe_84:
(8, 56312), (10, 56285), (17, 56186), (20, 56162), (21, 56159), (30, 56096), (63, 55982), (Start: 76
@55955 has 30 MA's), (Start: 83 @55946 has 22 MA's), (91, 55928), (103, 55871), (124, 55796), (136,
55748),

Gene: Toad24_27 Start: 20160, Stop: 19957, Start Num: 87

Candidate Starts for Toad24_27:

(Start: 87 @20160 has 19 MA's),

Gene: Togo_86 Start: 57069, Stop: 56821, Start Num: 76

Candidate Starts for Togo_86:

(11, 57381), (16, 57303), (30, 57210), (63, 57096), (Start: 76 @57069 has 30 MA's), (Start: 83 @57060 has 22 MA's), (91, 57042), (103, 56985), (124, 56910), (136, 56862),

Gene: Tonitrus_59 Start: 44270, Stop: 44503, Start Num: 56

Candidate Starts for Tonitrus_59:

(Start: 56 @44270 has 1 MA's), (97, 44363), (99, 44369), (117, 44423), (127, 44465),

Gene: Tophat_37 Start: 30385, Stop: 30167, Start Num: 79

Candidate Starts for Tophat_37:

(30, 30535), (36, 30490), (37, 30487), (46, 30448), (Start: 57 @30415 has 2 MA's), (Start: 79 @30385 has 19 MA's), (90, 30364), (97, 30328), (100, 30313), (105, 30298), (110, 30286),

Gene: TuertoX_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for TuertoX_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Twister6_85 Start: 55418, Stop: 55170, Start Num: 76

Candidate Starts for Twister6_85:

(11, 55730), (16, 55652), (19, 55631), (30, 55559), (63, 55445), (Start: 76 @55418 has 30 MA's), (Start: 83 @55409 has 22 MA's), (91, 55391), (103, 55334), (124, 55259), (136, 55211),

Gene: Twonlo_84 Start: 56083, Stop: 56334, Start Num: 59

Candidate Starts for Twonlo_84:

(Start: 59 @56083 has 7 MA's), (80, 56122), (92, 56146), (107, 56206), (132, 56281),

Gene: Tycho_84 Start: 56791, Stop: 57051, Start Num: 60

Candidate Starts for Tycho_84:

(Start: 60 @56791 has 18 MA's), (92, 56854), (114, 56935), (125, 56974),

Gene: Valary_87 Start: 57061, Stop: 56813, Start Num: 76

Candidate Starts for Valary_87:

(11, 57373), (16, 57295), (19, 57274), (30, 57202), (63, 57088), (Start: 76 @57061 has 30 MA's), (Start: 83 @57052 has 22 MA's), (91, 57034), (103, 56977), (124, 56902), (136, 56854),

Gene: VanDeWege_88 Start: 56586, Stop: 56338, Start Num: 76

Candidate Starts for VanDeWege_88:

(11, 56898), (16, 56820), (19, 56799), (30, 56727), (63, 56613), (Start: 76 @56586 has 30 MA's), (Start: 83 @56577 has 22 MA's), (91, 56559), (103, 56502), (124, 56427), (136, 56379),

Gene: ViaConlectus_87 Start: 57801, Stop: 58070, Start Num: 55

Candidate Starts for ViaConlectus_87:

(41, 57756), (Start: 55 @57801 has 5 MA's), (64, 57819), (92, 57870), (114, 57948),

Gene: Vulpecula_25 Start: 19383, Stop: 19186, Start Num: 73

Candidate Starts for Vulpecula_25:

(Start: 73 @19383 has 3 MA's),

Gene: Whack_33 Start: 28160, Stop: 27924, Start Num: 70

Candidate Starts for Whack_33:

(52, 28187), (Start: 70 @28160 has 2 MA's), (116, 28040),

Gene: Whiteclaw_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Whiteclaw_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: Wizard_81 Start: 55921, Stop: 55673, Start Num: 76

Candidate Starts for Wizard_81:

(11, 56233), (16, 56155), (19, 56134), (30, 56062), (63, 55948), (Start: 76 @55921 has 30 MA's), (Start: 83 @55912 has 22 MA's), (91, 55894), (103, 55837), (124, 55762), (136, 55714),

Gene: Yinzer_30 Start: 25663, Stop: 25463, Start Num: 81

Candidate Starts for Yinzer_30:

(Start: 81 @25663 has 13 MA's), (91, 25642), (Start: 94 @25627 has 4 MA's), (96, 25615), (106, 25579),

Gene: YorkOnyx_83 Start: 56426, Stop: 56686, Start Num: 60

Candidate Starts for YorkOnyx_83:

(Start: 60 @56426 has 18 MA's), (92, 56489), (114, 56570), (125, 56609),

Gene: Yoshi_28 Start: 24080, Stop: 23901, Start Num: 83

Candidate Starts for Yoshi_28:

(Start: 67 @24104 has 1 MA's), (Start: 83 @24080 has 22 MA's), (Start: 87 @24074 has 19 MA's), (Start: 94 @24047 has 4 MA's), (101, 24014), (134, 23918),

Gene: YungMoney_85 Start: 57771, Stop: 57520, Start Num: 76

Candidate Starts for YungMoney_85:

(8, 58128), (10, 58101), (17, 58002), (20, 57978), (21, 57975), (30, 57912), (63, 57798), (Start: 76 @57771 has 30 MA's), (Start: 83 @57762 has 22 MA's), (91, 57744), (103, 57687), (124, 57612), (136, 57564),

Gene: Zitch_90 Start: 58345, Stop: 58614, Start Num: 55

Candidate Starts for Zitch_90:

(Start: 55 @58345 has 5 MA's), (64, 58363), (92, 58414), (114, 58492),

Gene: Zixiang_26 Start: 20028, Stop: 19825, Start Num: 87

Candidate Starts for Zixiang_26:

(Start: 87 @20028 has 19 MA's),

Gene: phiAsp2_39 Start: 33131, Stop: 33403, Start Num: 60

Candidate Starts for phiAsp2_39:

(47, 33095), (Start: 60 @33131 has 18 MA's), (69, 33155), (91, 33191), (104, 33251), (125, 33317), (142, 33392),