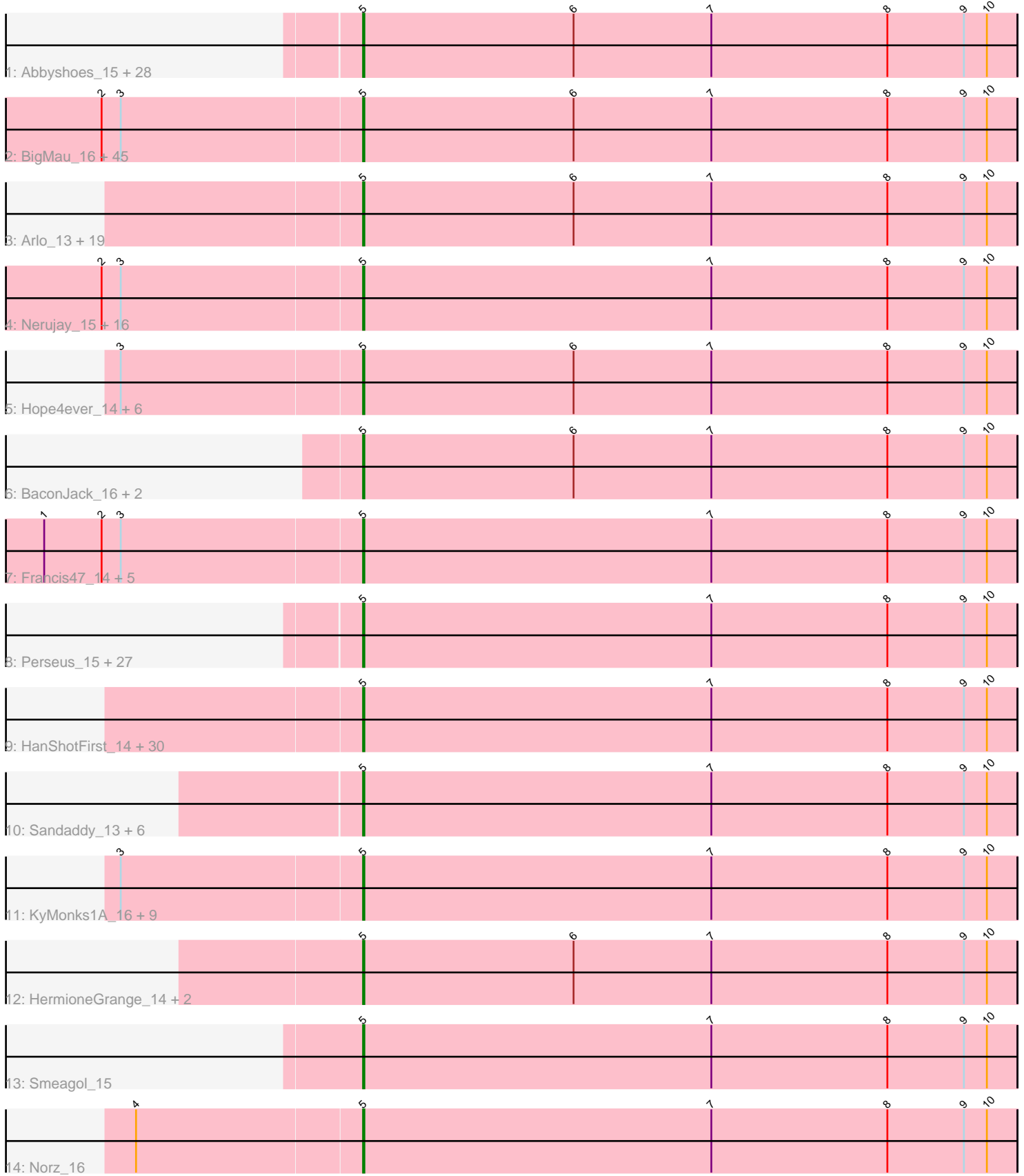


Pham 163346



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 163346 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163346 has 209 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Abbyshoes_15, Petruccio_14, Anglerfish_15, TheloniousMonk_16, Zephyr_14, Kenmech_17, Barriga_14, Makemake_14, A6_12, Squee_15, U2_14, Espresso_14, Marsha_14, Froghopper_15, ShortQueendom_13, Tripl3t_15, Parliament_13, Hermia_16, StewieG_13, Magnar_14, Corvo_14, Euphoria_14, Dussy_15, Pari_15, Switzer_15, DreamCatcher_17, Michley_14, Lesedi_13, BK1_12
- Track 2 : BigMau_16, Molly_15, Pippin_16, KSSJEB_14, Tote_16, Altman_15, Bircsak_14, Lopton_15, Petp2012_16, Ciao_14, Monet_16, Gompeii16_14, Alvin_15, BPBi3bs31_15, STLscum_15, Papez_16, Thor_14, HarryOW_15, Sibs6_16, Ichabod_15, Acme_16, Slagathor_15, QTRlifeCrisis_17, Jerm2_15, Homines_14, ConceptII_14, JC27_16, Gyzlar_16, Rohr_15, Swole_16, SarFire_14, GrecoEtereo_15, Marge_15, Nhonho_14, JuliaChild_16, JackSparrow_15, PattyP_16, Rufus_15, Museum_16, Zeeculate_13, MPlant7149_13, Marcell_14, Magnito_13, Wheeler_14, Burton_15, Pinto_16
- Track 3 : Arlo_13, Bob3_13, Scowl_15, Paraselene_13, Arcanine_15, DrFeelGood_13, Abrogate_150, TwoPeat_14, Rubeus_15, Bruns_13, Briton15_16, Jasper_15, Sagefire_15, Rajelicia_14, Dreamboat_15, Bethlehem_14, Doom_14, Seanderson_15, Mryolo_13, Rhynn_14
- Track 4 : Nerujay_15, Pepe_15, Dexes_15, LilBib_15, Dulcie_13, Pita2_16, Maroc7_13, Agaliana_14, PSullivan_15, SkiPole_16, Fascinus_13, Blue_14, BluSpix_14, Rutherford_16, Graduation_16, Ringer_14, IgnatiusPatJac_13
- Track 5 : Hope4ever_14, Fushigi_15, Fenn_15, Naira_15, Smairt_15, RidgeCB_14, Traft412_16
- Track 6 : BaconJack_16, Buttons_15, Licorice_16
- Track 7 : Francis47_14, Ajay_14, Violet_13, Wilkins_14, Eyeball_14, Topgun_14
- Track 8 : Perseus_15, Mule_14, Turj99_13, Kanely_15, Moose_13, Adahisdi_15, Killigrew_12, Atkinbua_15, Niza_16, Bones_14, Tasp14_15, Beatrix_13, Fajezeel_16, Greg_16, SwissCheese_14, Gandalf20_15, Paphu_13, Forsytheast_13, PacerPaul_14, Aeneas_16, Solon_14, Manatee_15, Oogway_13, Chanagan_13, PinkPlastic_13, Sumter_13, PhrostyMug_14, Ashballer_13
- Track 9 : HanShotFirst_14, DD5_15, Teodoridan_12, Pelly_15, BeesKnees_15, Zeuska_15, Marchy_12, GageAP_16, Lockley_14, Lamina13_14, Big3_14, Dynamix_15, PherrisBueller_15, NEHalo_14, Snazzy_12, MrGordo_14, Trouble_14, McGuire_15, StrongArm_13, KBG_15, Jorgensen_14, MaryBeth_14, Carlyle_16, Seabiscuit_16, CactusRose_13, MetalQZJ_14, Hami1_16, Alsfro_18, SpikeBT_16, Bexan_13, Payneful_13
- Track 10 : Sandaddy_13, Sorpresa_13, PascalRango_13, Ruotula_13, BigPaolini_15, Gwendoluna_16, Peterson_17

- Track 11 : KyMonks1A_16, Treddle_16, Applejack_14, Edtherson_15, Cueylyss_14, Watermelon_16, AFIS_14, ILeeKay_16, Bigfoot_13, Sunshine924_13
- Track 12 : HermioneGrange_14, Crispicous1_13, Ohno789_14
- Track 13 : Smeagol_15
- Track 14 : Norz_16

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

The start number called the most often in the published annotations is 5, it was called in 190 of the 190 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_12, AFIS_14, Abbyshoes_15, Abrogate_150, Acme_16, Adahisdi_15, Aeneas_16, Agaliana_14, Ajay_14, Alsfro_18, Altman_15, Alvin_15, Anglerfish_15, Applejack_14, Arcanine_15, Arlo_13, Ashballer_13, Atkinbua_15, BK1_12, BPBiebs31_15, BaconJack_16, Barriga_14, Beatrix_13, BeesKnees_15, Bethlehem_14, Bexan_13, Big3_14, BigMau_16, BigPaolini_15, Bigfoot_13, Bircsak_14, BluSpix_14, Blue_14, Bob3_13, Bones_14, Briton15_16, Bruns_13, Burton_15, Buttons_15, CactusRose_13, Carlyle_16, Chanagan_13, Ciao_14, Conceptll_14, Corvo_14, Crispicous1_13, Cueylyss_14, DD5_15, Dexes_15, Doom_14, DrFeelGood_13, DreamCatcher_17, Dreamboat_15, Dulcie_13, Dussy_15, Dynamix_15, Edtherson_15, Espresso_14, Euphoria_14, Eyeball_14, Fajezeel_16, Fascinus_13, Fenn_15, Forsytheast_13, Francis47_14, Frogopper_15, Fushigi_15, GageAP_16, Gandalf20_15, Gompeii16_14, Graduation_16, GrecoEtereo_15, Greg_16, Gwendoluna_16, Gyzlar_16, Hami1_16, HanShotFirst_14, HarryOW_15, Hermia_16, HermioneGrange_14, Homines_14, Hope4ever_14, ILeeKay_16, Ichabod_15, IgnatiusPatJac_13, JC27_16, JackSparrow_15, Jasper_15, Jerm2_15, Jorgensen_14, JuliaChild_16, KBG_15, KSSJEB_14, Kanely_15, Kenmech_17, Killigrew_12, KyMonks1A_16, Lamina13_14, Lesedi_13, Licorice_16, LilBib_15, Lockley_14, Lopton_15, MPlant7149_13, Magnar_14, Magnito_13, Makemake_14, Manatee_15, Marcell_14, Marchy_12, Marge_15, Maroc7_13, Marsha_14, MaryBeth_14, McGuire_15, MetalQZJ_14, Michley_14, Molly_15, Monet_16, Moose_13, MrGordo_14, Mryolo_13, Mule_14, Museum_16, NEHalo_14, Naira_15, Nerujay_15, Nhonho_14, Niza_16, Norz_16, Ohno789_14, Oogway_13, PSullivan_15, PacerPaul_14, Papez_16, Paphu_13, Paraselene_13, Pari_15, Parliament_13, PascalRango_13, PattyP_16, Payneful_13, Pelly_15, Pepe_15, Perseus_15, Peterson_17, Petp2012_16, Petruccio_14, PherrisBueller_15, PhrostyMug_14, PinkPlastic_13, Pinto_16, Pippin_16, Pita2_16, QTRLifeCrisis_17, Rajelicia_14, Rhynn_14, RidgeCB_14, Ringer_14, Rohr_15, Rubeus_15, Rufus_15, Ruotula_13, Rutherford_16, STLscum_15, Sagefire_15, Sandaddy_13, SarFire_14, Scowl_15, Seabiscuit_16, Seanderson_15, ShortQueendom_13, Sibs6_16, SkiPole_16, Slagathor_15, Smairt_15, Smeagol_15, Snazzy_12, Solon_14, Sorpresa_13, SpikeBT_16, Squee_15, StewieG_13, StrongArm_13, Sumter_13, Sunshine924_13, SwissCheese_14, Switzer_15, Swole_16, Tasp14_15, Teodoridan_12, TheloniousMonk_16, Thor_14, Topgun_14, Tote_16, Traft412_16, Treddle_16, Tripl3t_15, Trouble_14, Turj99_13, TwoPeat_14, U2_14, Violet_13, Watermelon_16, Wheeler_14, Wilkins_14, Zeeculate_13, Zephyr_14, Zeuska_15,

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

-

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

-

Summary by start number:

Start 5:

- Found in 209 of 209 (100.0%) of genes in pham
- Manual Annotations of this start: 190 of 190
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A6_12 (A1), AFIS_14 (A1), Abbyshoes_15 (A1), Abrogate_150 (A1), Acme_16 (A1), Adahisdi_15 (A1), Aeneas_16 (A1), Agaliana_14 (A1), Ajay_14 (A1), Alsfro_18 (A1), Altman_15 (A1), Alvin_15 (A1), Anglerfish_15 (A1), Applejack_14 (A1), Arcanine_15 (A1), Arlo_13 (A1), Ashballer_13 (A1), Atkinbua_15 (A1), BK1_12 (A1), BPBiebs31_15 (A1), BaconJack_16 (A1), Barriga_14 (A1), Beatrix_13 (A1), BeesKnees_15 (A1), Bethlehem_14 (A1), Bexan_13 (A1), Big3_14 (A1), BigMau_16 (A1), BigPaolini_15 (A1), Bigfoot_13 (A1), Bircsak_14 (A1), BluSpix_14 (A1), Blue_14 (A1), Bob3_13 (A1), Bones_14 (A1), Briton15_16 (A1), Bruns_13 (A1), Burton_15 (A1), Buttons_15 (A1), CactusRose_13 (A1), Carlyle_16 (A1), Chanagan_13 (A1), Ciao_14 (A1), ConceptII_14 (A1), Corvo_14 (A1), Crispicous1_13 (A1), Cueylyss_14 (A1), DD5_15 (A1), Dexes_15 (A1), Doom_14 (A1), DrFeelGood_13 (A1), DreamCatcher_17 (A1), Dreamboat_15 (A1), Dulcie_13 (A1), Dussy_15 (A1), Dynamix_15 (A1), Edtherson_15 (A1), Espresso_14 (A1), Euphoria_14 (A1), Eyeball_14 (A1), Fajezeel_16 (A1), Fascinus_13 (A1), Fenn_15 (A1), Forsytheast_13 (A1), Francis47_14 (A1), Froghopper_15 (A1), Fushigi_15 (A1), GageAP_16 (A1), Gandalf20_15 (A1), Gompeii16_14 (A1), Graduation_16 (A1), GrecoEtereo_15 (A1), Greg_16 (A1), Gwendoluna_16 (A1), Gyzlar_16 (A1), Hami1_16 (A1), HanShotFirst_14 (A1), HarryOW_15 (A1), Hermia_16 (A1), HermioneGrange_14 (A1), Homines_14 (A1), Hope4ever_14 (A1), ILeeKay_16 (A1), Ichabod_15 (A1), IgnatiusPatJac_13 (A1), JC27_16 (A1), JackSparrow_15 (A1), Jasper_15 (A1), Jerm2_15 (A1), Jorgensen_14 (A1), JuliaChild_16 (A1), KBG_15 (A1), KSSJEB_14 (A1), Kanely_15 (A1), Kenmech_17 (A1), Killigrew_12 (A1), KyMonks1A_16 (A1), Lamina13_14 (A1), Lesedi_13 (A1), Licorice_16 (A1), LilBib_15 (A1), Lockley_14 (A1), Lopton_15 (A1), MPlant7149_13 (A1), Magnar_14 (A1), Magnito_13 (A1), Makemake_14 (A1), Manatee_15 (A1), Marcell_14 (A1), Marchy_12 (A1), Marge_15 (A1), Maroc7_13 (A1), Marsha_14 (A1), MaryBeth_14 (A1), McGuire_15 (A1), MetalQZJ_14 (A1), Michley_14 (A1), Molly_15 (A1), Monet_16 (A1), Moose_13 (A1), MrGordo_14 (A1), Mryolo_13 (A1), Mule_14 (A1), Museum_16 (A1), NEHalo_14 (A1), Naira_15 (A1), Nerujay_15 (A1), Nhonho_14 (A1), Niza_16 (A1), Norz_16 (A1), Ohno789_14 (A1), Oogway_13 (A1), PSullivan_15 (A1), PacerPaul_14 (A1), Papez_16 (A1), Paphu_13 (A1), Paraselene_13 (A1), Pari_15 (A1), Parliament_13 (A1), PascalRango_13 (A1), PattyP_16 (A1), Payneful_13 (A1), Pelly_15 (A1), Pepe_15 (A1), Perseus_15 (A1), Peterson_17 (A1), Petp2012_16 (A1), Petruccio_14 (A1), PherrisBueller_15 (A1), PhrostyMug_14 (A1), PinkPlastic_13 (A1), Pinto_16 (A1), Pippin_16 (A1), Pita2_16 (A1), QTRlifeCrisis_17 (A1), Rajelicia_14 (A1), Rhynn_14 (A1), RidgeCB_14 (A1), Ringer_14 (A1), Rohr_15 (A1), Rubeus_15 (A1), Rufus_15 (A1), Ruotula_13 (A1), Rutherford_16 (A1), STLscum_15 (A1), Sagefire_15 (A1), Sandaddy_13 (A1), SarFire_14 (A1), Scowl_15 (A1), Seabiscuit_16 (A1), Seanderson_15 (A1), ShortQueendom_13 (A1), Sibs6_16 (A1), SkiPole_16 (A1), Slagathor_15 (A1), Smairt_15 (A1), Smeagol_15 (A1), Snazzy_12 (A1), Solon_14 (A1), Sorpresa_13 (A1), SpikeBT_16 (A1), Squee_15 (A1), StewieG_13 (A1),

StrongArm_13 (A1), Sumter_13 (A1), Sunshine924_13 (A1), SwissCheese_14 (A1), Switzer_15 (A1), Swole_16 (A1), Tasp14_15 (A1), Teodoridan_12 (A1), TheloniousMonk_16 (A1), Thor_14 (A1), Topgun_14 (A1), Tote_16 (A1), Traft412_16 (A1), Treddle_16 (A1), Trip13t_15 (A1), Trouble_14 (A1), Turj99_13 (A1), TwoPeat_14 (A1), U2_14 (A1), Violet_13 (A1), Watermelon_16 (A1), Wheeler_14 (A1), Wilkins_14 (A1), Zeeculate_13 (A1), Zephyr_14 (A1), Zeuska_15 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

•Start number 5 was manually annotated 190 times for cluster A1.

Gene Information:

Gene: A6_12 Start: 10644, Stop: 11156, Start Num: 5

Candidate Starts for A6_12:

(Start: 5 @10644 has 190 MA's), (6, 10809), (7, 10917), (8, 11055), (9, 11115), (10, 11133),

Gene: AFIS_14 Start: 10982, Stop: 11494, Start Num: 5

Candidate Starts for AFIS_14:

(3, 10796), (Start: 5 @10982 has 190 MA's), (7, 11255), (8, 11393), (9, 11453), (10, 11471),

Gene: Abbyshoes_15 Start: 11070, Stop: 11582, Start Num: 5

Candidate Starts for Abbyshoes_15:

(Start: 5 @11070 has 190 MA's), (6, 11235), (7, 11343), (8, 11481), (9, 11541), (10, 11559),

Gene: Abrogate_150 Start: 11727, Stop: 12239, Start Num: 5

Candidate Starts for Abrogate_150:

(Start: 5 @11727 has 190 MA's), (6, 11892), (7, 12000), (8, 12138), (9, 12198), (10, 12216),

Gene: Acme_16 Start: 11418, Stop: 11930, Start Num: 5

Candidate Starts for Acme_16:

(2, 11217), (3, 11232), (Start: 5 @11418 has 190 MA's), (6, 11583), (7, 11691), (8, 11829), (9, 11889), (10, 11907),

Gene: Adahisdi_15 Start: 11309, Stop: 11821, Start Num: 5

Candidate Starts for Adahisdi_15:

(Start: 5 @11309 has 190 MA's), (7, 11582), (8, 11720), (9, 11780), (10, 11798),

Gene: Aeneas_16 Start: 11404, Stop: 11916, Start Num: 5

Candidate Starts for Aeneas_16:

(Start: 5 @11404 has 190 MA's), (7, 11677), (8, 11815), (9, 11875), (10, 11893),

Gene: Agaliana_14 Start: 11119, Stop: 11631, Start Num: 5

Candidate Starts for Agaliana_14:

(2, 10918), (3, 10933), (Start: 5 @11119 has 190 MA's), (7, 11392), (8, 11530), (9, 11590), (10, 11608),

Gene: Ajay_14 Start: 11115, Stop: 11627, Start Num: 5

Candidate Starts for Ajay_14:

(1, 10869), (2, 10914), (3, 10929), (Start: 5 @11115 has 190 MA's), (7, 11388), (8, 11526), (9, 11586), (10, 11604),

Gene: Alsfro_18 Start: 11858, Stop: 12370, Start Num: 5

Candidate Starts for Alsfro_18:

(Start: 5 @11858 has 190 MA's), (7, 12131), (8, 12269), (9, 12329), (10, 12347),

Gene: Altman_15 Start: 11653, Stop: 12165, Start Num: 5

Candidate Starts for Altman_15:

(2, 11452), (3, 11467), (Start: 5 @11653 has 190 MA's), (6, 11818), (7, 11926), (8, 12064), (9, 12124), (10, 12142),

Gene: Alvin_15 Start: 11326, Stop: 11838, Start Num: 5

Candidate Starts for Alvin_15:

(2, 11125), (3, 11140), (Start: 5 @11326 has 190 MA's), (6, 11491), (7, 11599), (8, 11737), (9, 11797), (10, 11815),

Gene: Anglerfish_15 Start: 12039, Stop: 12551, Start Num: 5

Candidate Starts for Anglerfish_15:

(Start: 5 @12039 has 190 MA's), (6, 12204), (7, 12312), (8, 12450), (9, 12510), (10, 12528),

Gene: Applejack_14 Start: 11053, Stop: 11565, Start Num: 5

Candidate Starts for Applejack_14:

(3, 10867), (Start: 5 @11053 has 190 MA's), (7, 11326), (8, 11464), (9, 11524), (10, 11542),

Gene: Arcanine_15 Start: 10989, Stop: 11501, Start Num: 5

Candidate Starts for Arcanine_15:

(Start: 5 @10989 has 190 MA's), (6, 11154), (7, 11262), (8, 11400), (9, 11460), (10, 11478),

Gene: Arlo_13 Start: 10678, Stop: 11190, Start Num: 5

Candidate Starts for Arlo_13:

(Start: 5 @10678 has 190 MA's), (6, 10843), (7, 10951), (8, 11089), (9, 11149), (10, 11167),

Gene: Ashballer_13 Start: 11057, Stop: 11569, Start Num: 5

Candidate Starts for Ashballer_13:

(Start: 5 @11057 has 190 MA's), (7, 11330), (8, 11468), (9, 11528), (10, 11546),

Gene: Atkinbua_15 Start: 11032, Stop: 11544, Start Num: 5

Candidate Starts for Atkinbua_15:

(Start: 5 @11032 has 190 MA's), (7, 11305), (8, 11443), (9, 11503), (10, 11521),

Gene: BK1_12 Start: 10644, Stop: 11156, Start Num: 5

Candidate Starts for BK1_12:

(Start: 5 @10644 has 190 MA's), (6, 10809), (7, 10917), (8, 11055), (9, 11115), (10, 11133),

Gene: BPBiebs31_15 Start: 11317, Stop: 11829, Start Num: 5

Candidate Starts for BPBiebs31_15:

(2, 11116), (3, 11131), (Start: 5 @11317 has 190 MA's), (6, 11482), (7, 11590), (8, 11728), (9, 11788), (10, 11806),

Gene: BaconJack_16 Start: 11096, Stop: 11608, Start Num: 5

Candidate Starts for BaconJack_16:

(Start: 5 @11096 has 190 MA's), (6, 11261), (7, 11369), (8, 11507), (9, 11567), (10, 11585),

Gene: Barriga_14 Start: 10920, Stop: 11432, Start Num: 5

Candidate Starts for Barriga_14:

(Start: 5 @10920 has 190 MA's), (6, 11085), (7, 11193), (8, 11331), (9, 11391), (10, 11409),

Gene: Beatrix_13 Start: 11760, Stop: 12272, Start Num: 5

Candidate Starts for Beatrix_13:

(Start: 5 @11760 has 190 MA's), (7, 12033), (8, 12171), (9, 12231), (10, 12249),

Gene: BeesKnees_15 Start: 11119, Stop: 11631, Start Num: 5

Candidate Starts for BeesKnees_15:

(Start: 5 @11119 has 190 MA's), (7, 11392), (8, 11530), (9, 11590), (10, 11608),

Gene: Bethlehem_14 Start: 12347, Stop: 12859, Start Num: 5

Candidate Starts for Bethlehem_14:

(Start: 5 @12347 has 190 MA's), (6, 12512), (7, 12620), (8, 12758), (9, 12818), (10, 12836),

Gene: Bexan_13 Start: 11761, Stop: 12273, Start Num: 5

Candidate Starts for Bexan_13:

(Start: 5 @11761 has 190 MA's), (7, 12034), (8, 12172), (9, 12232), (10, 12250),

Gene: Big3_14 Start: 11704, Stop: 12216, Start Num: 5

Candidate Starts for Big3_14:

(Start: 5 @11704 has 190 MA's), (7, 11977), (8, 12115), (9, 12175), (10, 12193),

Gene: BigMau_16 Start: 11285, Stop: 11797, Start Num: 5

Candidate Starts for BigMau_16:

(2, 11084), (3, 11099), (Start: 5 @11285 has 190 MA's), (6, 11450), (7, 11558), (8, 11696), (9, 11756), (10, 11774),

Gene: BigPaolini_15 Start: 11711, Stop: 12223, Start Num: 5

Candidate Starts for BigPaolini_15:

(Start: 5 @11711 has 190 MA's), (7, 11984), (8, 12122), (9, 12182), (10, 12200),

Gene: Bigfoot_13 Start: 10809, Stop: 11321, Start Num: 5

Candidate Starts for Bigfoot_13:

(3, 10623), (Start: 5 @10809 has 190 MA's), (7, 11082), (8, 11220), (9, 11280), (10, 11298),

Gene: Bircsak_14 Start: 11270, Stop: 11782, Start Num: 5

Candidate Starts for Bircsak_14:

(2, 11069), (3, 11084), (Start: 5 @11270 has 190 MA's), (6, 11435), (7, 11543), (8, 11681), (9, 11741), (10, 11759),

Gene: BluSpix_14 Start: 11069, Stop: 11581, Start Num: 5

Candidate Starts for BluSpix_14:

(2, 10868), (3, 10883), (Start: 5 @11069 has 190 MA's), (7, 11342), (8, 11480), (9, 11540), (10, 11558),

Gene: Blue_14 Start: 11176, Stop: 11688, Start Num: 5

Candidate Starts for Blue_14:

(2, 10975), (3, 10990), (Start: 5 @11176 has 190 MA's), (7, 11449), (8, 11587), (9, 11647), (10, 11665),

Gene: Bob3_13 Start: 10625, Stop: 11137, Start Num: 5

Candidate Starts for Bob3_13:

(Start: 5 @10625 has 190 MA's), (6, 10790), (7, 10898), (8, 11036), (9, 11096), (10, 11114),

Gene: Bones_14 Start: 10819, Stop: 11331, Start Num: 5

Candidate Starts for Bones_14:

(Start: 5 @10819 has 190 MA's), (7, 11092), (8, 11230), (9, 11290), (10, 11308),

Gene: Briton15_16 Start: 11131, Stop: 11643, Start Num: 5

Candidate Starts for Briton15_16:

(Start: 5 @11131 has 190 MA's), (6, 11296), (7, 11404), (8, 11542), (9, 11602), (10, 11620),

Gene: Bruns_13 Start: 10988, Stop: 11500, Start Num: 5

Candidate Starts for Bruns_13:

(Start: 5 @10988 has 190 MA's), (6, 11153), (7, 11261), (8, 11399), (9, 11459), (10, 11477),

Gene: Burton_15 Start: 11188, Stop: 11700, Start Num: 5

Candidate Starts for Burton_15:

(2, 10987), (3, 11002), (Start: 5 @11188 has 190 MA's), (6, 11353), (7, 11461), (8, 11599), (9, 11659), (10, 11677),

Gene: Buttons_15 Start: 11258, Stop: 11770, Start Num: 5

Candidate Starts for Buttons_15:

(Start: 5 @11258 has 190 MA's), (6, 11423), (7, 11531), (8, 11669), (9, 11729), (10, 11747),

Gene: CactusRose_13 Start: 10808, Stop: 11320, Start Num: 5

Candidate Starts for CactusRose_13:

(Start: 5 @10808 has 190 MA's), (7, 11081), (8, 11219), (9, 11279), (10, 11297),

Gene: Carlyle_16 Start: 11656, Stop: 12168, Start Num: 5

Candidate Starts for Carlyle_16:

(Start: 5 @11656 has 190 MA's), (7, 11929), (8, 12067), (9, 12127), (10, 12145),

Gene: Chanagan_13 Start: 10651, Stop: 11163, Start Num: 5

Candidate Starts for Chanagan_13:

(Start: 5 @10651 has 190 MA's), (7, 10924), (8, 11062), (9, 11122), (10, 11140),

Gene: Ciao_14 Start: 11038, Stop: 11550, Start Num: 5

Candidate Starts for Ciao_14:

(2, 10837), (3, 10852), (Start: 5 @11038 has 190 MA's), (6, 11203), (7, 11311), (8, 11449), (9, 11509), (10, 11527),

Gene: ConceptII_14 Start: 11289, Stop: 11801, Start Num: 5

Candidate Starts for ConceptII_14:

(2, 11088), (3, 11103), (Start: 5 @11289 has 190 MA's), (6, 11454), (7, 11562), (8, 11700), (9, 11760), (10, 11778),

Gene: Corvo_14 Start: 11232, Stop: 11744, Start Num: 5

Candidate Starts for Corvo_14:

(Start: 5 @11232 has 190 MA's), (6, 11397), (7, 11505), (8, 11643), (9, 11703), (10, 11721),

Gene: Crispicous1_13 Start: 10518, Stop: 11030, Start Num: 5

Candidate Starts for Crispicious1_13:

(Start: 5 @10518 has 190 MA's), (6, 10683), (7, 10791), (8, 10929), (9, 10989), (10, 11007),

Gene: Cueyllyss_14 Start: 11228, Stop: 11740, Start Num: 5

Candidate Starts for Cueyllyss_14:

(3, 11042), (Start: 5 @11228 has 190 MA's), (7, 11501), (8, 11639), (9, 11699), (10, 11717),

Gene: DD5_15 Start: 11768, Stop: 12280, Start Num: 5

Candidate Starts for DD5_15:

(Start: 5 @11768 has 190 MA's), (7, 12041), (8, 12179), (9, 12239), (10, 12257),

Gene: Dexes_15 Start: 11733, Stop: 12245, Start Num: 5

Candidate Starts for Dexes_15:

(2, 11532), (3, 11547), (Start: 5 @11733 has 190 MA's), (7, 12006), (8, 12144), (9, 12204), (10, 12222),

Gene: Doom_14 Start: 11311, Stop: 11823, Start Num: 5

Candidate Starts for Doom_14:

(Start: 5 @11311 has 190 MA's), (6, 11476), (7, 11584), (8, 11722), (9, 11782), (10, 11800),

Gene: DrFeelGood_13 Start: 10835, Stop: 11347, Start Num: 5

Candidate Starts for DrFeelGood_13:

(Start: 5 @10835 has 190 MA's), (6, 11000), (7, 11108), (8, 11246), (9, 11306), (10, 11324),

Gene: DreamCatcher_17 Start: 12264, Stop: 12776, Start Num: 5

Candidate Starts for DreamCatcher_17:

(Start: 5 @12264 has 190 MA's), (6, 12429), (7, 12537), (8, 12675), (9, 12735), (10, 12753),

Gene: Dreamboat_15 Start: 10963, Stop: 11475, Start Num: 5

Candidate Starts for Dreamboat_15:

(Start: 5 @10963 has 190 MA's), (6, 11128), (7, 11236), (8, 11374), (9, 11434), (10, 11452),

Gene: Dulcie_13 Start: 10710, Stop: 11222, Start Num: 5

Candidate Starts for Dulcie_13:

(2, 10509), (3, 10524), (Start: 5 @10710 has 190 MA's), (7, 10983), (8, 11121), (9, 11181), (10, 11199),

Gene: Dussy_15 Start: 11070, Stop: 11582, Start Num: 5

Candidate Starts for Dussy_15:

(Start: 5 @11070 has 190 MA's), (6, 11235), (7, 11343), (8, 11481), (9, 11541), (10, 11559),

Gene: Dynamix_15 Start: 11120, Stop: 11632, Start Num: 5

Candidate Starts for Dynamix_15:

(Start: 5 @11120 has 190 MA's), (7, 11393), (8, 11531), (9, 11591), (10, 11609),

Gene: Edtherson_15 Start: 11568, Stop: 12080, Start Num: 5

Candidate Starts for Edtherson_15:

(3, 11382), (Start: 5 @11568 has 190 MA's), (7, 11841), (8, 11979), (9, 12039), (10, 12057),

Gene: Espresso_14 Start: 11163, Stop: 11675, Start Num: 5

Candidate Starts for Espresso_14:

(Start: 5 @11163 has 190 MA's), (6, 11328), (7, 11436), (8, 11574), (9, 11634), (10, 11652),

Gene: Euphoria_14 Start: 11059, Stop: 11571, Start Num: 5
Candidate Starts for Euphoria_14:
(Start: 5 @11059 has 190 MA's), (6, 11224), (7, 11332), (8, 11470), (9, 11530), (10, 11548),

Gene: Eyeball_14 Start: 10807, Stop: 11319, Start Num: 5
Candidate Starts for Eyeball_14:
(1, 10561), (2, 10606), (3, 10621), (Start: 5 @10807 has 190 MA's), (7, 11080), (8, 11218), (9, 11278),
(10, 11296),

Gene: Fajezeel_16 Start: 11383, Stop: 11895, Start Num: 5
Candidate Starts for Fajezeel_16:
(Start: 5 @11383 has 190 MA's), (7, 11656), (8, 11794), (9, 11854), (10, 11872),

Gene: Fascinus_13 Start: 10810, Stop: 11322, Start Num: 5
Candidate Starts for Fascinus_13:
(2, 10609), (3, 10624), (Start: 5 @10810 has 190 MA's), (7, 11083), (8, 11221), (9, 11281), (10,
11299),

Gene: Fenn_15 Start: 12374, Stop: 12886, Start Num: 5
Candidate Starts for Fenn_15:
(3, 12188), (Start: 5 @12374 has 190 MA's), (6, 12539), (7, 12647), (8, 12785), (9, 12845), (10,
12863),

Gene: Forsytheast_13 Start: 11073, Stop: 11585, Start Num: 5
Candidate Starts for Forsytheast_13:
(Start: 5 @11073 has 190 MA's), (7, 11346), (8, 11484), (9, 11544), (10, 11562),

Gene: Francis47_14 Start: 11311, Stop: 11823, Start Num: 5
Candidate Starts for Francis47_14:
(1, 11065), (2, 11110), (3, 11125), (Start: 5 @11311 has 190 MA's), (7, 11584), (8, 11722), (9, 11782),
(10, 11800),

Gene: Froghopper_15 Start: 10752, Stop: 11264, Start Num: 5
Candidate Starts for Froghopper_15:
(Start: 5 @10752 has 190 MA's), (6, 10917), (7, 11025), (8, 11163), (9, 11223), (10, 11241),

Gene: Fushigi_15 Start: 11475, Stop: 11987, Start Num: 5
Candidate Starts for Fushigi_15:
(3, 11289), (Start: 5 @11475 has 190 MA's), (6, 11640), (7, 11748), (8, 11886), (9, 11946), (10,
11964),

Gene: GageAP_16 Start: 11800, Stop: 12312, Start Num: 5
Candidate Starts for GageAP_16:
(Start: 5 @11800 has 190 MA's), (7, 12073), (8, 12211), (9, 12271), (10, 12289),

Gene: Gandalf20_15 Start: 11867, Stop: 12379, Start Num: 5
Candidate Starts for Gandalf20_15:
(Start: 5 @11867 has 190 MA's), (7, 12140), (8, 12278), (9, 12338), (10, 12356),

Gene: Gompeii16_14 Start: 11271, Stop: 11783, Start Num: 5
Candidate Starts for Gompeii16_14:
(2, 11070), (3, 11085), (Start: 5 @11271 has 190 MA's), (6, 11436), (7, 11544), (8, 11682), (9, 11742),
(10, 11760),

Gene: Graduation_16 Start: 11833, Stop: 12345, Start Num: 5

Candidate Starts for Graduation_16:

(2, 11632), (3, 11647), (Start: 5 @11833 has 190 MA's), (7, 12106), (8, 12244), (9, 12304), (10, 12322),

Gene: GrecoEtereo_15 Start: 11371, Stop: 11883, Start Num: 5

Candidate Starts for GrecoEtereo_15:

(2, 11170), (3, 11185), (Start: 5 @11371 has 190 MA's), (6, 11536), (7, 11644), (8, 11782), (9, 11842), (10, 11860),

Gene: Greg_16 Start: 11383, Stop: 11895, Start Num: 5

Candidate Starts for Greg_16:

(Start: 5 @11383 has 190 MA's), (7, 11656), (8, 11794), (9, 11854), (10, 11872),

Gene: Gwendoluna_16 Start: 12253, Stop: 12765, Start Num: 5

Candidate Starts for Gwendoluna_16:

(Start: 5 @12253 has 190 MA's), (7, 12526), (8, 12664), (9, 12724), (10, 12742),

Gene: Gyzlar_16 Start: 12014, Stop: 12526, Start Num: 5

Candidate Starts for Gyzlar_16:

(2, 11813), (3, 11828), (Start: 5 @12014 has 190 MA's), (6, 12179), (7, 12287), (8, 12425), (9, 12485), (10, 12503),

Gene: Hami1_16 Start: 11455, Stop: 11967, Start Num: 5

Candidate Starts for Hami1_16:

(Start: 5 @11455 has 190 MA's), (7, 11728), (8, 11866), (9, 11926), (10, 11944),

Gene: HanShotFirst_14 Start: 10675, Stop: 11187, Start Num: 5

Candidate Starts for HanShotFirst_14:

(Start: 5 @10675 has 190 MA's), (7, 10948), (8, 11086), (9, 11146), (10, 11164),

Gene: HarryOW_15 Start: 11371, Stop: 11883, Start Num: 5

Candidate Starts for HarryOW_15:

(2, 11170), (3, 11185), (Start: 5 @11371 has 190 MA's), (6, 11536), (7, 11644), (8, 11782), (9, 11842), (10, 11860),

Gene: Hermia_16 Start: 11814, Stop: 12326, Start Num: 5

Candidate Starts for Hermia_16:

(Start: 5 @11814 has 190 MA's), (6, 11979), (7, 12087), (8, 12225), (9, 12285), (10, 12303),

Gene: HermioneGrange_14 Start: 10785, Stop: 11297, Start Num: 5

Candidate Starts for HermioneGrange_14:

(Start: 5 @10785 has 190 MA's), (6, 10950), (7, 11058), (8, 11196), (9, 11256), (10, 11274),

Gene: Homines_14 Start: 11090, Stop: 11602, Start Num: 5

Candidate Starts for Homines_14:

(2, 10889), (3, 10904), (Start: 5 @11090 has 190 MA's), (6, 11255), (7, 11363), (8, 11501), (9, 11561), (10, 11579),

Gene: Hope4ever_14 Start: 11192, Stop: 11704, Start Num: 5

Candidate Starts for Hope4ever_14:

(3, 11006), (Start: 5 @11192 has 190 MA's), (6, 11357), (7, 11465), (8, 11603), (9, 11663), (10, 11681),

Gene: ILeeKay_16 Start: 11244, Stop: 11756, Start Num: 5

Candidate Starts for ILeeKay_16:

(3, 11058), (Start: 5 @11244 has 190 MA's), (7, 11517), (8, 11655), (9, 11715), (10, 11733),

Gene: Ichabod_15 Start: 11096, Stop: 11608, Start Num: 5

Candidate Starts for Ichabod_15:

(2, 10895), (3, 10910), (Start: 5 @11096 has 190 MA's), (6, 11261), (7, 11369), (8, 11507), (9, 11567), (10, 11585),

Gene: IgnatiusPatJac_13 Start: 11070, Stop: 11582, Start Num: 5

Candidate Starts for IgnatiusPatJac_13:

(2, 10869), (3, 10884), (Start: 5 @11070 has 190 MA's), (7, 11343), (8, 11481), (9, 11541), (10, 11559),

Gene: JC27_16 Start: 11696, Stop: 12208, Start Num: 5

Candidate Starts for JC27_16:

(2, 11495), (3, 11510), (Start: 5 @11696 has 190 MA's), (6, 11861), (7, 11969), (8, 12107), (9, 12167), (10, 12185),

Gene: JackSparrow_15 Start: 11412, Stop: 11924, Start Num: 5

Candidate Starts for JackSparrow_15:

(2, 11211), (3, 11226), (Start: 5 @11412 has 190 MA's), (6, 11577), (7, 11685), (8, 11823), (9, 11883), (10, 11901),

Gene: Jasper_15 Start: 10907, Stop: 11419, Start Num: 5

Candidate Starts for Jasper_15:

(Start: 5 @10907 has 190 MA's), (6, 11072), (7, 11180), (8, 11318), (9, 11378), (10, 11396),

Gene: Jerm2_15 Start: 11285, Stop: 11797, Start Num: 5

Candidate Starts for Jerm2_15:

(2, 11084), (3, 11099), (Start: 5 @11285 has 190 MA's), (6, 11450), (7, 11558), (8, 11696), (9, 11756), (10, 11774),

Gene: Jorgensen_14 Start: 10868, Stop: 11380, Start Num: 5

Candidate Starts for Jorgensen_14:

(Start: 5 @10868 has 190 MA's), (7, 11141), (8, 11279), (9, 11339), (10, 11357),

Gene: JuliaChild_16 Start: 11543, Stop: 12055, Start Num: 5

Candidate Starts for JuliaChild_16:

(2, 11342), (3, 11357), (Start: 5 @11543 has 190 MA's), (6, 11708), (7, 11816), (8, 11954), (9, 12014), (10, 12032),

Gene: KBG_15 Start: 11976, Stop: 12488, Start Num: 5

Candidate Starts for KBG_15:

(Start: 5 @11976 has 190 MA's), (7, 12249), (8, 12387), (9, 12447), (10, 12465),

Gene: KSSJEB_14 Start: 10881, Stop: 11393, Start Num: 5

Candidate Starts for KSSJEB_14:

(2, 10680), (3, 10695), (Start: 5 @10881 has 190 MA's), (6, 11046), (7, 11154), (8, 11292), (9, 11352), (10, 11370),

Gene: Kanely_15 Start: 11652, Stop: 12164, Start Num: 5

Candidate Starts for Kanely_15:

(Start: 5 @11652 has 190 MA's), (7, 11925), (8, 12063), (9, 12123), (10, 12141),

Gene: Kenmech_17 Start: 12156, Stop: 12668, Start Num: 5

Candidate Starts for Kenmech_17:

(Start: 5 @12156 has 190 MA's), (6, 12321), (7, 12429), (8, 12567), (9, 12627), (10, 12645),

Gene: Killigrew_12 Start: 10517, Stop: 11029, Start Num: 5

Candidate Starts for Killigrew_12:

(Start: 5 @10517 has 190 MA's), (7, 10790), (8, 10928), (9, 10988), (10, 11006),

Gene: KyMonks1A_16 Start: 11387, Stop: 11899, Start Num: 5

Candidate Starts for KyMonks1A_16:

(3, 11201), (Start: 5 @11387 has 190 MA's), (7, 11660), (8, 11798), (9, 11858), (10, 11876),

Gene: Lamina13_14 Start: 10663, Stop: 11175, Start Num: 5

Candidate Starts for Lamina13_14:

(Start: 5 @10663 has 190 MA's), (7, 10936), (8, 11074), (9, 11134), (10, 11152),

Gene: Lesedi_13 Start: 10821, Stop: 11333, Start Num: 5

Candidate Starts for Lesedi_13:

(Start: 5 @10821 has 190 MA's), (6, 10986), (7, 11094), (8, 11232), (9, 11292), (10, 11310),

Gene: Licorice_16 Start: 11679, Stop: 12191, Start Num: 5

Candidate Starts for Licorice_16:

(Start: 5 @11679 has 190 MA's), (6, 11844), (7, 11952), (8, 12090), (9, 12150), (10, 12168),

Gene: LilBib_15 Start: 11622, Stop: 12134, Start Num: 5

Candidate Starts for LilBib_15:

(2, 11421), (3, 11436), (Start: 5 @11622 has 190 MA's), (7, 11895), (8, 12033), (9, 12093), (10, 12111),

Gene: Lockley_14 Start: 11001, Stop: 11513, Start Num: 5

Candidate Starts for Lockley_14:

(Start: 5 @11001 has 190 MA's), (7, 11274), (8, 11412), (9, 11472), (10, 11490),

Gene: Lopton_15 Start: 12429, Stop: 12941, Start Num: 5

Candidate Starts for Lopton_15:

(2, 12228), (3, 12243), (Start: 5 @12429 has 190 MA's), (6, 12594), (7, 12702), (8, 12840), (9, 12900), (10, 12918),

Gene: MPlant7149_13 Start: 10639, Stop: 11151, Start Num: 5

Candidate Starts for MPlant7149_13:

(2, 10438), (3, 10453), (Start: 5 @10639 has 190 MA's), (6, 10804), (7, 10912), (8, 11050), (9, 11110), (10, 11128),

Gene: Magnar_14 Start: 10786, Stop: 11298, Start Num: 5

Candidate Starts for Magnar_14:

(Start: 5 @10786 has 190 MA's), (6, 10951), (7, 11059), (8, 11197), (9, 11257), (10, 11275),

Gene: Magnito_13 Start: 10538, Stop: 11050, Start Num: 5

Candidate Starts for Magnito_13:

(2, 10337), (3, 10352), (Start: 5 @10538 has 190 MA's), (6, 10703), (7, 10811), (8, 10949), (9, 11009), (10, 11027),

Gene: Makemake_14 Start: 12270, Stop: 12782, Start Num: 5

Candidate Starts for Makemake_14:

(Start: 5 @12270 has 190 MA's), (6, 12435), (7, 12543), (8, 12681), (9, 12741), (10, 12759),

Gene: Manatee_15 Start: 11070, Stop: 11582, Start Num: 5

Candidate Starts for Manatee_15:

(Start: 5 @11070 has 190 MA's), (7, 11343), (8, 11481), (9, 11541), (10, 11559),

Gene: Marcell_14 Start: 10998, Stop: 11510, Start Num: 5

Candidate Starts for Marcell_14:

(2, 10797), (3, 10812), (Start: 5 @10998 has 190 MA's), (6, 11163), (7, 11271), (8, 11409), (9, 11469), (10, 11487),

Gene: Marchy_12 Start: 10625, Stop: 11137, Start Num: 5

Candidate Starts for Marchy_12:

(Start: 5 @10625 has 190 MA's), (7, 10898), (8, 11036), (9, 11096), (10, 11114),

Gene: Marge_15 Start: 11521, Stop: 12033, Start Num: 5

Candidate Starts for Marge_15:

(2, 11320), (3, 11335), (Start: 5 @11521 has 190 MA's), (6, 11686), (7, 11794), (8, 11932), (9, 11992), (10, 12010),

Gene: Maroc7_13 Start: 10811, Stop: 11323, Start Num: 5

Candidate Starts for Maroc7_13:

(2, 10610), (3, 10625), (Start: 5 @10811 has 190 MA's), (7, 11084), (8, 11222), (9, 11282), (10, 11300),

Gene: Marsha_14 Start: 11254, Stop: 11766, Start Num: 5

Candidate Starts for Marsha_14:

(Start: 5 @11254 has 190 MA's), (6, 11419), (7, 11527), (8, 11665), (9, 11725), (10, 11743),

Gene: MaryBeth_14 Start: 11233, Stop: 11745, Start Num: 5

Candidate Starts for MaryBeth_14:

(Start: 5 @11233 has 190 MA's), (7, 11506), (8, 11644), (9, 11704), (10, 11722),

Gene: McGuire_15 Start: 11116, Stop: 11628, Start Num: 5

Candidate Starts for McGuire_15:

(Start: 5 @11116 has 190 MA's), (7, 11389), (8, 11527), (9, 11587), (10, 11605),

Gene: MetalQZJ_14 Start: 11233, Stop: 11745, Start Num: 5

Candidate Starts for MetalQZJ_14:

(Start: 5 @11233 has 190 MA's), (7, 11506), (8, 11644), (9, 11704), (10, 11722),

Gene: Michley_14 Start: 10980, Stop: 11492, Start Num: 5

Candidate Starts for Michley_14:

(Start: 5 @10980 has 190 MA's), (6, 11145), (7, 11253), (8, 11391), (9, 11451), (10, 11469),

Gene: Molly_15 Start: 10841, Stop: 11353, Start Num: 5

Candidate Starts for Molly_15:

(2, 10640), (3, 10655), (Start: 5 @10841 has 190 MA's), (6, 11006), (7, 11114), (8, 11252), (9, 11312), (10, 11330),

Gene: Monet_16 Start: 12038, Stop: 12550, Start Num: 5

Candidate Starts for Monet_16:

(2, 11837), (3, 11852), (Start: 5 @12038 has 190 MA's), (6, 12203), (7, 12311), (8, 12449), (9, 12509), (10, 12527),

Gene: Moose_13 Start: 11073, Stop: 11585, Start Num: 5

Candidate Starts for Moose_13:

(Start: 5 @11073 has 190 MA's), (7, 11346), (8, 11484), (9, 11544), (10, 11562),

Gene: MrGordo_14 Start: 10793, Stop: 11305, Start Num: 5

Candidate Starts for MrGordo_14:

(Start: 5 @10793 has 190 MA's), (7, 11066), (8, 11204), (9, 11264), (10, 11282),

Gene: Mryolo_13 Start: 10823, Stop: 11335, Start Num: 5

Candidate Starts for Mryolo_13:

(Start: 5 @10823 has 190 MA's), (6, 10988), (7, 11096), (8, 11234), (9, 11294), (10, 11312),

Gene: Mule_14 Start: 11108, Stop: 11620, Start Num: 5

Candidate Starts for Mule_14:

(Start: 5 @11108 has 190 MA's), (7, 11381), (8, 11519), (9, 11579), (10, 11597),

Gene: Museum_16 Start: 11127, Stop: 11639, Start Num: 5

Candidate Starts for Museum_16:

(2, 10926), (3, 10941), (Start: 5 @11127 has 190 MA's), (6, 11292), (7, 11400), (8, 11538), (9, 11598), (10, 11616),

Gene: NEHalo_14 Start: 10635, Stop: 11147, Start Num: 5

Candidate Starts for NEHalo_14:

(Start: 5 @10635 has 190 MA's), (7, 10908), (8, 11046), (9, 11106), (10, 11124),

Gene: Naira_15 Start: 12374, Stop: 12886, Start Num: 5

Candidate Starts for Naira_15:

(3, 12188), (Start: 5 @12374 has 190 MA's), (6, 12539), (7, 12647), (8, 12785), (9, 12845), (10, 12863),

Gene: Nerujay_15 Start: 11530, Stop: 12042, Start Num: 5

Candidate Starts for Nerujay_15:

(2, 11329), (3, 11344), (Start: 5 @11530 has 190 MA's), (7, 11803), (8, 11941), (9, 12001), (10, 12019),

Gene: Nhonho_14 Start: 10979, Stop: 11491, Start Num: 5

Candidate Starts for Nhonho_14:

(2, 10778), (3, 10793), (Start: 5 @10979 has 190 MA's), (6, 11144), (7, 11252), (8, 11390), (9, 11450), (10, 11468),

Gene: Niza_16 Start: 12146, Stop: 12658, Start Num: 5

Candidate Starts for Niza_16:

(Start: 5 @12146 has 190 MA's), (7, 12419), (8, 12557), (9, 12617), (10, 12635),

Gene: Norz_16 Start: 11782, Stop: 12294, Start Num: 5

Candidate Starts for Norz_16:

(4, 11608), (Start: 5 @11782 has 190 MA's), (7, 12055), (8, 12193), (9, 12253), (10, 12271),

Gene: Ohno789_14 Start: 10925, Stop: 11437, Start Num: 5

Candidate Starts for Ohno789_14:

(Start: 5 @10925 has 190 MA's), (6, 11090), (7, 11198), (8, 11336), (9, 11396), (10, 11414),

Gene: Oogway_13 Start: 11054, Stop: 11566, Start Num: 5

Candidate Starts for Oogway_13:

(Start: 5 @11054 has 190 MA's), (7, 11327), (8, 11465), (9, 11525), (10, 11543),

Gene: PSullivan_15 Start: 11543, Stop: 12055, Start Num: 5

Candidate Starts for PSullivan_15:

(2, 11342), (3, 11357), (Start: 5 @11543 has 190 MA's), (7, 11816), (8, 11954), (9, 12014), (10, 12032),

Gene: PacerPaul_14 Start: 11310, Stop: 11822, Start Num: 5

Candidate Starts for PacerPaul_14:

(Start: 5 @11310 has 190 MA's), (7, 11583), (8, 11721), (9, 11781), (10, 11799),

Gene: Papez_16 Start: 12506, Stop: 13018, Start Num: 5

Candidate Starts for Papez_16:

(2, 12305), (3, 12320), (Start: 5 @12506 has 190 MA's), (6, 12671), (7, 12779), (8, 12917), (9, 12977), (10, 12995),

Gene: Paphu_13 Start: 10499, Stop: 11011, Start Num: 5

Candidate Starts for Paphu_13:

(Start: 5 @10499 has 190 MA's), (7, 10772), (8, 10910), (9, 10970), (10, 10988),

Gene: Paraselene_13 Start: 10812, Stop: 11324, Start Num: 5

Candidate Starts for Paraselene_13:

(Start: 5 @10812 has 190 MA's), (6, 10977), (7, 11085), (8, 11223), (9, 11283), (10, 11301),

Gene: Pari_15 Start: 11278, Stop: 11790, Start Num: 5

Candidate Starts for Pari_15:

(Start: 5 @11278 has 190 MA's), (6, 11443), (7, 11551), (8, 11689), (9, 11749), (10, 11767),

Gene: Parliament_13 Start: 10881, Stop: 11393, Start Num: 5

Candidate Starts for Parliament_13:

(Start: 5 @10881 has 190 MA's), (6, 11046), (7, 11154), (8, 11292), (9, 11352), (10, 11370),

Gene: PascalRango_13 Start: 10739, Stop: 11251, Start Num: 5

Candidate Starts for PascalRango_13:

(Start: 5 @10739 has 190 MA's), (7, 11012), (8, 11150), (9, 11210), (10, 11228),

Gene: PattyP_16 Start: 11336, Stop: 11848, Start Num: 5

Candidate Starts for PattyP_16:

(2, 11135), (3, 11150), (Start: 5 @11336 has 190 MA's), (6, 11501), (7, 11609), (8, 11747), (9, 11807), (10, 11825),

Gene: Payneful_13 Start: 10625, Stop: 11137, Start Num: 5

Candidate Starts for Payneful_13:

(Start: 5 @10625 has 190 MA's), (7, 10898), (8, 11036), (9, 11096), (10, 11114),

Gene: Pelly_15 Start: 11571, Stop: 12083, Start Num: 5

Candidate Starts for Pelly_15:

(Start: 5 @11571 has 190 MA's), (7, 11844), (8, 11982), (9, 12042), (10, 12060),

Gene: Pepe_15 Start: 11534, Stop: 12046, Start Num: 5

Candidate Starts for Pepe_15:

(2, 11333), (3, 11348), (Start: 5 @11534 has 190 MA's), (7, 11807), (8, 11945), (9, 12005), (10, 12023),

Gene: Perseus_15 Start: 11194, Stop: 11706, Start Num: 5

Candidate Starts for Perseus_15:

(Start: 5 @11194 has 190 MA's), (7, 11467), (8, 11605), (9, 11665), (10, 11683),

Gene: Peterson_17 Start: 12495, Stop: 13007, Start Num: 5

Candidate Starts for Peterson_17:

(Start: 5 @12495 has 190 MA's), (7, 12768), (8, 12906), (9, 12966), (10, 12984),

Gene: Petp2012_16 Start: 12010, Stop: 12522, Start Num: 5

Candidate Starts for Petp2012_16:

(2, 11809), (3, 11824), (Start: 5 @12010 has 190 MA's), (6, 12175), (7, 12283), (8, 12421), (9, 12481), (10, 12499),

Gene: Petruchio_14 Start: 10752, Stop: 11264, Start Num: 5

Candidate Starts for Petruchio_14:

(Start: 5 @10752 has 190 MA's), (6, 10917), (7, 11025), (8, 11163), (9, 11223), (10, 11241),

Gene: PherrisBueller_15 Start: 10963, Stop: 11475, Start Num: 5

Candidate Starts for PherrisBueller_15:

(Start: 5 @10963 has 190 MA's), (7, 11236), (8, 11374), (9, 11434), (10, 11452),

Gene: PhrostyMug_14 Start: 11108, Stop: 11620, Start Num: 5

Candidate Starts for PhrostyMug_14:

(Start: 5 @11108 has 190 MA's), (7, 11381), (8, 11519), (9, 11579), (10, 11597),

Gene: PinkPlastic_13 Start: 10877, Stop: 11389, Start Num: 5

Candidate Starts for PinkPlastic_13:

(Start: 5 @10877 has 190 MA's), (7, 11150), (8, 11288), (9, 11348), (10, 11366),

Gene: Pinto_16 Start: 11185, Stop: 11697, Start Num: 5

Candidate Starts for Pinto_16:

(2, 10984), (3, 10999), (Start: 5 @11185 has 190 MA's), (6, 11350), (7, 11458), (8, 11596), (9, 11656), (10, 11674),

Gene: Pippin_16 Start: 11446, Stop: 11958, Start Num: 5

Candidate Starts for Pippin_16:

(2, 11245), (3, 11260), (Start: 5 @11446 has 190 MA's), (6, 11611), (7, 11719), (8, 11857), (9, 11917), (10, 11935),

Gene: Pita2_16 Start: 11543, Stop: 12055, Start Num: 5

Candidate Starts for Pita2_16:

(2, 11342), (3, 11357), (Start: 5 @11543 has 190 MA's), (7, 11816), (8, 11954), (9, 12014), (10, 12032),

Gene: QTRlifeCrisis_17 Start: 11511, Stop: 12023, Start Num: 5

Candidate Starts for QTRlifeCrisis_17:

(2, 11310), (3, 11325), (Start: 5 @11511 has 190 MA's), (6, 11676), (7, 11784), (8, 11922), (9, 11982), (10, 12000),

Gene: Rajelicia_14 Start: 11018, Stop: 11530, Start Num: 5

Candidate Starts for Rajelicia_14:

(Start: 5 @11018 has 190 MA's), (6, 11183), (7, 11291), (8, 11429), (9, 11489), (10, 11507),

Gene: Rhynn_14 Start: 11112, Stop: 11624, Start Num: 5

Candidate Starts for Rhynn_14:

(Start: 5 @11112 has 190 MA's), (6, 11277), (7, 11385), (8, 11523), (9, 11583), (10, 11601),

Gene: RidgeCB_14 Start: 10639, Stop: 11151, Start Num: 5

Candidate Starts for RidgeCB_14:

(3, 10453), (Start: 5 @10639 has 190 MA's), (6, 10804), (7, 10912), (8, 11050), (9, 11110), (10, 11128),

Gene: Ringer_14 Start: 11370, Stop: 11882, Start Num: 5

Candidate Starts for Ringer_14:

(2, 11169), (3, 11184), (Start: 5 @11370 has 190 MA's), (7, 11643), (8, 11781), (9, 11841), (10, 11859),

Gene: Rohr_15 Start: 11318, Stop: 11830, Start Num: 5

Candidate Starts for Rohr_15:

(2, 11117), (3, 11132), (Start: 5 @11318 has 190 MA's), (6, 11483), (7, 11591), (8, 11729), (9, 11789), (10, 11807),

Gene: Rubeus_15 Start: 11144, Stop: 11656, Start Num: 5

Candidate Starts for Rubeus_15:

(Start: 5 @11144 has 190 MA's), (6, 11309), (7, 11417), (8, 11555), (9, 11615), (10, 11633),

Gene: Rufus_15 Start: 11201, Stop: 11713, Start Num: 5

Candidate Starts for Rufus_15:

(2, 11000), (3, 11015), (Start: 5 @11201 has 190 MA's), (6, 11366), (7, 11474), (8, 11612), (9, 11672), (10, 11690),

Gene: Ruotula_13 Start: 11321, Stop: 11833, Start Num: 5

Candidate Starts for Ruotula_13:

(Start: 5 @11321 has 190 MA's), (7, 11594), (8, 11732), (9, 11792), (10, 11810),

Gene: Rutherferd_16 Start: 11662, Stop: 12174, Start Num: 5

Candidate Starts for Rutherferd_16:

(2, 11461), (3, 11476), (Start: 5 @11662 has 190 MA's), (7, 11935), (8, 12073), (9, 12133), (10, 12151),

Gene: STLscum_15 Start: 11231, Stop: 11743, Start Num: 5

Candidate Starts for STLscum_15:

(2, 11030), (3, 11045), (Start: 5 @11231 has 190 MA's), (6, 11396), (7, 11504), (8, 11642), (9, 11702), (10, 11720),

Gene: Sagefire_15 Start: 11913, Stop: 12425, Start Num: 5

Candidate Starts for Sagefire_15:

(Start: 5 @11913 has 190 MA's), (6, 12078), (7, 12186), (8, 12324), (9, 12384), (10, 12402),

Gene: Sandaddy_13 Start: 11037, Stop: 11549, Start Num: 5

Candidate Starts for Sandaddy_13:

(Start: 5 @11037 has 190 MA's), (7, 11310), (8, 11448), (9, 11508), (10, 11526),

Gene: SarFire_14 Start: 10897, Stop: 11409, Start Num: 5

Candidate Starts for SarFire_14:

(2, 10696), (3, 10711), (Start: 5 @10897 has 190 MA's), (6, 11062), (7, 11170), (8, 11308), (9, 11368), (10, 11386),

Gene: Scowl_15 Start: 11589, Stop: 12101, Start Num: 5

Candidate Starts for Scowl_15:

(Start: 5 @11589 has 190 MA's), (6, 11754), (7, 11862), (8, 12000), (9, 12060), (10, 12078),

Gene: Seabiscuit_16 Start: 11118, Stop: 11630, Start Num: 5

Candidate Starts for Seabiscuit_16:

(Start: 5 @11118 has 190 MA's), (7, 11391), (8, 11529), (9, 11589), (10, 11607),

Gene: Seanderson_15 Start: 11562, Stop: 12074, Start Num: 5

Candidate Starts for Seanderson_15:

(Start: 5 @11562 has 190 MA's), (6, 11727), (7, 11835), (8, 11973), (9, 12033), (10, 12051),

Gene: ShortQueendom_13 Start: 10703, Stop: 11215, Start Num: 5

Candidate Starts for ShortQueendom_13:

(Start: 5 @10703 has 190 MA's), (6, 10868), (7, 10976), (8, 11114), (9, 11174), (10, 11192),

Gene: Sibs6_16 Start: 11337, Stop: 11849, Start Num: 5

Candidate Starts for Sibs6_16:

(2, 11136), (3, 11151), (Start: 5 @11337 has 190 MA's), (6, 11502), (7, 11610), (8, 11748), (9, 11808), (10, 11826),

Gene: SkiPole_16 Start: 11211, Stop: 11723, Start Num: 5

Candidate Starts for SkiPole_16:

(2, 11010), (3, 11025), (Start: 5 @11211 has 190 MA's), (7, 11484), (8, 11622), (9, 11682), (10, 11700),

Gene: Slagathor_15 Start: 10989, Stop: 11501, Start Num: 5

Candidate Starts for Slagathor_15:

(2, 10788), (3, 10803), (Start: 5 @10989 has 190 MA's), (6, 11154), (7, 11262), (8, 11400), (9, 11460), (10, 11478),

Gene: Smairt_15 Start: 11508, Stop: 12020, Start Num: 5

Candidate Starts for Smairt_15:

(3, 11322), (Start: 5 @11508 has 190 MA's), (6, 11673), (7, 11781), (8, 11919), (9, 11979), (10, 11997),

Gene: Smeagol_15 Start: 11925, Stop: 12437, Start Num: 5

Candidate Starts for Smeagol_15:

(Start: 5 @11925 has 190 MA's), (7, 12198), (8, 12336), (9, 12396), (10, 12414),

Gene: Snazzy_12 Start: 10518, Stop: 11030, Start Num: 5

Candidate Starts for Snazzy_12:

(Start: 5 @10518 has 190 MA's), (7, 10791), (8, 10929), (9, 10989), (10, 11007),

Gene: Solon_14 Start: 11669, Stop: 12181, Start Num: 5

Candidate Starts for Solon_14:

(Start: 5 @11669 has 190 MA's), (7, 11942), (8, 12080), (9, 12140), (10, 12158),

Gene: Sorpresa_13 Start: 11037, Stop: 11549, Start Num: 5

Candidate Starts for Sorpresa_13:

(Start: 5 @11037 has 190 MA's), (7, 11310), (8, 11448), (9, 11508), (10, 11526),

Gene: SpikeBT_16 Start: 11973, Stop: 12485, Start Num: 5

Candidate Starts for SpikeBT_16:

(Start: 5 @11973 has 190 MA's), (7, 12246), (8, 12384), (9, 12444), (10, 12462),

Gene: Squee_15 Start: 11513, Stop: 12025, Start Num: 5

Candidate Starts for Squee_15:

(Start: 5 @11513 has 190 MA's), (6, 11678), (7, 11786), (8, 11924), (9, 11984), (10, 12002),

Gene: StewieG_13 Start: 10885, Stop: 11397, Start Num: 5

Candidate Starts for StewieG_13:

(Start: 5 @10885 has 190 MA's), (6, 11050), (7, 11158), (8, 11296), (9, 11356), (10, 11374),

Gene: StrongArm_13 Start: 11761, Stop: 12273, Start Num: 5

Candidate Starts for StrongArm_13:

(Start: 5 @11761 has 190 MA's), (7, 12034), (8, 12172), (9, 12232), (10, 12250),

Gene: Sumter_13 Start: 10628, Stop: 11140, Start Num: 5

Candidate Starts for Sumter_13:

(Start: 5 @10628 has 190 MA's), (7, 10901), (8, 11039), (9, 11099), (10, 11117),

Gene: Sunshine924_13 Start: 10612, Stop: 11124, Start Num: 5

Candidate Starts for Sunshine924_13:

(3, 10426), (Start: 5 @10612 has 190 MA's), (7, 10885), (8, 11023), (9, 11083), (10, 11101),

Gene: SwissCheese_14 Start: 11073, Stop: 11585, Start Num: 5

Candidate Starts for SwissCheese_14:

(Start: 5 @11073 has 190 MA's), (7, 11346), (8, 11484), (9, 11544), (10, 11562),

Gene: Switzer_15 Start: 10996, Stop: 11508, Start Num: 5

Candidate Starts for Switzer_15:

(Start: 5 @10996 has 190 MA's), (6, 11161), (7, 11269), (8, 11407), (9, 11467), (10, 11485),

Gene: Swole_16 Start: 11543, Stop: 12055, Start Num: 5

Candidate Starts for Swole_16:

(2, 11342), (3, 11357), (Start: 5 @11543 has 190 MA's), (6, 11708), (7, 11816), (8, 11954), (9, 12014), (10, 12032),

Gene: Tasp14_15 Start: 11313, Stop: 11825, Start Num: 5

Candidate Starts for Tasp14_15:

(Start: 5 @11313 has 190 MA's), (7, 11586), (8, 11724), (9, 11784), (10, 11802),

Gene: Teodoridan_12 Start: 10445, Stop: 10957, Start Num: 5

Candidate Starts for Teodoridan_12:

(Start: 5 @10445 has 190 MA's), (7, 10718), (8, 10856), (9, 10916), (10, 10934),

Gene: TheloniousMonk_16 Start: 12056, Stop: 12568, Start Num: 5

Candidate Starts for TheloniousMonk_16:

(Start: 5 @12056 has 190 MA's), (6, 12221), (7, 12329), (8, 12467), (9, 12527), (10, 12545),

Gene: Thor_14 Start: 10897, Stop: 11409, Start Num: 5

Candidate Starts for Thor_14:

(2, 10696), (3, 10711), (Start: 5 @10897 has 190 MA's), (6, 11062), (7, 11170), (8, 11308), (9, 11368), (10, 11386),

Gene: Topgun_14 Start: 10802, Stop: 11314, Start Num: 5

Candidate Starts for Topgun_14:

(1, 10556), (2, 10601), (3, 10616), (Start: 5 @10802 has 190 MA's), (7, 11075), (8, 11213), (9, 11273), (10, 11291),

Gene: Tote_16 Start: 11543, Stop: 12055, Start Num: 5

Candidate Starts for Tote_16:

(2, 11342), (3, 11357), (Start: 5 @11543 has 190 MA's), (6, 11708), (7, 11816), (8, 11954), (9, 12014), (10, 12032),

Gene: Traft412_16 Start: 11724, Stop: 12236, Start Num: 5

Candidate Starts for Traft412_16:

(3, 11538), (Start: 5 @11724 has 190 MA's), (6, 11889), (7, 11997), (8, 12135), (9, 12195), (10, 12213),

Gene: Treddle_16 Start: 12039, Stop: 12551, Start Num: 5

Candidate Starts for Treddle_16:

(3, 11853), (Start: 5 @12039 has 190 MA's), (7, 12312), (8, 12450), (9, 12510), (10, 12528),

Gene: Tripl3t_15 Start: 11724, Stop: 12236, Start Num: 5

Candidate Starts for Tripl3t_15:

(Start: 5 @11724 has 190 MA's), (6, 11889), (7, 11997), (8, 12135), (9, 12195), (10, 12213),

Gene: Trouble_14 Start: 11374, Stop: 11886, Start Num: 5

Candidate Starts for Trouble_14:

(Start: 5 @11374 has 190 MA's), (7, 11647), (8, 11785), (9, 11845), (10, 11863),

Gene: Turj99_13 Start: 10817, Stop: 11329, Start Num: 5

Candidate Starts for Turj99_13:

(Start: 5 @10817 has 190 MA's), (7, 11090), (8, 11228), (9, 11288), (10, 11306),

Gene: TwoPeat_14 Start: 11336, Stop: 11848, Start Num: 5

Candidate Starts for TwoPeat_14:

(Start: 5 @11336 has 190 MA's), (6, 11501), (7, 11609), (8, 11747), (9, 11807), (10, 11825),

Gene: U2_14 Start: 10998, Stop: 11510, Start Num: 5

Candidate Starts for U2_14:

(Start: 5 @10998 has 190 MA's), (6, 11163), (7, 11271), (8, 11409), (9, 11469), (10, 11487),

Gene: Violet_13 Start: 11633, Stop: 12145, Start Num: 5

Candidate Starts for Violet_13:

(1, 11387), (2, 11432), (3, 11447), (Start: 5 @11633 has 190 MA's), (7, 11906), (8, 12044), (9, 12104), (10, 12122),

Gene: Watermelon_16 Start: 11925, Stop: 12437, Start Num: 5

Candidate Starts for Watermelon_16:

(3, 11739), (Start: 5 @11925 has 190 MA's), (7, 12198), (8, 12336), (9, 12396), (10, 12414),

Gene: Wheeler_14 Start: 11091, Stop: 11603, Start Num: 5

Candidate Starts for Wheeler_14:

(2, 10890), (3, 10905), (Start: 5 @11091 has 190 MA's), (6, 11256), (7, 11364), (8, 11502), (9, 11562), (10, 11580),

Gene: Wilkins_14 Start: 10802, Stop: 11314, Start Num: 5

Candidate Starts for Wilkins_14:

(1, 10556), (2, 10601), (3, 10616), (Start: 5 @10802 has 190 MA's), (7, 11075), (8, 11213), (9, 11273), (10, 11291),

Gene: Zeeculate_13 Start: 10786, Stop: 11298, Start Num: 5

Candidate Starts for Zeeculate_13:

(2, 10585), (3, 10600), (Start: 5 @10786 has 190 MA's), (6, 10951), (7, 11059), (8, 11197), (9, 11257), (10, 11275),

Gene: Zephyr_14 Start: 10926, Stop: 11438, Start Num: 5

Candidate Starts for Zephyr_14:

(Start: 5 @10926 has 190 MA's), (6, 11091), (7, 11199), (8, 11337), (9, 11397), (10, 11415),

Gene: Zeuska_15 Start: 11605, Stop: 12117, Start Num: 5

Candidate Starts for Zeuska_15:

(Start: 5 @11605 has 190 MA's), (7, 11878), (8, 12016), (9, 12076), (10, 12094),