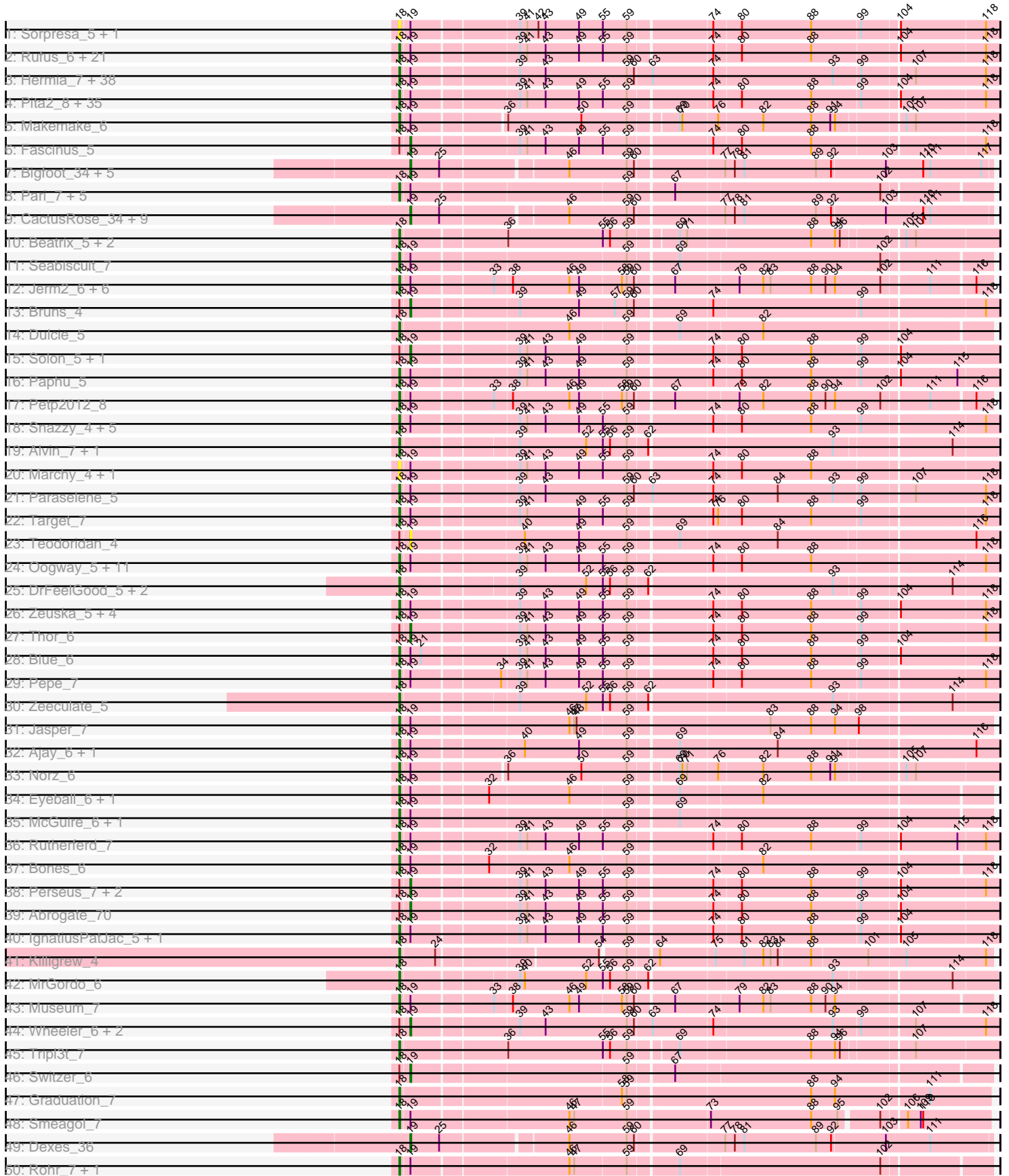


Pham 161553



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 161553 Report

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

Pham number 161553 has 256 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Sorpresa_5, Sandaddy_5
- Track 2 : Rufus_6, Molly_7, NEHalo_6, Niza_7, Agaliana_6, Ciao_6, BaconJack_7, Corvo_6, MPlant7149_5, JC27_7, MetalQZJ_6, Ohno789_5, Espresso_6, Arlo_5, Rubeus_6, Greg_7, Lopton_7, Fajezeel_7, Zephyr_6, Ichabod_6, MaryBeth_6, Sibs6_7
- Track 3 : Hermia_7, Ashballer_4, Bxb1_5, Scowl_7, BillKnuckles_6, Slagathor_6, Magnito_5, FrogHopper_7, Petruccio_6, Kenmech_7, Lockley_6, Watermelon_8, Manatee_6, Traft412_8, Homines_6, Monet_6, Carlyle_8, Gyzlar_7, GrecoEtereo_7, Seanderson_7, Kugel_7, Dussy_7, A6_04, Lesedi_5, DD5_6, Abbysshoes_7, Fushigi_6, Anglerfish_6, HarryOW_7, Marge_6, Violet_5, BK1_04, Arcanine_6, Gwendoluna_6, Marcell_6, Kykar_4, Rajelicia_5, Licorice_8, Turj99_5
- Track 4 : Pita2_8, Euphoria_6, TwoPeat_6, Topgun_6, KBG_6, LilBib_5, Smairt_7, Applejack_6, Swole_8, JackSparrow_6, Sumter_5, StewieG_5, SwissCheese_6, PascalRango_5, Trouble_6, Dexes_7, HanShotFirst_6, Pelly_7, Hami1_6, BPBiebs31_7, ShortQueendom_4, PSullivan_7, PhrostyMug_5, Nerujay_6, Rhynn_6, Tote_8, Sunshine924_5, Mule_5, Sagefire_7, PattyP_7, JuliaChild_8, BigPaolini_7, Aeneas_7, Wilkins_6, Forsytheast_5, Moose_5
- Track 5 : Makemake_6
- Track 6 : Fascinus_5
- Track 7 : Bigfoot_34, Kykar_35, A6_33, BK1_33, JC27_37, Fascinus_35
- Track 8 : Pari_7, Bircsak_6, Briton15_7, HermioneGrange_7, DreamCatcher_7, Hope4ever_6
- Track 9 : CactusRose_34, GageAP_37, IgnatiusPatJac_35, LilBib_36, HanShotFirst_35, FrogHopper_36, Wilkins_35, Topgun_35, HarryOW_36, Pelly_36
- Track 10 : Beatrix_5, Bexan_5, StrongArm_5
- Track 11 : Seabiscuit_7
- Track 12 : Jerm2_6, Bob3_5, Burton_6, Fenn_6, PinkPlastic_4, Naira_6, BigMau_7
- Track 13 : Bruns_4
- Track 14 : Dulcie_5
- Track 15 : Solon_5, Edtherson_6
- Track 16 : Paphu_5
- Track 17 : Petp2012_8
- Track 18 : Snazzy_4, STLscum_7, Ringer_5, Bethlehem_6, SarFire_6, Ruotula_5
- Track 19 : Alvin_7, Crispicous1_5
- Track 20 : Marchy_4, Payneful_5
- Track 21 : Paraselene_5
- Track 22 : Target_7

- Track 23 : Teodoridan_4
- Track 24 : Oogway_5, Altman_7, Francis47_6, CactusRose_5, GageAP_7, Pinto_8, ConceptII_6, PacerPaul_6, Kanely_7, Maroc7_5, Bigfoot_5, Adahisdi_7
- Track 25 : DrFeelGood_5, Big3_6, Michley_6
- Track 26 : Zeuska_5, AFIS_6, SpikeBT_6, Barriga_6, Papez_6
- Track 27 : Thor_6
- Track 28 : Blue_6
- Track 29 : Pepe_7
- Track 30 : Zeeculate_5
- Track 31 : Jasper_7
- Track 32 : Ajay_6, Alsfro_10
- Track 33 : Norz_6
- Track 34 : Eyeball_6, Chanagan_5
- Track 35 : McGuire_6, Dynamix_6
- Track 36 : Rutherferd_7
- Track 37 : Bones_6
- Track 38 : Perseus_7, Doom_6, RidgeCB_6
- Track 39 : Abrogate_70
- Track 40 : IgnatiusPatJac_5, Marsha_6
- Track 41 : Killigrew_4
- Track 42 : MrGordo_6
- Track 43 : Museum_7
- Track 44 : Wheeler_6, Treddle_6, QTRlifeCrisis_7
- Track 45 : Tripl3t_7
- Track 46 : Switzer_6
- Track 47 : Graduation_7
- Track 48 : Smeagol_7
- Track 49 : Dexes_36
- Track 50 : Rohr_7, BeesKnees_6
- Track 51 : Peterson_8
- Track 52 : Pinto_38
- Track 53 : Gandalf20_7
- Track 54 : KyMonks1A_8, Magnar_6
- Track 55 : lLeeKay_8
- Track 56 : Squee_5
- Track 57 : U2_5
- Track 58 : Acme_7, Pippin_7
- Track 59 : Tasp14_7
- Track 60 : Atkinbua_6
- Track 61 : TheloniousMonk_6
- Track 62 : Lamina13_6
- Track 63 : KSSJEB_5
- Track 64 : Nhonho_6
- Track 65 : Buttons_6
- Track 66 : DroogsArmy_7
- Track 67 : Henry_29, Daikon_27
- Track 68 : Blarby_28
- Track 69 : Tweety_21
- Track 70 : Bora_62, Mori_64, SchoolBus_64, Idergollasper_64, Shida_64, Blessica_65, Schuy_62, JangDynasty_64, Alkhayr_62, TelAviv_61, Catdawg_64, Vorrps_64, Murai_65, Winget_65, Familton_65, MadKillah_65
- Track 71 : FoulBall_61, Krili_63, NiebruSaylor_63
- Track 72 : Firecracker_65, Dylan_64, Ashwin_65, Wildflower_62, Zakhe101_64

- Track 73 : YungJamal_69, Smooch_67
- Track 74 : Corndog_67
- Track 75 : Ryadel_68

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

The start number called the most often in the published annotations is 18, it was called in 173 of the 229 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6_04, AFIS_6, Abbyshoes_7, Acme_7, Adahisdi_7, Aeneas_7, Agaliana_6, Ajay_6, Alsfro_10, Altman_7, Alvin_7, Anglerfish_6, Applejack_6, Arcanine_6, Arlo_5, Ashballer_4, Atkinbua_6, BK1_04, BPBiebs31_7, BaconJack_7, Barriga_6, Beatrix_5, BeesKnees_6, Bethlehem_6, Bexan_5, Big3_6, BigMau_7, BigPaolini_7, Bigfoot_5, BillKnuckles_6, Bircsak_6, Blue_6, Bob3_5, Bones_6, Briton15_7, Burton_6, Buttons_6, Bxb1_5, CactusRose_5, Carlyle_8, Chanagan_5, Ciao_6, Conceptll_6, Corvo_6, Crispicous1_5, DD5_6, Dexes_7, DrFeelGood_5, DreamCatcher_7, Dulcie_5, Dussy_7, Dynamix_6, Espresso_6, Euphoria_6, Eyeball_6, Fajezeel_7, Fenn_6, Forsytheast_5, Francis47_6, Froghopper_7, Fushigi_6, GageAP_7, Graduation_7, GrecoEtereo_7, Greg_7, Gwendoluna_6, Gyzlar_7, Hami1_6, HanShotFirst_6, HarryOW_7, Hermia_7, HermioneGrange_7, Homines_6, Hope4ever_6, ILeeKay_8, Ichabod_6, IgnatiusPatJac_5, JC27_7, JackSparrow_6, Jasper_7, Jerm2_6, JuliaChild_8, KBG_6, Kanely_7, Kenmech_7, Killigrew_4, Kugel_7, KyMonks1A_8, Kykar_4, Lamina13_6, Lesedi_5, Licorice_8, LilBib_5, Lockley_6, Lopton_7, MPlant7149_5, Magnar_6, Magnito_5, Makemake_6, Manatee_6, Marcell_6, Marchy_4, Marge_6, Maroc7_5, Marsha_6, MaryBeth_6, McGuire_6, MetalQZJ_6, Michley_6, Molly_7, Monet_6, Moose_5, MrGordo_6, Mule_5, Museum_7, NEHalo_6, Naira_6, Nerujay_6, Nhonho_6, Niza_7, Norz_6, Ohno789_5, Oogway_5, PSullivan_7, PacerPaul_6, Papez_6, Paphu_5, Paraselene_5, Pari_7, PascalRango_5, PattyP_7, Payneful_5, Pelly_7, Pepe_7, Peterson_8, Petp2012_8, Petruchio_6, PhrostyMug_5, PinkPlastic_4, Pinto_8, Pippin_7, Pita2_8, Rajelicia_5, Rhynn_6, Ringer_5, Rohr_7, Rubeus_6, Rufus_6, Ruotula_5, Rutherford_7, STLscum_7, Sagefire_7, Sandaddy_5, SarFire_6, Scowl_7, Seabiscuit_7, Seanderson_7, ShortQueendom_4, Sibs6_7, Slagathor_6, Smairt_7, Smeagol_7, Snazzy_4, Sorpresa_5, SpikeBT_6, Squee_5, StewieG_5, StrongArm_5, Sumter_5, Sunshine924_5, SwissCheese_6, Swole_8, Target_7, Tasp14_7, TheloniousMonk_6, Topgun_6, Tote_8, Traft412_8, Tripl3t_7, Trouble_6, Turj99_5, TwoPeat_6, U2_5, Violet_5, Watermelon_8, Wilkins_6, Zeeculate_5, Zephyr_6, Zeuska_5,

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

- Abrogate_70, Bruns_4, Doom_6, Edtherson_6, Fascinus_5, Gandalf20_7, KSSJEB_5, Perseus_7, QTRlifeCrisis_7, RidgeCB_6, Solon_5, Switzer_6, Teodoridan_4, Thor_6, Treddle_6, Wheeler_6,

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

- A6_33, Alkhayr_62, Ashwin_65, BK1_33, Bigfoot_34, Blarby_28, Blessica_65, Bora_62, CactusRose_34, Catdawg_64, Corndog_67, Daikon_27, Dexes_36, DroogsArmy_7, Dylan_64, Familton_65, Fascinus_35, Firecracker_65, FoulBall_61, Froghopper_36, GageAP_37, HanShotFirst_35, HarryOW_36, Henry_29,

Idergollasper_64, IgnatiusPatJac_35, JC27_37, JangDynasty_64, Krili_63, Kykar_35, LilBib_36, MadKillah_65, Mori_64, Murai_65, NiebruSaylor_63, Pelly_36, Pinto_38, Ryadel_68, SchoolBus_64, Schuy_62, Shida_64, Smooch_67, TelAviv_61, Topgun_35, Tweety_21, Vorrps_64, Wildflower_62, Wilkins_35, Winget_65, YungJamal_69, Zakhe101_64,

Summary by start number:

Start 12:

- Found in 2 of 256 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 229
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Tweety_21 (F1),

Start 17:

- Found in 2 of 256 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Blarby_28 (F),

Start 18:

- Found in 205 of 256 (80.1%) of genes in pham
- Manual Annotations of this start: 173 of 229
- Called 92.2% of time when present
- Phage (with cluster) where this start called: A6_04 (A1), AFIS_6 (A1), Abbysshoes_7 (A1), Acme_7 (A1), Adahisdi_7 (A1), Aeneas_7 (A1), Agaliana_6 (A1), Ajay_6 (A1), Alsfro_10 (A1), Altman_7 (A1), Alvin_7 (A1), Anglerfish_6 (A1), Applejack_6 (A1), Arcanine_6 (A1), Arlo_5 (A1), Ashballer_4 (A1), Atkinbua_6 (A1), BK1_04 (A1), BPBiabs31_7 (A1), BaconJack_7 (A1), Barriga_6 (A1), Beatrix_5 (A1), BeesKnees_6 (A1), Bethlehem_6 (A1), Bexan_5 (A1), Big3_6 (A1), BigMau_7 (A1), BigPaolini_7 (A1), Bigfoot_5 (A1), BillKnuckles_6 (A1), Bircsak_6 (A1), Blue_6 (A1), Bob3_5 (A1), Bones_6 (A1), Briton15_7 (A1), Burton_6 (A1), Buttons_6 (A1), Bxb1_5 (A1), CactusRose_5 (A1), Carlyle_8 (A1), Chanagan_5 (A1), Ciao_6 (A1), ConceptII_6 (A1), Corvo_6 (A1), Crispicous1_5 (A1), DD5_6 (A1), Dexes_7 (A1), DrFeelGood_5 (A1), DreamCatcher_7 (A1), Dulcie_5 (A1), Dussy_7 (A1), Dynamix_6 (A1), Espresso_6 (A1), Euphoria_6 (A1), Eyeball_6 (A1), Fajezeel_7 (A1), Fenn_6 (A1), Forsytheast_5 (A1), Francis47_6 (A1), Froghopper_7 (A1), Fushigi_6 (A1), GageAP_7 (A1), Graduation_7 (A1), GrecoEtereo_7 (A1), Greg_7 (A1), Gwendoluna_6 (A1), Gyzlar_7 (A1), Hami1_6 (A1), HanShotFirst_6 (A1), HarryOW_7 (A1), Hermia_7 (A1), HermioneGrange_7 (A1), Homines_6 (A1), Hope4ever_6 (A1), ILeeKay_8 (A1), Ichabod_6 (A1), IgnatiusPatJac_5 (A1), JC27_7 (A1), JackSparrow_6 (A1), Jasper_7 (A1), Jerm2_6 (A1), JuliaChild_8 (A1), KBG_6 (A1), Kanely_7 (A1), Kenmech_7 (A1), Killigrew_4 (A1), Kugel_7 (A1), KyMonks1A_8 (A1), Kykar_4 (A1), Lamina13_6 (A1), Lesedi_5 (A1), Licorice_8 (A1), LilBib_5 (A1), Lockley_6 (A1), Lopton_7 (A1), MPlant7149_5 (A1), Magnar_6 (A1), Magnito_5 (A1), Makemake_6 (A1), Manatee_6 (A1), Marcell_6 (A1), Marchy_4 (A1), Marge_6 (A1), Maroc7_5 (A1), Marsha_6 (A1), MaryBeth_6 (A1), McGuire_6 (A1), MetalQZJ_6 (A1), Michley_6 (A1), Molly_7 (A1), Monet_6 (A1), Moose_5 (A1), MrGordo_6 (A1), Mule_5 (A1), Museum_7 (A1), NEHalo_6 (A1), Naira_6 (A1), Nerujay_6 (A1), Nhonho_6 (A1), Niza_7 (A1), Norz_6 (A1), Ohno789_5 (A1), Oogway_5 (A1), PSullivan_7 (A1), PacerPaul_6 (A1), Papez_6 (A1), Paphu_5 (A1), Paraselene_5 (A1), Pari_7 (A1), PascalRango_5 (A1), PattyP_7 (A1), Payneful_5 (A1), Pelly_7 (A1), Pepe_7 (A1), Peterson_8 (A1), Petp2012_8 (A1), Petruccio_6 (A1), PhrostyMug_5 (A1),

PinkPlastic_4 (A1), Pinto_8 (A1), Pippin_7 (A1), Pita2_8 (A1), Rajelicia_5 (A1), Rhynn_6 (A1), Ringer_5 (A1), Rohr_7 (A1), Rubeus_6 (A1), Rufus_6 (A1), Ruotula_5 (A1), Rutherford_7 (A1), STLscum_7 (A1), Sagefire_7 (A1), Sandaddy_5 (A1), SarFire_6 (A1), Scowl_7 (A1), Seabiscuit_7 (A1), Seanderson_7 (A1), ShortQueendom_4 (A1), Sibs6_7 (A1), Slagathor_6 (A1), Smairt_7 (A1), Smeagol_7 (A1), Snazzy_4 (A1), Sorpresa_5 (A1), SpikeBT_6 (A1), Squee_5 (A1), StewieG_5 (A1), StrongArm_5 (A1), Sumter_5 (A1), Sunshine924_5 (A1), SwissCheese_6 (A1), Swole_8 (A1), Target_7 (A1), Tasp14_7 (A1), TheloniousMonk_6 (A1), Topgun_6 (A1), Tote_8 (A1), Traft412_8 (A1), Tripl3t_7 (A1), Trouble_6 (A1), Turj99_5 (A1), TwoPeat_6 (A1), U2_5 (A1), Violet_5 (A1), Watermelon_8 (A1), Wilkins_6 (A1), Zeeculate_5 (A1), Zephyr_6 (A1), Zeuska_5 (A1),

Start 19:

- Found in 238 of 256 (93.0%) of genes in pham
- Manual Annotations of this start: 54 of 229
- Called 26.5% of time when present
- Phage (with cluster) where this start called: A6_33 (A1), Abrogate_70 (A1), Alkhayr_62 (O), Ashwin_65 (O), BK1_33 (A1), Bigfoot_34 (A1), Blessica_65 (O), Bora_62 (O), Bruns_4 (A1), CactusRose_34 (A1), Catdawg_64 (O), Corndog_67 (O), Dexes_36 (A1), Doom_6 (A1), DroogsArmy_7 (A7), Dylan_64 (O), Edtherson_6 (A1), Familton_65 (O), Fascinus_35 (A1), Fascinus_5 (A1), Firecracker_65 (O), FoulBall_61 (O), Froghopper_36 (A1), GageAP_37 (A1), Gandalf20_7 (A1), HanShotFirst_35 (A1), HarryOW_36 (A1), Idergollasper_64 (O), IgnatiusPatJac_35 (A1), JC27_37 (A1), JangDynasty_64 (O), KSSJEB_5 (A1), Krili_63 (O), Kykar_35 (A1), LilBib_36 (A1), MadKillah_65 (O), Mori_64 (O), Murai_65 (O), NiebruSaylor_63 (O), Pelly_36 (A1), Perseus_7 (A1), Pinto_38 (A1), QTRlifeCrisis_7 (A1), RidgeCB_6 (A1), Ryadel_68 (O), SchoolBus_64 (O), Schuy_62 (O), Shida_64 (O), Smooch_67 (O), Solon_5 (A1), Switzer_6 (A1), TelAviv_61 (O), Teodoridan_4 (A1), Thor_6 (A1), Topgun_35 (A1), Treddle_6 (A1), Vorrrps_64 (O), Wheeler_6 (A1), Wildflower_62 (O), Wilkins_35 (A1), Winget_65 (O), YungJamal_69 (O), Zakhe101_64 (O),

Start 31:

- Found in 4 of 256 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 229
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Daikon_27 (E), Henry_29 (E),

Summary by clusters:

There are 6 clusters represented in this pham: F1, E, F, O, A1, A7,

Info for manual annotations of cluster A1:

- Start number 18 was manually annotated 173 times for cluster A1.
- Start number 19 was manually annotated 31 times for cluster A1.

Info for manual annotations of cluster A7:

- Start number 19 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster E:

- Start number 31 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:

- Start number 12 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster O:

- Start number 19 was manually annotated 22 times for cluster O.

Gene Information:

Gene: A6_33 Start: 27619, Stop: 28305, Start Num: 19

Candidate Starts for A6_33:

(Start: 19 @27619 has 54 MA's), (25, 27655), (46, 27802), (59, 27871), (60, 27880), (77, 27982), (78, 27994), (81, 28006), (89, 28096), (92, 28114), (103, 28177), (110, 28222), (111, 28231), (117, 28294),

Gene: A6_04 Start: 2921, Stop: 3631, Start Num: 18

Candidate Starts for A6_04:

(Start: 18 @2921 has 173 MA's), (Start: 19 @2930 has 54 MA's), (39, 3053), (43, 3083), (59, 3185), (60, 3194), (63, 3215), (74, 3287), (93, 3434), (99, 3467), (107, 3527), (118, 3614),

Gene: AFIS_6 Start: 3288, Stop: 3989, Start Num: 18

Candidate Starts for AFIS_6:

(Start: 18 @3288 has 173 MA's), (Start: 19 @3297 has 54 MA's), (39, 3420), (43, 3450), (49, 3492), (55, 3522), (59, 3552), (74, 3648), (80, 3681), (88, 3768), (99, 3828), (104, 3870), (118, 3972),

Gene: Abbyshoes_7 Start: 3368, Stop: 4078, Start Num: 18

Candidate Starts for Abbyshoes_7:

(Start: 18 @3368 has 173 MA's), (Start: 19 @3377 has 54 MA's), (39, 3500), (43, 3530), (59, 3632), (60, 3641), (63, 3662), (74, 3734), (93, 3881), (99, 3914), (107, 3974), (118, 4061),

Gene: Abrogate_70 Start: 4028, Stop: 4720, Start Num: 19

Candidate Starts for Abrogate_70:

(Start: 18 @4019 has 173 MA's), (Start: 19 @4028 has 54 MA's), (39, 4151), (41, 4160), (43, 4181), (49, 4223), (55, 4253), (59, 4283), (74, 4379), (80, 4412), (88, 4499), (99, 4559), (104, 4601),

Gene: Acme_7 Start: 3201, Stop: 3902, Start Num: 18

Candidate Starts for Acme_7:

(Start: 18 @3201 has 173 MA's), (Start: 19 @3210 has 54 MA's), (39, 3333), (41, 3342), (43, 3363), (49, 3405), (55, 3435), (59, 3465), (74, 3561), (80, 3594), (88, 3681), (99, 3741),

Gene: Adahisdi_7 Start: 3595, Stop: 4296, Start Num: 18

Candidate Starts for Adahisdi_7:

(Start: 18 @3595 has 173 MA's), (Start: 19 @3604 has 54 MA's), (39, 3727), (41, 3736), (43, 3757), (49, 3799), (55, 3829), (59, 3859), (74, 3955), (80, 3988), (88, 4075), (118, 4279),

Gene: Aeneas_7 Start: 3480, Stop: 4181, Start Num: 18

Candidate Starts for Aeneas_7:

(Start: 18 @3480 has 173 MA's), (Start: 19 @3489 has 54 MA's), (39, 3612), (41, 3621), (43, 3642), (49, 3684), (55, 3714), (59, 3744), (74, 3840), (80, 3873), (88, 3960), (99, 4020), (104, 4062), (118, 4164),

Gene: Agaliana_6 Start: 3404, Stop: 4105, Start Num: 18

Candidate Starts for Agaliana_6:

(Start: 18 @3404 has 173 MA's), (Start: 19 @3413 has 54 MA's), (39, 3536), (41, 3545), (43, 3566), (49, 3608), (55, 3638), (59, 3668), (74, 3764), (80, 3797), (88, 3884), (104, 3986), (118, 4088),

Gene: Ajay_6 Start: 3432, Stop: 4136, Start Num: 18

Candidate Starts for Ajay_6:

(Start: 18 @3432 has 173 MA's), (Start: 19 @3441 has 54 MA's), (40, 3570), (49, 3636), (59, 3696), (69, 3753), (84, 3873), (116, 4107),

Gene: Alkhayr_62 Start: 41056, Stop: 41742, Start Num: 19

Candidate Starts for Alkhayr_62:

(Start: 19 @41056 has 54 MA's), (23, 41083), (25, 41092), (26, 41110), (27, 41122), (30, 41143), (46, 41236), (48, 41245), (59, 41302), (61, 41314), (68, 41356), (82, 41461), (87, 41515), (100, 41584), (103, 41611), (109, 41653), (110, 41656), (113, 41683), (118, 41734),

Gene: Alsfro_10 Start: 4116, Stop: 4820, Start Num: 18

Candidate Starts for Alsfro_10:

(Start: 18 @4116 has 173 MA's), (Start: 19 @4125 has 54 MA's), (40, 4254), (49, 4320), (59, 4380), (69, 4437), (84, 4557), (116, 4791),

Gene: Altman_7 Start: 3938, Stop: 4639, Start Num: 18

Candidate Starts for Altman_7:

(Start: 18 @3938 has 173 MA's), (Start: 19 @3947 has 54 MA's), (39, 4070), (41, 4079), (43, 4100), (49, 4142), (55, 4172), (59, 4202), (74, 4298), (80, 4331), (88, 4418), (118, 4622),

Gene: Alvin_7 Start: 3646, Stop: 4338, Start Num: 18

Candidate Starts for Alvin_7:

(Start: 18 @3646 has 173 MA's), (39, 3775), (52, 3856), (55, 3877), (56, 3886), (59, 3907), (62, 3931), (93, 4150), (114, 4285),

Gene: Anglerfish_6 Start: 2963, Stop: 3673, Start Num: 18

Candidate Starts for Anglerfish_6:

(Start: 18 @2963 has 173 MA's), (Start: 19 @2972 has 54 MA's), (39, 3095), (43, 3125), (59, 3227), (60, 3236), (63, 3257), (74, 3329), (93, 3476), (99, 3509), (107, 3569), (118, 3656),

Gene: Applejack_6 Start: 3338, Stop: 4039, Start Num: 18

Candidate Starts for Applejack_6:

(Start: 18 @3338 has 173 MA's), (Start: 19 @3347 has 54 MA's), (39, 3470), (41, 3479), (43, 3500), (49, 3542), (55, 3572), (59, 3602), (74, 3698), (80, 3731), (88, 3818), (99, 3878), (104, 3920), (118, 4022),

Gene: Arcanine_6 Start: 2929, Stop: 3639, Start Num: 18

Candidate Starts for Arcanine_6:

(Start: 18 @2929 has 173 MA's), (Start: 19 @2938 has 54 MA's), (39, 3061), (43, 3091), (59, 3193), (60, 3202), (63, 3223), (74, 3295), (93, 3442), (99, 3475), (107, 3535), (118, 3622),

Gene: Arlo_5 Start: 2963, Stop: 3664, Start Num: 18

Candidate Starts for Arlo_5:

(Start: 18 @2963 has 173 MA's), (Start: 19 @2972 has 54 MA's), (39, 3095), (41, 3104), (43, 3125), (49, 3167), (55, 3197), (59, 3227), (74, 3323), (80, 3356), (88, 3443), (104, 3545), (118, 3647),

Gene: Ashballer_4 Start: 2832, Stop: 3542, Start Num: 18

Candidate Starts for Ashballer_4:

(Start: 18 @2832 has 173 MA's), (Start: 19 @2841 has 54 MA's), (39, 2964), (43, 2994), (59, 3096), (60, 3105), (63, 3126), (74, 3198), (93, 3345), (99, 3378), (107, 3438), (118, 3525),

Gene: Ashwin_65 Start: 41826, Stop: 42512, Start Num: 19

Candidate Starts for Ashwin_65:

(Start: 19 @41826 has 54 MA's), (23, 41853), (25, 41862), (26, 41880), (27, 41892), (30, 41913), (37, 41943), (46, 42006), (48, 42015), (59, 42072), (61, 42084), (68, 42126), (82, 42231), (87, 42285), (100, 42354), (103, 42381), (109, 42423), (110, 42426), (113, 42453), (118, 42504),

Gene: Atkinbua_6 Start: 3001, Stop: 3690, Start Num: 18

Candidate Starts for Atkinbua_6:

(Start: 18 @3001 has 173 MA's), (Start: 19 @3010 has 54 MA's), (46, 3193), (59, 3262), (69, 3319), (102, 3565),

Gene: BK1_33 Start: 27619, Stop: 28305, Start Num: 19

Candidate Starts for BK1_33:

(Start: 19 @27619 has 54 MA's), (25, 27655), (46, 27802), (59, 27871), (60, 27880), (77, 27982), (78, 27994), (81, 28006), (89, 28096), (92, 28114), (103, 28177), (110, 28222), (111, 28231), (117, 28294),

Gene: BK1_04 Start: 2921, Stop: 3631, Start Num: 18

Candidate Starts for BK1_04:

(Start: 18 @2921 has 173 MA's), (Start: 19 @2930 has 54 MA's), (39, 3053), (43, 3083), (59, 3185), (60, 3194), (63, 3215), (74, 3287), (93, 3434), (99, 3467), (107, 3527), (118, 3614),

Gene: BPBiebs31_7 Start: 3602, Stop: 4303, Start Num: 18

Candidate Starts for BPBiebs31_7:

(Start: 18 @3602 has 173 MA's), (Start: 19 @3611 has 54 MA's), (39, 3734), (41, 3743), (43, 3764), (49, 3806), (55, 3836), (59, 3866), (74, 3962), (80, 3995), (88, 4082), (99, 4142), (104, 4184), (118, 4286),

Gene: BaconJack_7 Start: 3186, Stop: 3887, Start Num: 18

Candidate Starts for BaconJack_7:

(Start: 18 @3186 has 173 MA's), (Start: 19 @3195 has 54 MA's), (39, 3318), (41, 3327), (43, 3348), (49, 3390), (55, 3420), (59, 3450), (74, 3546), (80, 3579), (88, 3666), (104, 3768), (118, 3870),

Gene: Barriga_6 Start: 3218, Stop: 3919, Start Num: 18

Candidate Starts for Barriga_6:

(Start: 18 @3218 has 173 MA's), (Start: 19 @3227 has 54 MA's), (39, 3350), (43, 3380), (49, 3422), (55, 3452), (59, 3482), (74, 3578), (80, 3611), (88, 3698), (99, 3758), (104, 3800), (118, 3902),

Gene: Beatrix_5 Start: 3035, Stop: 3730, Start Num: 18

Candidate Starts for Beatrix_5:

(Start: 18 @3035 has 173 MA's), (36, 3152), (55, 3269), (56, 3278), (59, 3299), (69, 3353), (71, 3362), (88, 3512), (94, 3542), (96, 3548), (105, 3617), (107, 3629),

Gene: BeesKnees_6 Start: 3082, Stop: 3771, Start Num: 18

Candidate Starts for BeesKnees_6:

(Start: 18 @3082 has 173 MA's), (Start: 19 @3091 has 54 MA's), (46, 3274), (47, 3280), (59, 3343), (69, 3400), (102, 3646),

Gene: Bethlehem_6 Start: 3609, Stop: 4310, Start Num: 18

Candidate Starts for Bethlehem_6:

(Start: 18 @3609 has 173 MA's), (Start: 19 @3618 has 54 MA's), (39, 3741), (41, 3750), (43, 3771), (49, 3813), (55, 3843), (59, 3873), (74, 3969), (80, 4002), (88, 4089), (99, 4149), (118, 4293),

Gene: Bexan_5 Start: 3035, Stop: 3730, Start Num: 18

Candidate Starts for Bexan_5:

(Start: 18 @3035 has 173 MA's), (36, 3152), (55, 3269), (56, 3278), (59, 3299), (69, 3353), (71, 3362), (88, 3512), (94, 3542), (96, 3548), (105, 3617), (107, 3629),

Gene: Big3_6 Start: 2980, Stop: 3672, Start Num: 18

Candidate Starts for Big3_6:

(Start: 18 @2980 has 173 MA's), (39, 3109), (52, 3190), (55, 3211), (56, 3220), (59, 3241), (62, 3265), (93, 3484), (114, 3619),

Gene: BigMau_7 Start: 3086, Stop: 3775, Start Num: 18

Candidate Starts for BigMau_7:

(Start: 18 @3086 has 173 MA's), (Start: 19 @3095 has 54 MA's), (33, 3188), (38, 3209), (46, 3278), (49, 3290), (58, 3341), (59, 3347), (60, 3356), (67, 3398), (79, 3473), (82, 3503), (83, 3512), (88, 3563), (90, 3581), (94, 3593), (102, 3650), (111, 3704), (116, 3755),

Gene: BigPaolini_7 Start: 3995, Stop: 4696, Start Num: 18

Candidate Starts for BigPaolini_7:

(Start: 18 @3995 has 173 MA's), (Start: 19 @4004 has 54 MA's), (39, 4127), (41, 4136), (43, 4157), (49, 4199), (55, 4229), (59, 4259), (74, 4355), (80, 4388), (88, 4475), (99, 4535), (104, 4577), (118, 4679),

Gene: Bigfoot_34 Start: 27850, Stop: 28536, Start Num: 19

Candidate Starts for Bigfoot_34:

(Start: 19 @27850 has 54 MA's), (25, 27886), (46, 28033), (59, 28102), (60, 28111), (77, 28213), (78, 28225), (81, 28237), (89, 28327), (92, 28345), (103, 28408), (110, 28453), (111, 28462), (117, 28525),

Gene: Bigfoot_5 Start: 3094, Stop: 3795, Start Num: 18

Candidate Starts for Bigfoot_5:

(Start: 18 @3094 has 173 MA's), (Start: 19 @3103 has 54 MA's), (39, 3226), (41, 3235), (43, 3256), (49, 3298), (55, 3328), (59, 3358), (74, 3454), (80, 3487), (88, 3574), (118, 3778),

Gene: BillKnuckles_6 Start: 3460, Stop: 4170, Start Num: 18

Candidate Starts for BillKnuckles_6:

(Start: 18 @3460 has 173 MA's), (Start: 19 @3469 has 54 MA's), (39, 3592), (43, 3622), (59, 3724), (60, 3733), (63, 3754), (74, 3826), (93, 3973), (99, 4006), (107, 4066), (118, 4153),

Gene: Bircsak_6 Start: 3571, Stop: 4260, Start Num: 18

Candidate Starts for Bircsak_6:

(Start: 18 @3571 has 173 MA's), (Start: 19 @3580 has 54 MA's), (59, 3832), (67, 3883), (102, 4135),

Gene: Blarby_28 Start: 22525, Stop: 23256, Start Num: 17

Candidate Starts for Blarby_28:

(1, 22054), (2, 22096), (3, 22156), (4, 22219), (5, 22228), (6, 22255), (7, 22261), (8, 22279), (9, 22318), (11, 22339), (Start: 12 @22366 has 1 MA's), (13, 22384), (14, 22396), (16, 22441), (17, 22525), (22, 22585), (28, 22627), (29, 22645), (Start: 31 @22654 has 1 MA's), (36, 22678), (40, 22699), (49, 22765), (59, 22825), (69, 22882), (74, 22921), (79, 22954), (84, 23002), (97, 23092), (116, 23230),

Gene: Blessica_65 Start: 41655, Stop: 42341, Start Num: 19

Candidate Starts for Blessica_65:

(Start: 19 @41655 has 54 MA's), (23, 41682), (25, 41691), (26, 41709), (27, 41721), (30, 41742), (46, 41835), (48, 41844), (59, 41901), (61, 41913), (68, 41955), (82, 42060), (87, 42114), (100, 42183), (103, 42210), (109, 42252), (110, 42255), (113, 42282), (118, 42333),

Gene: Blue_6 Start: 3463, Stop: 4164, Start Num: 18

Candidate Starts for Blue_6:

(Start: 18 @3463 has 173 MA's), (Start: 19 @3472 has 54 MA's), (21, 3484), (39, 3595), (41, 3604), (43, 3625), (49, 3667), (55, 3697), (59, 3727), (74, 3823), (80, 3856), (88, 3943), (99, 4003), (104, 4045),

Gene: Bob3_5 Start: 2926, Stop: 3615, Start Num: 18

Candidate Starts for Bob3_5:

(Start: 18 @2926 has 173 MA's), (Start: 19 @2935 has 54 MA's), (33, 3028), (38, 3049), (46, 3118), (49, 3130), (58, 3181), (59, 3187), (60, 3196), (67, 3238), (79, 3313), (82, 3343), (83, 3352), (88, 3403), (90, 3421), (94, 3433), (102, 3490), (111, 3544), (116, 3595),

Gene: Bones_6 Start: 3119, Stop: 3808, Start Num: 18

Candidate Starts for Bones_6:

(Start: 18 @3119 has 173 MA's), (Start: 19 @3128 has 54 MA's), (32, 3215), (46, 3311), (59, 3380), (82, 3536),

Gene: Bora_62 Start: 41012, Stop: 41698, Start Num: 19

Candidate Starts for Bora_62:

(Start: 19 @41012 has 54 MA's), (23, 41039), (25, 41048), (26, 41066), (27, 41078), (30, 41099), (46, 41192), (48, 41201), (59, 41258), (61, 41270), (68, 41312), (82, 41417), (87, 41471), (100, 41540), (103, 41567), (109, 41609), (110, 41612), (113, 41639), (118, 41690),

Gene: Briton15_7 Start: 3137, Stop: 3826, Start Num: 18

Candidate Starts for Briton15_7:

(Start: 18 @3137 has 173 MA's), (Start: 19 @3146 has 54 MA's), (59, 3398), (67, 3449), (102, 3701),

Gene: Bruns_4 Start: 2779, Stop: 3474, Start Num: 19

Candidate Starts for Bruns_4:

(Start: 18 @2770 has 173 MA's), (Start: 19 @2779 has 54 MA's), (39, 2902), (49, 2974), (57, 3019), (59, 3034), (60, 3043), (74, 3133), (99, 3313), (118, 3457),

Gene: Burton_6 Start: 2987, Stop: 3676, Start Num: 18

Candidate Starts for Burton_6:

(Start: 18 @2987 has 173 MA's), (Start: 19 @2996 has 54 MA's), (33, 3089), (38, 3110), (46, 3179), (49, 3191), (58, 3242), (59, 3248), (60, 3257), (67, 3299), (79, 3374), (82, 3404), (83, 3413), (88, 3464), (90, 3482), (94, 3494), (102, 3551), (111, 3605), (116, 3656),

Gene: Buttons_6 Start: 2980, Stop: 3681, Start Num: 18

Candidate Starts for Buttons_6:

(Start: 18 @2980 has 173 MA's), (Start: 19 @2989 has 54 MA's), (39, 3112), (41, 3121), (43, 3142), (49, 3184), (56, 3223), (59, 3244), (74, 3340), (80, 3373), (88, 3460), (99, 3520), (104, 3562), (115, 3631), (118, 3664),

Gene: Bxb1_5 Start: 3371, Stop: 4081, Start Num: 18

Candidate Starts for Bxb1_5:

(Start: 18 @3371 has 173 MA's), (Start: 19 @3380 has 54 MA's), (39, 3503), (43, 3533), (59, 3635), (60, 3644), (63, 3665), (74, 3737), (93, 3884), (99, 3917), (107, 3977), (118, 4064),

Gene: CactusRose_34 Start: 27944, Stop: 28630, Start Num: 19

Candidate Starts for CactusRose_34:

(Start: 19 @27944 has 54 MA's), (25, 27980), (46, 28127), (59, 28196), (60, 28205), (77, 28307), (78, 28319), (81, 28331), (89, 28421), (92, 28439), (103, 28502), (110, 28547), (111, 28556),

Gene: CactusRose_5 Start: 3093, Stop: 3794, Start Num: 18

Candidate Starts for CactusRose_5:

(Start: 18 @3093 has 173 MA's), (Start: 19 @3102 has 54 MA's), (39, 3225), (41, 3234), (43, 3255), (49, 3297), (55, 3327), (59, 3357), (74, 3453), (80, 3486), (88, 3573), (118, 3777),

Gene: Carlyle_8 Start: 3934, Stop: 4644, Start Num: 18

Candidate Starts for Carlyle_8:

(Start: 18 @3934 has 173 MA's), (Start: 19 @3943 has 54 MA's), (39, 4066), (43, 4096), (59, 4198), (60, 4207), (63, 4228), (74, 4300), (93, 4447), (99, 4480), (107, 4540), (118, 4627),

Gene: Catdawg_64 Start: 41391, Stop: 42077, Start Num: 19

Candidate Starts for Catdawg_64:

(Start: 19 @41391 has 54 MA's), (23, 41418), (25, 41427), (26, 41445), (27, 41457), (30, 41478), (46, 41571), (48, 41580), (59, 41637), (61, 41649), (68, 41691), (82, 41796), (87, 41850), (100, 41919), (103, 41946), (109, 41988), (110, 41991), (113, 42018), (118, 42069),

Gene: Chanagan_5 Start: 2952, Stop: 3641, Start Num: 18

Candidate Starts for Chanagan_5:

(Start: 18 @2952 has 173 MA's), (Start: 19 @2961 has 54 MA's), (32, 3048), (46, 3144), (59, 3213), (69, 3270), (82, 3369),

Gene: Ciao_6 Start: 3325, Stop: 4026, Start Num: 18

Candidate Starts for Ciao_6:

(Start: 18 @3325 has 173 MA's), (Start: 19 @3334 has 54 MA's), (39, 3457), (41, 3466), (43, 3487), (49, 3529), (55, 3559), (59, 3589), (74, 3685), (80, 3718), (88, 3805), (104, 3907), (118, 4009),

Gene: ConceptII_6 Start: 3574, Stop: 4275, Start Num: 18

Candidate Starts for ConceptII_6:

(Start: 18 @3574 has 173 MA's), (Start: 19 @3583 has 54 MA's), (39, 3706), (41, 3715), (43, 3736), (49, 3778), (55, 3808), (59, 3838), (74, 3934), (80, 3967), (88, 4054), (118, 4258),

Gene: Corndog_67 Start: 42385, Stop: 43071, Start Num: 19

Candidate Starts for Corndog_67:

(Start: 19 @42385 has 54 MA's), (23, 42412), (25, 42421), (26, 42439), (27, 42451), (30, 42472), (46, 42565), (48, 42574), (59, 42631), (61, 42643), (66, 42673), (68, 42685), (76, 42733), (82, 42790), (87, 42844), (100, 42913), (103, 42940), (109, 42982), (110, 42985), (113, 43012), (118, 43063),

Gene: Corvo_6 Start: 3520, Stop: 4221, Start Num: 18

Candidate Starts for Corvo_6:

(Start: 18 @3520 has 173 MA's), (Start: 19 @3529 has 54 MA's), (39, 3652), (41, 3661), (43, 3682), (49, 3724), (55, 3754), (59, 3784), (74, 3880), (80, 3913), (88, 4000), (104, 4102), (118, 4204),

Gene: Crispicous1_5 Start: 2816, Stop: 3508, Start Num: 18

Candidate Starts for Crispicous1_5:

(Start: 18 @2816 has 173 MA's), (39, 2945), (52, 3026), (55, 3047), (56, 3056), (59, 3077), (62, 3101), (93, 3320), (114, 3455),

Gene: DD5_6 Start: 3502, Stop: 4212, Start Num: 18

Candidate Starts for DD5_6:

(Start: 18 @3502 has 173 MA's), (Start: 19 @3511 has 54 MA's), (39, 3634), (43, 3664), (59, 3766), (60, 3775), (63, 3796), (74, 3868), (93, 4015), (99, 4048), (107, 4108), (118, 4195),

Gene: Daikon_27 Start: 27616, Stop: 28206, Start Num: 31

Candidate Starts for Daikon_27:

(Start: 31 @27616 has 1 MA's), (46, 27712), (47, 27718), (59, 27781), (69, 27838), (75, 27880), (79, 27907), (91, 28021), (108, 28123),

Gene: Dexes_7 Start: 3958, Stop: 4659, Start Num: 18

Candidate Starts for Dexes_7:

(Start: 18 @3958 has 173 MA's), (Start: 19 @3967 has 54 MA's), (39, 4090), (41, 4099), (43, 4120), (49, 4162), (55, 4192), (59, 4222), (74, 4318), (80, 4351), (88, 4438), (99, 4498), (104, 4540), (118, 4642),

Gene: Dexes_36 Start: 28737, Stop: 29423, Start Num: 19

Candidate Starts for Dexes_36:

(Start: 19 @28737 has 54 MA's), (25, 28773), (46, 28920), (59, 28989), (60, 28998), (77, 29100), (78, 29112), (81, 29124), (89, 29214), (92, 29232), (103, 29295), (111, 29349),

Gene: Doom_6 Start: 3605, Stop: 4297, Start Num: 19

Candidate Starts for Doom_6:

(Start: 18 @3596 has 173 MA's), (Start: 19 @3605 has 54 MA's), (39, 3728), (41, 3737), (43, 3758), (49, 3800), (55, 3830), (59, 3860), (74, 3956), (80, 3989), (88, 4076), (99, 4136), (104, 4178), (118, 4280),

Gene: DrFeelGood_5 Start: 3134, Stop: 3826, Start Num: 18

Candidate Starts for DrFeelGood_5:

(Start: 18 @3134 has 173 MA's), (39, 3263), (52, 3344), (55, 3365), (56, 3374), (59, 3395), (62, 3419), (93, 3638), (114, 3773),

Gene: DreamCatcher_7 Start: 3730, Stop: 4419, Start Num: 18

Candidate Starts for DreamCatcher_7:

(Start: 18 @3730 has 173 MA's), (Start: 19 @3739 has 54 MA's), (59, 3991), (67, 4042), (102, 4294),

Gene: DroogsArmy_7 Start: 4452, Stop: 5159, Start Num: 19

Candidate Starts for DroogsArmy_7:

(15, 4305), (Start: 19 @4452 has 54 MA's), (20, 4458), (23, 4479), (26, 4506), (35, 4563), (47, 4650), (49, 4656), (56, 4692), (59, 4713), (65, 4749), (67, 4764), (71, 4779), (73, 4809), (75, 4815), (85, 4896), (91, 4956), (109, 5070), (112, 5088),

Gene: Dulcie_5 Start: 3031, Stop: 3720, Start Num: 18

Candidate Starts for Dulcie_5:

(Start: 18 @3031 has 173 MA's), (46, 3223), (59, 3292), (69, 3349), (82, 3448),

Gene: Dussy_7 Start: 3368, Stop: 4078, Start Num: 18

Candidate Starts for Dussy_7:

(Start: 18 @3368 has 173 MA's), (Start: 19 @3377 has 54 MA's), (39, 3500), (43, 3530), (59, 3632), (60, 3641), (63, 3662), (74, 3734), (93, 3881), (99, 3914), (107, 3974), (118, 4061),

Gene: Dylan_64 Start: 41438, Stop: 42124, Start Num: 19

Candidate Starts for Dylan_64:

(Start: 19 @41438 has 54 MA's), (23, 41465), (25, 41474), (26, 41492), (27, 41504), (30, 41525), (37, 41555), (46, 41618), (48, 41627), (59, 41684), (61, 41696), (68, 41738), (82, 41843), (87, 41897), (100, 41966), (103, 41993), (109, 42035), (110, 42038), (113, 42065), (118, 42116),

Gene: Dynamix_6 Start: 3084, Stop: 3773, Start Num: 18

Candidate Starts for Dynamix_6:

(Start: 18 @3084 has 173 MA's), (Start: 19 @3093 has 54 MA's), (59, 3345), (69, 3402),

Gene: Edtherson_6 Start: 3299, Stop: 3991, Start Num: 19

Candidate Starts for Edtherson_6:

(Start: 18 @3290 has 173 MA's), (Start: 19 @3299 has 54 MA's), (39, 3422), (41, 3431), (43, 3452), (49, 3494), (59, 3554), (74, 3650), (80, 3683), (88, 3770), (99, 3830), (104, 3872),

Gene: Espresso_6 Start: 3449, Stop: 4150, Start Num: 18

Candidate Starts for Espresso_6:

(Start: 18 @3449 has 173 MA's), (Start: 19 @3458 has 54 MA's), (39, 3581), (41, 3590), (43, 3611), (49, 3653), (55, 3683), (59, 3713), (74, 3809), (80, 3842), (88, 3929), (104, 4031), (118, 4133),

Gene: Euphoria_6 Start: 3347, Stop: 4048, Start Num: 18

Candidate Starts for Euphoria_6:

(Start: 18 @3347 has 173 MA's), (Start: 19 @3356 has 54 MA's), (39, 3479), (41, 3488), (43, 3509), (49, 3551), (55, 3581), (59, 3611), (74, 3707), (80, 3740), (88, 3827), (99, 3887), (104, 3929), (118, 4031),

Gene: Eyeball_6 Start: 3127, Stop: 3816, Start Num: 18

Candidate Starts for Eyeball_6:

(Start: 18 @3127 has 173 MA's), (Start: 19 @3136 has 54 MA's), (32, 3223), (46, 3319), (59, 3388), (69, 3445), (82, 3544),

Gene: Fajezeel_7 Start: 3169, Stop: 3870, Start Num: 18

Candidate Starts for Fajezeel_7:

(Start: 18 @3169 has 173 MA's), (Start: 19 @3178 has 54 MA's), (39, 3301), (41, 3310), (43, 3331), (49, 3373), (55, 3403), (59, 3433), (74, 3529), (80, 3562), (88, 3649), (104, 3751), (118, 3853),

Gene: Familton_65 Start: 41348, Stop: 42034, Start Num: 19

Candidate Starts for Familton_65:

(Start: 19 @41348 has 54 MA's), (23, 41375), (25, 41384), (26, 41402), (27, 41414), (30, 41435), (46, 41528), (48, 41537), (59, 41594), (61, 41606), (68, 41648), (82, 41753), (87, 41807), (100, 41876), (103, 41903), (109, 41945), (110, 41948), (113, 41975), (118, 42026),

Gene: Fascinus_5 Start: 3104, Stop: 3796, Start Num: 19

Candidate Starts for Fascinus_5:

(Start: 18 @3095 has 173 MA's), (Start: 19 @3104 has 54 MA's), (39, 3227), (41, 3236), (43, 3257), (49, 3299), (55, 3329), (59, 3359), (74, 3455), (80, 3488), (88, 3575), (118, 3779),

Gene: Fascinus_35 Start: 28001, Stop: 28687, Start Num: 19

Candidate Starts for Fascinus_35:

(Start: 19 @28001 has 54 MA's), (25, 28037), (46, 28184), (59, 28253), (60, 28262), (77, 28364), (78, 28376), (81, 28388), (89, 28478), (92, 28496), (103, 28559), (110, 28604), (111, 28613), (117, 28676),

Gene: Fenn_6 Start: 3315, Stop: 4004, Start Num: 18

Candidate Starts for Fenn_6:

(Start: 18 @3315 has 173 MA's), (Start: 19 @3324 has 54 MA's), (33, 3417), (38, 3438), (46, 3507), (49, 3519), (58, 3570), (59, 3576), (60, 3585), (67, 3627), (79, 3702), (82, 3732), (83, 3741), (88, 3792), (90, 3810), (94, 3822), (102, 3879), (111, 3933), (116, 3984),

Gene: Firecracker_65 Start: 41538, Stop: 42224, Start Num: 19

Candidate Starts for Firecracker_65:

(Start: 19 @41538 has 54 MA's), (23, 41565), (25, 41574), (26, 41592), (27, 41604), (30, 41625), (37, 41655), (46, 41718), (48, 41727), (59, 41784), (61, 41796), (68, 41838), (82, 41943), (87, 41997), (100, 42066), (103, 42093), (109, 42135), (110, 42138), (113, 42165), (118, 42216),

Gene: Forsytheast_5 Start: 3359, Stop: 4060, Start Num: 18

Candidate Starts for Forsytheast_5:

(Start: 18 @3359 has 173 MA's), (Start: 19 @3368 has 54 MA's), (39, 3491), (41, 3500), (43, 3521), (49, 3563), (55, 3593), (59, 3623), (74, 3719), (80, 3752), (88, 3839), (99, 3899), (104, 3941), (118, 4043),

Gene: FoulBall_61 Start: 41342, Stop: 42028, Start Num: 19

Candidate Starts for FoulBall_61:

(Start: 19 @41342 has 54 MA's), (23, 41369), (25, 41378), (26, 41396), (27, 41408), (30, 41429), (46, 41522), (48, 41531), (59, 41588), (61, 41600), (68, 41642), (76, 41690), (82, 41747), (87, 41801), (100, 41870), (103, 41897), (109, 41939), (110, 41942), (113, 41969), (118, 42020),

Gene: Francis47_6 Start: 3617, Stop: 4318, Start Num: 18

Candidate Starts for Francis47_6:

(Start: 18 @3617 has 173 MA's), (Start: 19 @3626 has 54 MA's), (39, 3749), (41, 3758), (43, 3779), (49, 3821), (55, 3851), (59, 3881), (74, 3977), (80, 4010), (88, 4097), (118, 4301),

Gene: Froghopper_7 Start: 3029, Stop: 3739, Start Num: 18

Candidate Starts for Froghopper_7:

(Start: 18 @3029 has 173 MA's), (Start: 19 @3038 has 54 MA's), (39, 3161), (43, 3191), (59, 3293), (60, 3302), (63, 3323), (74, 3395), (93, 3542), (99, 3575), (107, 3635), (118, 3722),

Gene: Froghopper_36 Start: 28015, Stop: 28701, Start Num: 19

Candidate Starts for Froghopper_36:

(Start: 19 @28015 has 54 MA's), (25, 28051), (46, 28198), (59, 28267), (60, 28276), (77, 28378), (78, 28390), (81, 28402), (89, 28492), (92, 28510), (103, 28573), (110, 28618), (111, 28627),

Gene: Fushigi_6 Start: 3249, Stop: 3959, Start Num: 18

Candidate Starts for Fushigi_6:

(Start: 18 @3249 has 173 MA's), (Start: 19 @3258 has 54 MA's), (39, 3381), (43, 3411), (59, 3513), (60, 3522), (63, 3543), (74, 3615), (93, 3762), (99, 3795), (107, 3855), (118, 3942),

Gene: GageAP_37 Start: 28786, Stop: 29472, Start Num: 19

Candidate Starts for GageAP_37:

(Start: 19 @28786 has 54 MA's), (25, 28822), (46, 28969), (59, 29038), (60, 29047), (77, 29149), (78, 29161), (81, 29173), (89, 29263), (92, 29281), (103, 29344), (110, 29389), (111, 29398),

Gene: GageAP_7 Start: 3583, Stop: 4284, Start Num: 18

Candidate Starts for GageAP_7:

(Start: 18 @3583 has 173 MA's), (Start: 19 @3592 has 54 MA's), (39, 3715), (41, 3724), (43, 3745), (49, 3787), (55, 3817), (59, 3847), (74, 3943), (80, 3976), (88, 4063), (118, 4267),

Gene: Gandalf20_7 Start: 3468, Stop: 4154, Start Num: 19

Candidate Starts for Gandalf20_7:

(Start: 18 @3459 has 173 MA's), (Start: 19 @3468 has 54 MA's), (58, 3714), (59, 3720), (88, 3939), (94, 3969), (111, 4080),

Gene: Graduation_7 Start: 3446, Stop: 4141, Start Num: 18

Candidate Starts for Graduation_7:

(Start: 18 @3446 has 173 MA's), (58, 3701), (59, 3707), (88, 3926), (94, 3956), (111, 4067),

Gene: GrecoEtereo_7 Start: 3653, Stop: 4363, Start Num: 18

Candidate Starts for GrecoEtereo_7:

(Start: 18 @3653 has 173 MA's), (Start: 19 @3662 has 54 MA's), (39, 3785), (43, 3815), (59, 3917), (60, 3926), (63, 3947), (74, 4019), (93, 4166), (99, 4199), (107, 4259), (118, 4346),

Gene: Greg_7 Start: 3169, Stop: 3870, Start Num: 18

Candidate Starts for Greg_7:

(Start: 18 @3169 has 173 MA's), (Start: 19 @3178 has 54 MA's), (39, 3301), (41, 3310), (43, 3331), (49, 3373), (55, 3403), (59, 3433), (74, 3529), (80, 3562), (88, 3649), (104, 3751), (118, 3853),

Gene: Gwendoluna_6 Start: 3451, Stop: 4161, Start Num: 18

Candidate Starts for Gwendoluna_6:

(Start: 18 @3451 has 173 MA's), (Start: 19 @3460 has 54 MA's), (39, 3583), (43, 3613), (59, 3715), (60, 3724), (63, 3745), (74, 3817), (93, 3964), (99, 3997), (107, 4057), (118, 4144),

Gene: Gyzlar_7 Start: 3788, Stop: 4498, Start Num: 18

Candidate Starts for Gyzlar_7:

(Start: 18 @3788 has 173 MA's), (Start: 19 @3797 has 54 MA's), (39, 3920), (43, 3950), (59, 4052), (60, 4061), (63, 4082), (74, 4154), (93, 4301), (99, 4334), (107, 4394), (118, 4481),

Gene: Hami1_6 Start: 3357, Stop: 4058, Start Num: 18

Candidate Starts for Hami1_6:

(Start: 18 @3357 has 173 MA's), (Start: 19 @3366 has 54 MA's), (39, 3489), (41, 3498), (43, 3519), (49, 3561), (55, 3591), (59, 3621), (74, 3717), (80, 3750), (88, 3837), (99, 3897), (104, 3939), (118, 4041),

Gene: HanShotFirst_35 Start: 27990, Stop: 28676, Start Num: 19

Candidate Starts for HanShotFirst_35:

(Start: 19 @27990 has 54 MA's), (25, 28026), (46, 28173), (59, 28242), (60, 28251), (77, 28353), (78, 28365), (81, 28377), (89, 28467), (92, 28485), (103, 28548), (110, 28593), (111, 28602),

Gene: HanShotFirst_6 Start: 2962, Stop: 3663, Start Num: 18

Candidate Starts for HanShotFirst_6:

(Start: 18 @2962 has 173 MA's), (Start: 19 @2971 has 54 MA's), (39, 3094), (41, 3103), (43, 3124), (49, 3166), (55, 3196), (59, 3226), (74, 3322), (80, 3355), (88, 3442), (99, 3502), (104, 3544), (118, 3646),

Gene: HarryOW_36 Start: 28444, Stop: 29130, Start Num: 19

Candidate Starts for HarryOW_36:

(Start: 19 @28444 has 54 MA's), (25, 28480), (46, 28627), (59, 28696), (60, 28705), (77, 28807), (78, 28819), (81, 28831), (89, 28921), (92, 28939), (103, 29002), (110, 29047), (111, 29056),

Gene: HarryOW_7 Start: 3653, Stop: 4363, Start Num: 18

Candidate Starts for HarryOW_7:

(Start: 18 @3653 has 173 MA's), (Start: 19 @3662 has 54 MA's), (39, 3785), (43, 3815), (59, 3917), (60, 3926), (63, 3947), (74, 4019), (93, 4166), (99, 4199), (107, 4259), (118, 4346),

Gene: Henry_29 Start: 27878, Stop: 28468, Start Num: 31

Candidate Starts for Henry_29:

(Start: 31 @27878 has 1 MA's), (46, 27974), (47, 27980), (59, 28043), (69, 28100), (75, 28142), (79, 28169), (91, 28283), (108, 28385),

Gene: Hermia_7 Start: 3534, Stop: 4244, Start Num: 18

Candidate Starts for Hermia_7:

(Start: 18 @3534 has 173 MA's), (Start: 19 @3543 has 54 MA's), (39, 3666), (43, 3696), (59, 3798), (60, 3807), (63, 3828), (74, 3900), (93, 4047), (99, 4080), (107, 4140), (118, 4227),

Gene: HermioneGrange_7 Start: 3087, Stop: 3776, Start Num: 18

Candidate Starts for HermioneGrange_7:

(Start: 18 @3087 has 173 MA's), (Start: 19 @3096 has 54 MA's), (59, 3348), (67, 3399), (102, 3651),

Gene: Homines_6 Start: 3366, Stop: 4076, Start Num: 18

Candidate Starts for Homines_6:

(Start: 18 @3366 has 173 MA's), (Start: 19 @3375 has 54 MA's), (39, 3498), (43, 3528), (59, 3630), (60, 3639), (63, 3660), (74, 3732), (93, 3879), (99, 3912), (107, 3972), (118, 4059),

Gene: Hope4ever_6 Start: 3493, Stop: 4182, Start Num: 18

Candidate Starts for Hope4ever_6:

(Start: 18 @3493 has 173 MA's), (Start: 19 @3502 has 54 MA's), (59, 3754), (67, 3805), (102, 4057),

Gene: ILeeKay_8 Start: 3564, Stop: 4253, Start Num: 18

Candidate Starts for ILeeKay_8:

(Start: 18 @3564 has 173 MA's), (Start: 19 @3573 has 54 MA's), (46, 3756), (59, 3825), (69, 3882), (82, 3981),

Gene: Ichabod_6 Start: 3086, Stop: 3787, Start Num: 18

Candidate Starts for Ichabod_6:

(Start: 18 @3086 has 173 MA's), (Start: 19 @3095 has 54 MA's), (39, 3218), (41, 3227), (43, 3248), (49, 3290), (55, 3320), (59, 3350), (74, 3446), (80, 3479), (88, 3566), (104, 3668), (118, 3770),

Gene: Idergollasper_64 Start: 41342, Stop: 42028, Start Num: 19

Candidate Starts for Idergollasper_64:

(Start: 19 @41342 has 54 MA's), (23, 41369), (25, 41378), (26, 41396), (27, 41408), (30, 41429), (46, 41522), (48, 41531), (59, 41588), (61, 41600), (68, 41642), (82, 41747), (87, 41801), (100, 41870), (103, 41897), (109, 41939), (110, 41942), (113, 41969), (118, 42020),

Gene: IgnatiusPatJac_35 Start: 28305, Stop: 28991, Start Num: 19

Candidate Starts for IgnatiusPatJac_35:

(Start: 19 @28305 has 54 MA's), (25, 28341), (46, 28488), (59, 28557), (60, 28566), (77, 28668), (78, 28680), (81, 28692), (89, 28782), (92, 28800), (103, 28863), (110, 28908), (111, 28917),

Gene: IgnatiusPatJac_5 Start: 3362, Stop: 4063, Start Num: 18

Candidate Starts for IgnatiusPatJac_5:

(Start: 18 @3362 has 173 MA's), (Start: 19 @3371 has 54 MA's), (39, 3494), (41, 3503), (43, 3524), (49, 3566), (55, 3596), (59, 3626), (74, 3722), (80, 3755), (88, 3842), (99, 3902), (104, 3944),

Gene: JC27_7 Start: 3784, Stop: 4485, Start Num: 18

Candidate Starts for JC27_7:

(Start: 18 @3784 has 173 MA's), (Start: 19 @3793 has 54 MA's), (39, 3916), (41, 3925), (43, 3946), (49, 3988), (55, 4018), (59, 4048), (74, 4144), (80, 4177), (88, 4264), (104, 4366), (118, 4468),

Gene: JC27_37 Start: 28962, Stop: 29648, Start Num: 19

Candidate Starts for JC27_37:

(Start: 19 @28962 has 54 MA's), (25, 28998), (46, 29145), (59, 29214), (60, 29223), (77, 29325), (78, 29337), (81, 29349), (89, 29439), (92, 29457), (103, 29520), (110, 29565), (111, 29574), (117, 29637),

Gene: JackSparrow_6 Start: 3351, Stop: 4052, Start Num: 18

Candidate Starts for JackSparrow_6:

(Start: 18 @3351 has 173 MA's), (Start: 19 @3360 has 54 MA's), (39, 3483), (41, 3492), (43, 3513), (49, 3555), (55, 3585), (59, 3615), (74, 3711), (80, 3744), (88, 3831), (99, 3891), (104, 3933), (118, 4035),

Gene: JangDynasty_64 Start: 41428, Stop: 42114, Start Num: 19

Candidate Starts for JangDynasty_64:

(Start: 19 @41428 has 54 MA's), (23, 41455), (25, 41464), (26, 41482), (27, 41494), (30, 41515), (46, 41608), (48, 41617), (59, 41674), (61, 41686), (68, 41728), (82, 41833), (87, 41887), (100, 41956), (103, 41983), (109, 42025), (110, 42028), (113, 42055), (118, 42106),

Gene: Jasper_7 Start: 3199, Stop: 3897, Start Num: 18

Candidate Starts for Jasper_7:

(Start: 18 @3199 has 173 MA's), (Start: 19 @3208 has 54 MA's), (46, 3391), (47, 3397), (48, 3400), (59, 3460), (83, 3628), (88, 3679), (94, 3709), (98, 3739),

Gene: Jerm2_6 Start: 3086, Stop: 3775, Start Num: 18

Candidate Starts for Jerm2_6:

(Start: 18 @3086 has 173 MA's), (Start: 19 @3095 has 54 MA's), (33, 3188), (38, 3209), (46, 3278), (49, 3290), (58, 3341), (59, 3347), (60, 3356), (67, 3398), (79, 3473), (82, 3503), (83, 3512), (88, 3563), (90, 3581), (94, 3593), (102, 3650), (111, 3704), (116, 3755),

Gene: JuliaChild_8 Start: 3828, Stop: 4529, Start Num: 18

Candidate Starts for JuliaChild_8:

(Start: 18 @3828 has 173 MA's), (Start: 19 @3837 has 54 MA's), (39, 3960), (41, 3969), (43, 3990), (49, 4032), (55, 4062), (59, 4092), (74, 4188), (80, 4221), (88, 4308), (99, 4368), (104, 4410), (118, 4512),

Gene: KBG_6 Start: 3719, Stop: 4420, Start Num: 18

Candidate Starts for KBG_6:

(Start: 18 @3719 has 173 MA's), (Start: 19 @3728 has 54 MA's), (39, 3851), (41, 3860), (43, 3881), (49, 3923), (55, 3953), (59, 3983), (74, 4079), (80, 4112), (88, 4199), (99, 4259), (104, 4301), (118, 4403),

Gene: KSSJEB_5 Start: 2853, Stop: 3533, Start Num: 19

Candidate Starts for KSSJEB_5:

(Start: 18 @2844 has 173 MA's), (Start: 19 @2853 has 54 MA's), (33, 2946), (38, 2967), (46, 3036), (49, 3048), (58, 3099), (59, 3105), (60, 3114), (67, 3156), (79, 3231), (82, 3261), (83, 3270), (88, 3321), (90, 3339), (94, 3351), (102, 3408), (111, 3462), (116, 3513),

Gene: Kanely_7 Start: 3938, Stop: 4639, Start Num: 18

Candidate Starts for Kanely_7:

(Start: 18 @3938 has 173 MA's), (Start: 19 @3947 has 54 MA's), (39, 4070), (41, 4079), (43, 4100), (49, 4142), (55, 4172), (59, 4202), (74, 4298), (80, 4331), (88, 4418), (118, 4622),

Gene: Kenmech_7 Start: 3368, Stop: 4078, Start Num: 18

Candidate Starts for Kenmech_7:

(Start: 18 @3368 has 173 MA's), (Start: 19 @3377 has 54 MA's), (39, 3500), (43, 3530), (59, 3632), (60, 3641), (63, 3662), (74, 3734), (93, 3881), (99, 3914), (107, 3974), (118, 4061),

Gene: Killigrew_4 Start: 2819, Stop: 3508, Start Num: 18

Candidate Starts for Killigrew_4:

(Start: 18 @2819 has 173 MA's), (24, 2858), (54, 3044), (59, 3071), (64, 3104), (75, 3170), (81, 3206), (82, 3230), (83, 3239), (84, 3248), (88, 3287), (101, 3356), (105, 3401), (118, 3500),

Gene: Krili_63 Start: 40852, Stop: 41538, Start Num: 19

Candidate Starts for Krili_63:

(Start: 19 @40852 has 54 MA's), (23, 40879), (25, 40888), (26, 40906), (27, 40918), (30, 40939), (46, 41032), (48, 41041), (59, 41098), (61, 41110), (68, 41152), (76, 41200), (82, 41257), (87, 41311), (100, 41380), (103, 41407), (109, 41449), (110, 41452), (113, 41479), (118, 41530),

Gene: Kugel_7 Start: 3406, Stop: 4116, Start Num: 18

Candidate Starts for Kugel_7:

(Start: 18 @3406 has 173 MA's), (Start: 19 @3415 has 54 MA's), (39, 3538), (43, 3568), (59, 3670), (60, 3679), (63, 3700), (74, 3772), (93, 3919), (99, 3952), (107, 4012), (118, 4099),

Gene: KyMonks1A_8 Start: 3672, Stop: 4373, Start Num: 18

Candidate Starts for KyMonks1A_8:

(Start: 18 @3672 has 173 MA's), (Start: 19 @3681 has 54 MA's), (39, 3804), (41, 3813), (43, 3834), (49, 3876), (59, 3936), (74, 4032), (80, 4065), (88, 4152), (99, 4212), (104, 4254),

Gene: Kykar_35 Start: 28019, Stop: 28705, Start Num: 19

Candidate Starts for Kykar_35:

(Start: 19 @28019 has 54 MA's), (25, 28055), (46, 28202), (59, 28271), (60, 28280), (77, 28382), (78, 28394), (81, 28406), (89, 28496), (92, 28514), (103, 28577), (110, 28622), (111, 28631), (117, 28694),

Gene: Kykar_4 Start: 2883, Stop: 3593, Start Num: 18

Candidate Starts for Kykar_4:

(Start: 18 @2883 has 173 MA's), (Start: 19 @2892 has 54 MA's), (39, 3015), (43, 3045), (59, 3147), (60, 3156), (63, 3177), (74, 3249), (93, 3396), (99, 3429), (107, 3489), (118, 3576),

Gene: Lamina13_6 Start: 2960, Stop: 3655, Start Num: 18

Candidate Starts for Lamina13_6:

(Start: 18 @2960 has 173 MA's), (Start: 19 @2969 has 54 MA's), (36, 3077), (56, 3203), (59, 3224), (69, 3278), (88, 3437), (94, 3467), (96, 3473), (105, 3542), (107, 3554),

Gene: Lesedi_5 Start: 3098, Stop: 3808, Start Num: 18

Candidate Starts for Lesedi_5:

(Start: 18 @3098 has 173 MA's), (Start: 19 @3107 has 54 MA's), (39, 3230), (43, 3260), (59, 3362), (60, 3371), (63, 3392), (74, 3464), (93, 3611), (99, 3644), (107, 3704), (118, 3791),

Gene: Licorice_8 Start: 3957, Stop: 4667, Start Num: 18

Candidate Starts for Licorice_8:

(Start: 18 @3957 has 173 MA's), (Start: 19 @3966 has 54 MA's), (39, 4089), (43, 4119), (59, 4221), (60, 4230), (63, 4251), (74, 4323), (93, 4470), (99, 4503), (107, 4563), (118, 4650),

Gene: LilBib_5 Start: 3141, Stop: 3842, Start Num: 18

Candidate Starts for LilBib_5:

(Start: 18 @3141 has 173 MA's), (Start: 19 @3150 has 54 MA's), (39, 3273), (41, 3282), (43, 3303), (49, 3345), (55, 3375), (59, 3405), (74, 3501), (80, 3534), (88, 3621), (99, 3681), (104, 3723), (118, 3825),

Gene: LilBib_36 Start: 29268, Stop: 29954, Start Num: 19

Candidate Starts for LilBib_36:

(Start: 19 @29268 has 54 MA's), (25, 29304), (46, 29451), (59, 29520), (60, 29529), (77, 29631), (78, 29643), (81, 29655), (89, 29745), (92, 29763), (103, 29826), (110, 29871), (111, 29880),

Gene: Lockley_6 Start: 3279, Stop: 3989, Start Num: 18

Candidate Starts for Lockley_6:

(Start: 18 @3279 has 173 MA's), (Start: 19 @3288 has 54 MA's), (39, 3411), (43, 3441), (59, 3543), (60, 3552), (63, 3573), (74, 3645), (93, 3792), (99, 3825), (107, 3885), (118, 3972),

Gene: Lopton_7 Start: 3693, Stop: 4394, Start Num: 18

Candidate Starts for Lopton_7:

(Start: 18 @3693 has 173 MA's), (Start: 19 @3702 has 54 MA's), (39, 3825), (41, 3834), (43, 3855), (49, 3897), (55, 3927), (59, 3957), (74, 4053), (80, 4086), (88, 4173), (104, 4275), (118, 4377),

Gene: MPlant7149_5 Start: 2926, Stop: 3627, Start Num: 18

Candidate Starts for MPlant7149_5:

(Start: 18 @2926 has 173 MA's), (Start: 19 @2935 has 54 MA's), (39, 3058), (41, 3067), (43, 3088), (49, 3130), (55, 3160), (59, 3190), (74, 3286), (80, 3319), (88, 3406), (104, 3508), (118, 3610),

Gene: MadKillah_65 Start: 41121, Stop: 41807, Start Num: 19

Candidate Starts for MadKillah_65:

(Start: 19 @41121 has 54 MA's), (23, 41148), (25, 41157), (26, 41175), (27, 41187), (30, 41208), (46, 41301), (48, 41310), (59, 41367), (61, 41379), (68, 41421), (82, 41526), (87, 41580), (100, 41649), (103, 41676), (109, 41718), (110, 41721), (113, 41748), (118, 41799),

Gene: Magnar_6 Start: 3078, Stop: 3779, Start Num: 18

Candidate Starts for Magnar_6:

(Start: 18 @3078 has 173 MA's), (Start: 19 @3087 has 54 MA's), (39, 3210), (41, 3219), (43, 3240), (49, 3282), (59, 3342), (74, 3438), (80, 3471), (88, 3558), (99, 3618), (104, 3660),

Gene: Magnito_5 Start: 2814, Stop: 3524, Start Num: 18

Candidate Starts for Magnito_5:

(Start: 18 @2814 has 173 MA's), (Start: 19 @2823 has 54 MA's), (39, 2946), (43, 2976), (59, 3078), (60, 3087), (63, 3108), (74, 3180), (93, 3327), (99, 3360), (107, 3420), (118, 3507),

Gene: Makemake_6 Start: 3551, Stop: 4240, Start Num: 18

Candidate Starts for Makemake_6:

(Start: 18 @3551 has 173 MA's), (Start: 19 @3560 has 54 MA's), (36, 3662), (50, 3752), (59, 3809), (69, 3863), (70, 3866), (76, 3908), (82, 3962), (88, 4022), (91, 4046), (94, 4052), (105, 4127), (107, 4139),

Gene: Manatee_6 Start: 3013, Stop: 3723, Start Num: 18

Candidate Starts for Manatee_6:

(Start: 18 @3013 has 173 MA's), (Start: 19 @3022 has 54 MA's), (39, 3145), (43, 3175), (59, 3277), (60, 3286), (63, 3307), (74, 3379), (93, 3526), (99, 3559), (107, 3619), (118, 3706),

Gene: Marcell_6 Start: 3274, Stop: 3984, Start Num: 18

Candidate Starts for Marcell_6:

(Start: 18 @3274 has 173 MA's), (Start: 19 @3283 has 54 MA's), (39, 3406), (43, 3436), (59, 3538), (60, 3547), (63, 3568), (74, 3640), (93, 3787), (99, 3820), (107, 3880), (118, 3967),

Gene: Marchy_4 Start: 2910, Stop: 3611, Start Num: 18

Candidate Starts for Marchy_4:

(Start: 18 @2910 has 173 MA's), (Start: 19 @2919 has 54 MA's), (39, 3042), (41, 3051), (43, 3072), (49, 3114), (55, 3144), (59, 3174), (74, 3270), (80, 3303), (88, 3390),

Gene: Marge_6 Start: 3295, Stop: 4005, Start Num: 18

Candidate Starts for Marge_6:

(Start: 18 @3295 has 173 MA's), (Start: 19 @3304 has 54 MA's), (39, 3427), (43, 3457), (59, 3559), (60, 3568), (63, 3589), (74, 3661), (93, 3808), (99, 3841), (107, 3901), (118, 3988),

Gene: Maroc7_5 Start: 3096, Stop: 3797, Start Num: 18

Candidate Starts for Maroc7_5:

(Start: 18 @3096 has 173 MA's), (Start: 19 @3105 has 54 MA's), (39, 3228), (41, 3237), (43, 3258), (49, 3300), (55, 3330), (59, 3360), (74, 3456), (80, 3489), (88, 3576), (118, 3780),

Gene: Marsha_6 Start: 3549, Stop: 4250, Start Num: 18

Candidate Starts for Marsha_6:

(Start: 18 @3549 has 173 MA's), (Start: 19 @3558 has 54 MA's), (39, 3681), (41, 3690), (43, 3711), (49, 3753), (55, 3783), (59, 3813), (74, 3909), (80, 3942), (88, 4029), (99, 4089), (104, 4131),

Gene: MaryBeth_6 Start: 3520, Stop: 4221, Start Num: 18

Candidate Starts for MaryBeth_6:

(Start: 18 @3520 has 173 MA's), (Start: 19 @3529 has 54 MA's), (39, 3652), (41, 3661), (43, 3682), (49, 3724), (55, 3754), (59, 3784), (74, 3880), (80, 3913), (88, 4000), (104, 4102), (118, 4204),

Gene: McGuire_6 Start: 3080, Stop: 3769, Start Num: 18

Candidate Starts for McGuire_6:

(Start: 18 @3080 has 173 MA's), (Start: 19 @3089 has 54 MA's), (59, 3341), (69, 3398),

Gene: MetalQZJ_6 Start: 3520, Stop: 4221, Start Num: 18

Candidate Starts for MetalQZJ_6:

(Start: 18 @3520 has 173 MA's), (Start: 19 @3529 has 54 MA's), (39, 3652), (41, 3661), (43, 3682), (49, 3724), (55, 3754), (59, 3784), (74, 3880), (80, 3913), (88, 4000), (104, 4102), (118, 4204),

Gene: Michley_6 Start: 3280, Stop: 3972, Start Num: 18

Candidate Starts for Michley_6:

(Start: 18 @3280 has 173 MA's), (39, 3409), (52, 3490), (55, 3511), (56, 3520), (59, 3541), (62, 3565), (93, 3784), (114, 3919),

Gene: Molly_7 Start: 3126, Stop: 3827, Start Num: 18

Candidate Starts for Molly_7:

(Start: 18 @3126 has 173 MA's), (Start: 19 @3135 has 54 MA's), (39, 3258), (41, 3267), (43, 3288), (49, 3330), (55, 3360), (59, 3390), (74, 3486), (80, 3519), (88, 3606), (104, 3708), (118, 3810),

Gene: Monet_6 Start: 3249, Stop: 3959, Start Num: 18

Candidate Starts for Monet_6:

(Start: 18 @3249 has 173 MA's), (Start: 19 @3258 has 54 MA's), (39, 3381), (43, 3411), (59, 3513), (60, 3522), (63, 3543), (74, 3615), (93, 3762), (99, 3795), (107, 3855), (118, 3942),

Gene: Moose_5 Start: 3359, Stop: 4060, Start Num: 18

Candidate Starts for Moose_5:

(Start: 18 @3359 has 173 MA's), (Start: 19 @3368 has 54 MA's), (39, 3491), (41, 3500), (43, 3521), (49, 3563), (55, 3593), (59, 3623), (74, 3719), (80, 3752), (88, 3839), (99, 3899), (104, 3941), (118, 4043),

Gene: Mori_64 Start: 41383, Stop: 42069, Start Num: 19

Candidate Starts for Mori_64:

(Start: 19 @41383 has 54 MA's), (23, 41410), (25, 41419), (26, 41437), (27, 41449), (30, 41470), (46, 41563), (48, 41572), (59, 41629), (61, 41641), (68, 41683), (82, 41788), (87, 41842), (100, 41911), (103, 41938), (109, 41980), (110, 41983), (113, 42010), (118, 42061),

Gene: MrGordo_6 Start: 3113, Stop: 3805, Start Num: 18

Candidate Starts for MrGordo_6:

(Start: 18 @3113 has 173 MA's), (39, 3242), (40, 3248), (52, 3323), (55, 3344), (56, 3353), (59, 3374), (62, 3398), (93, 3617), (114, 3752),

Gene: Mule_5 Start: 3184, Stop: 3885, Start Num: 18

Candidate Starts for Mule_5:

(Start: 18 @3184 has 173 MA's), (Start: 19 @3193 has 54 MA's), (39, 3316), (41, 3325), (43, 3346), (49, 3388), (55, 3418), (59, 3448), (74, 3544), (80, 3577), (88, 3664), (99, 3724), (104, 3766), (118, 3868),

Gene: Murai_65 Start: 41564, Stop: 42250, Start Num: 19

Candidate Starts for Murai_65:

(Start: 19 @41564 has 54 MA's), (23, 41591), (25, 41600), (26, 41618), (27, 41630), (30, 41651), (46, 41744), (48, 41753), (59, 41810), (61, 41822), (68, 41864), (82, 41969), (87, 42023), (100, 42092), (103, 42119), (109, 42161), (110, 42164), (113, 42191), (118, 42242),

Gene: Museum_7 Start: 2926, Stop: 3615, Start Num: 18

Candidate Starts for Museum_7:

(Start: 18 @2926 has 173 MA's), (Start: 19 @2935 has 54 MA's), (33, 3028), (38, 3049), (46, 3118), (49, 3130), (58, 3181), (59, 3187), (60, 3196), (67, 3238), (79, 3313), (82, 3343), (83, 3352), (88, 3403), (90, 3421), (94, 3433),

Gene: NEHalo_6 Start: 2920, Stop: 3621, Start Num: 18

Candidate Starts for NEHalo_6:

(Start: 18 @2920 has 173 MA's), (Start: 19 @2929 has 54 MA's), (39, 3052), (41, 3061), (43, 3082), (49, 3124), (55, 3154), (59, 3184), (74, 3280), (80, 3313), (88, 3400), (104, 3502), (118, 3604),

Gene: Naira_6 Start: 3315, Stop: 4004, Start Num: 18

Candidate Starts for Naira_6:

(Start: 18 @3315 has 173 MA's), (Start: 19 @3324 has 54 MA's), (33, 3417), (38, 3438), (46, 3507), (49, 3519), (58, 3570), (59, 3576), (60, 3585), (67, 3627), (79, 3702), (82, 3732), (83, 3741), (88, 3792), (90, 3810), (94, 3822), (102, 3879), (111, 3933), (116, 3984),

Gene: Nerujay_6 Start: 3213, Stop: 3914, Start Num: 18

Candidate Starts for Nerujay_6:

(Start: 18 @3213 has 173 MA's), (Start: 19 @3222 has 54 MA's), (39, 3345), (41, 3354), (43, 3375), (49, 3417), (55, 3447), (59, 3477), (74, 3573), (80, 3606), (88, 3693), (99, 3753), (104, 3795), (118,

3897),

Gene: Nhonho_6 Start: 3216, Stop: 3917, Start Num: 18

Candidate Starts for Nhonho_6:

(Start: 18 @3216 has 173 MA's), (Start: 19 @3225 has 54 MA's), (39, 3348), (41, 3357), (49, 3420), (56, 3459), (59, 3480), (74, 3576), (80, 3609), (99, 3756), (104, 3798), (118, 3900),

Gene: NiebruSaylor_63 Start: 40771, Stop: 41457, Start Num: 19

Candidate Starts for NiebruSaylor_63:

(Start: 19 @40771 has 54 MA's), (23, 40798), (25, 40807), (26, 40825), (27, 40837), (30, 40858), (46, 40951), (48, 40960), (59, 41017), (61, 41029), (68, 41071), (76, 41119), (82, 41176), (87, 41230), (100, 41299), (103, 41326), (109, 41368), (110, 41371), (113, 41398), (118, 41449),

Gene: Niza_7 Start: 3932, Stop: 4633, Start Num: 18

Candidate Starts for Niza_7:

(Start: 18 @3932 has 173 MA's), (Start: 19 @3941 has 54 MA's), (39, 4064), (41, 4073), (43, 4094), (49, 4136), (55, 4166), (59, 4196), (74, 4292), (80, 4325), (88, 4412), (104, 4514), (118, 4616),

Gene: Norz_6 Start: 3312, Stop: 4001, Start Num: 18

Candidate Starts for Norz_6:

(Start: 18 @3312 has 173 MA's), (Start: 19 @3321 has 54 MA's), (36, 3423), (50, 3513), (59, 3570), (69, 3624), (70, 3627), (71, 3633), (76, 3669), (82, 3723), (88, 3783), (91, 3807), (94, 3813), (105, 3888), (107, 3900),

Gene: Ohno789_5 Start: 2769, Stop: 3470, Start Num: 18

Candidate Starts for Ohno789_5:

(Start: 18 @2769 has 173 MA's), (Start: 19 @2778 has 54 MA's), (39, 2901), (41, 2910), (43, 2931), (49, 2973), (55, 3003), (59, 3033), (74, 3129), (80, 3162), (88, 3249), (104, 3351), (118, 3453),

Gene: Oogway_5 Start: 3340, Stop: 4041, Start Num: 18

Candidate Starts for Oogway_5:

(Start: 18 @3340 has 173 MA's), (Start: 19 @3349 has 54 MA's), (39, 3472), (41, 3481), (43, 3502), (49, 3544), (55, 3574), (59, 3604), (74, 3700), (80, 3733), (88, 3820), (118, 4024),

Gene: PSullivan_7 Start: 3828, Stop: 4529, Start Num: 18

Candidate Starts for PSullivan_7:

(Start: 18 @3828 has 173 MA's), (Start: 19 @3837 has 54 MA's), (39, 3960), (41, 3969), (43, 3990), (49, 4032), (55, 4062), (59, 4092), (74, 4188), (80, 4221), (88, 4308), (99, 4368), (104, 4410), (118, 4512),

Gene: PacerPaul_6 Start: 3617, Stop: 4318, Start Num: 18

Candidate Starts for PacerPaul_6:

(Start: 18 @3617 has 173 MA's), (Start: 19 @3626 has 54 MA's), (39, 3749), (41, 3758), (43, 3779), (49, 3821), (55, 3851), (59, 3881), (74, 3977), (80, 4010), (88, 4097), (118, 4301),

Gene: Papez_6 Start: 3435, Stop: 4136, Start Num: 18

Candidate Starts for Papez_6:

(Start: 18 @3435 has 173 MA's), (Start: 19 @3444 has 54 MA's), (39, 3567), (43, 3597), (49, 3639), (55, 3669), (59, 3699), (74, 3795), (80, 3828), (88, 3915), (99, 3975), (104, 4017), (118, 4119),

Gene: Paphu_5 Start: 2806, Stop: 3507, Start Num: 18

Candidate Starts for Paphu_5:

(Start: 18 @2806 has 173 MA's), (Start: 19 @2815 has 54 MA's), (39, 2938), (41, 2947), (43, 2968), (49, 3010), (59, 3070), (74, 3166), (80, 3199), (88, 3286), (99, 3346), (104, 3388), (115, 3457),

Gene: Paraselene_5 Start: 3090, Stop: 3800, Start Num: 18

Candidate Starts for Paraselene_5:

(Start: 18 @3090 has 173 MA's), (Start: 19 @3099 has 54 MA's), (39, 3222), (43, 3252), (59, 3354), (60, 3363), (63, 3384), (74, 3456), (84, 3534), (93, 3603), (99, 3636), (107, 3696), (118, 3783),

Gene: Pari_7 Start: 3580, Stop: 4269, Start Num: 18

Candidate Starts for Pari_7:

(Start: 18 @3580 has 173 MA's), (Start: 19 @3589 has 54 MA's), (59, 3841), (67, 3892), (102, 4144),

Gene: PascalRango_5 Start: 2963, Stop: 3664, Start Num: 18

Candidate Starts for PascalRango_5:

(Start: 18 @2963 has 173 MA's), (Start: 19 @2972 has 54 MA's), (39, 3095), (41, 3104), (43, 3125), (49, 3167), (55, 3197), (59, 3227), (74, 3323), (80, 3356), (88, 3443), (99, 3503), (104, 3545), (118, 3647),

Gene: PattyP_7 Start: 3121, Stop: 3822, Start Num: 18

Candidate Starts for PattyP_7:

(Start: 18 @3121 has 173 MA's), (Start: 19 @3130 has 54 MA's), (39, 3253), (41, 3262), (43, 3283), (49, 3325), (55, 3355), (59, 3385), (74, 3481), (80, 3514), (88, 3601), (99, 3661), (104, 3703), (118, 3805),

Gene: Payneful_5 Start: 2910, Stop: 3611, Start Num: 18

Candidate Starts for Payneful_5:

(Start: 18 @2910 has 173 MA's), (Start: 19 @2919 has 54 MA's), (39, 3042), (41, 3051), (43, 3072), (49, 3114), (55, 3144), (59, 3174), (74, 3270), (80, 3303), (88, 3390),

Gene: Pelly_7 Start: 3760, Stop: 4461, Start Num: 18

Candidate Starts for Pelly_7:

(Start: 18 @3760 has 173 MA's), (Start: 19 @3769 has 54 MA's), (39, 3892), (41, 3901), (43, 3922), (49, 3964), (55, 3994), (59, 4024), (74, 4120), (80, 4153), (88, 4240), (99, 4300), (104, 4342), (118, 4444),

Gene: Pelly_36 Start: 28758, Stop: 29444, Start Num: 19

Candidate Starts for Pelly_36:

(Start: 19 @28758 has 54 MA's), (25, 28794), (46, 28941), (59, 29010), (60, 29019), (77, 29121), (78, 29133), (81, 29145), (89, 29235), (92, 29253), (103, 29316), (110, 29361), (111, 29370),

Gene: Pepe_7 Start: 3783, Stop: 4484, Start Num: 18

Candidate Starts for Pepe_7:

(Start: 18 @3783 has 173 MA's), (Start: 19 @3792 has 54 MA's), (34, 3894), (39, 3915), (41, 3924), (43, 3945), (49, 3987), (55, 4017), (59, 4047), (74, 4143), (80, 4176), (88, 4263), (99, 4323), (118, 4467),

Gene: Perseus_7 Start: 3489, Stop: 4181, Start Num: 19

Candidate Starts for Perseus_7:

(Start: 18 @3480 has 173 MA's), (Start: 19 @3489 has 54 MA's), (39, 3612), (41, 3621), (43, 3642), (49, 3684), (55, 3714), (59, 3744), (74, 3840), (80, 3873), (88, 3960), (99, 4020), (104, 4062), (118, 4164),

Gene: Peterson_8 Start: 4615, Stop: 5310, Start Num: 18

Candidate Starts for Peterson_8:

(Start: 18 @4615 has 173 MA's), (Start: 19 @4624 has 54 MA's), (36, 4732), (56, 4858), (59, 4879), (69, 4933), (71, 4942), (88, 5092), (94, 5122), (96, 5128), (107, 5209),

Gene: Petp2012_8 Start: 3288, Stop: 3977, Start Num: 18

Candidate Starts for Petp2012_8:

(Start: 18 @3288 has 173 MA's), (Start: 19 @3297 has 54 MA's), (33, 3390), (38, 3411), (46, 3480), (49, 3492), (58, 3543), (59, 3549), (60, 3558), (67, 3600), (79, 3675), (82, 3705), (88, 3765), (90, 3783), (94, 3795), (102, 3852), (111, 3906), (116, 3957),

Gene: Petruchio_6 Start: 3029, Stop: 3739, Start Num: 18

Candidate Starts for Petruchio_6:

(Start: 18 @3029 has 173 MA's), (Start: 19 @3038 has 54 MA's), (39, 3161), (43, 3191), (59, 3293), (60, 3302), (63, 3323), (74, 3395), (93, 3542), (99, 3575), (107, 3635), (118, 3722),

Gene: PhrostyMug_5 Start: 3184, Stop: 3885, Start Num: 18

Candidate Starts for PhrostyMug_5:

(Start: 18 @3184 has 173 MA's), (Start: 19 @3193 has 54 MA's), (39, 3316), (41, 3325), (43, 3346), (49, 3388), (55, 3418), (59, 3448), (74, 3544), (80, 3577), (88, 3664), (99, 3724), (104, 3766), (118, 3868),

Gene: PinkPlastic_4 Start: 2843, Stop: 3532, Start Num: 18

Candidate Starts for PinkPlastic_4:

(Start: 18 @2843 has 173 MA's), (Start: 19 @2852 has 54 MA's), (33, 2945), (38, 2966), (46, 3035), (49, 3047), (58, 3098), (59, 3104), (60, 3113), (67, 3155), (79, 3230), (82, 3260), (83, 3269), (88, 3320), (90, 3338), (94, 3350), (102, 3407), (111, 3461), (116, 3512),

Gene: Pinto_8 Start: 3470, Stop: 4171, Start Num: 18

Candidate Starts for Pinto_8:

(Start: 18 @3470 has 173 MA's), (Start: 19 @3479 has 54 MA's), (39, 3602), (41, 3611), (43, 3632), (49, 3674), (55, 3704), (59, 3734), (74, 3830), (80, 3863), (88, 3950), (118, 4154),

Gene: Pinto_38 Start: 28671, Stop: 29357, Start Num: 19

Candidate Starts for Pinto_38:

(Start: 19 @28671 has 54 MA's), (25, 28707), (46, 28854), (59, 28923), (60, 28932), (77, 29034), (78, 29046), (89, 29148), (92, 29166), (103, 29229), (110, 29274), (111, 29283),

Gene: Pippin_7 Start: 3169, Stop: 3870, Start Num: 18

Candidate Starts for Pippin_7:

(Start: 18 @3169 has 173 MA's), (Start: 19 @3178 has 54 MA's), (39, 3301), (41, 3310), (43, 3331), (49, 3373), (55, 3403), (59, 3433), (74, 3529), (80, 3562), (88, 3649), (99, 3709),

Gene: Pita2_8 Start: 3828, Stop: 4529, Start Num: 18

Candidate Starts for Pita2_8:

(Start: 18 @3828 has 173 MA's), (Start: 19 @3837 has 54 MA's), (39, 3960), (41, 3969), (43, 3990), (49, 4032), (55, 4062), (59, 4092), (74, 4188), (80, 4221), (88, 4308), (99, 4368), (104, 4410), (118, 4512),

Gene: QTRlifeCrisis_7 Start: 3254, Stop: 3955, Start Num: 19

Candidate Starts for QTRlifeCrisis_7:

(Start: 18 @3245 has 173 MA's), (Start: 19 @3254 has 54 MA's), (39, 3377), (43, 3407), (59, 3509), (60, 3518), (63, 3539), (74, 3611), (93, 3758), (99, 3791), (107, 3851), (118, 3938),

Gene: Rajelicia_5 Start: 2958, Stop: 3668, Start Num: 18

Candidate Starts for Rajelicia_5:

(Start: 18 @2958 has 173 MA's), (Start: 19 @2967 has 54 MA's), (39, 3090), (43, 3120), (59, 3222), (60, 3231), (63, 3252), (74, 3324), (93, 3471), (99, 3504), (107, 3564), (118, 3651),

Gene: Rhynn_6 Start: 3404, Stop: 4105, Start Num: 18

Candidate Starts for Rhynn_6:

(Start: 18 @3404 has 173 MA's), (Start: 19 @3413 has 54 MA's), (39, 3536), (41, 3545), (43, 3566), (49, 3608), (55, 3638), (59, 3668), (74, 3764), (80, 3797), (88, 3884), (99, 3944), (104, 3986), (118, 4088),

Gene: RidgeCB_6 Start: 2935, Stop: 3627, Start Num: 19

Candidate Starts for RidgeCB_6:

(Start: 18 @2926 has 173 MA's), (Start: 19 @2935 has 54 MA's), (39, 3058), (41, 3067), (43, 3088), (49, 3130), (55, 3160), (59, 3190), (74, 3286), (80, 3319), (88, 3406), (99, 3466), (104, 3508), (118, 3610),

Gene: Ringer_5 Start: 3413, Stop: 4114, Start Num: 18

Candidate Starts for Ringer_5:

(Start: 18 @3413 has 173 MA's), (Start: 19 @3422 has 54 MA's), (39, 3545), (41, 3554), (43, 3575), (49, 3617), (55, 3647), (59, 3677), (74, 3773), (80, 3806), (88, 3893), (99, 3953), (118, 4097),

Gene: Rohr_7 Start: 3620, Stop: 4309, Start Num: 18

Candidate Starts for Rohr_7:

(Start: 18 @3620 has 173 MA's), (Start: 19 @3629 has 54 MA's), (46, 3812), (47, 3818), (59, 3881), (69, 3938), (102, 4184),

Gene: Rubeus_6 Start: 2927, Stop: 3628, Start Num: 18

Candidate Starts for Rubeus_6:

(Start: 18 @2927 has 173 MA's), (Start: 19 @2936 has 54 MA's), (39, 3059), (41, 3068), (43, 3089), (49, 3131), (55, 3161), (59, 3191), (74, 3287), (80, 3320), (88, 3407), (104, 3509), (118, 3611),

Gene: Rufus_6 Start: 2984, Stop: 3685, Start Num: 18

Candidate Starts for Rufus_6:

(Start: 18 @2984 has 173 MA's), (Start: 19 @2993 has 54 MA's), (39, 3116), (41, 3125), (43, 3146), (49, 3188), (55, 3218), (59, 3248), (74, 3344), (80, 3377), (88, 3464), (104, 3566), (118, 3668),

Gene: Ruotula_5 Start: 3545, Stop: 4246, Start Num: 18

Candidate Starts for Ruotula_5:

(Start: 18 @3545 has 173 MA's), (Start: 19 @3554 has 54 MA's), (39, 3677), (41, 3686), (43, 3707), (49, 3749), (55, 3779), (59, 3809), (74, 3905), (80, 3938), (88, 4025), (99, 4085), (118, 4229),

Gene: Rutherferd_7 Start: 3445, Stop: 4146, Start Num: 18

Candidate Starts for Rutherferd_7:

(Start: 18 @3445 has 173 MA's), (Start: 19 @3454 has 54 MA's), (39, 3577), (41, 3586), (43, 3607), (49, 3649), (55, 3679), (59, 3709), (74, 3805), (80, 3838), (88, 3925), (99, 3985), (104, 4027), (115, 4096), (118, 4129),

Gene: Ryadel_68 Start: 42152, Stop: 42838, Start Num: 19

Candidate Starts for Ryadel_68:

(Start: 19 @42152 has 54 MA's), (23, 42179), (25, 42188), (26, 42206), (27, 42218), (30, 42239), (46, 42332), (48, 42341), (58, 42392), (59, 42398), (61, 42410), (68, 42452), (76, 42500), (82, 42557), (100, 42680), (103, 42707), (109, 42749), (110, 42752), (113, 42779), (118, 42830),

Gene: STLscum_7 Start: 3537, Stop: 4238, Start Num: 18

Candidate Starts for STLscum_7:

(Start: 18 @3537 has 173 MA's), (Start: 19 @3546 has 54 MA's), (39, 3669), (41, 3678), (43, 3699), (49, 3741), (55, 3771), (59, 3801), (74, 3897), (80, 3930), (88, 4017), (99, 4077), (118, 4221),

Gene: Sagefire_7 Start: 3600, Stop: 4301, Start Num: 18

Candidate Starts for Sagefire_7:

(Start: 18 @3600 has 173 MA's), (Start: 19 @3609 has 54 MA's), (39, 3732), (41, 3741), (43, 3762), (49, 3804), (55, 3834), (59, 3864), (74, 3960), (80, 3993), (88, 4080), (99, 4140), (104, 4182), (118, 4284),

Gene: Sandaddy_5 Start: 3321, Stop: 4022, Start Num: 18

Candidate Starts for Sandaddy_5:

(Start: 18 @3321 has 173 MA's), (Start: 19 @3330 has 54 MA's), (39, 3453), (41, 3462), (42, 3474), (43, 3483), (49, 3525), (55, 3555), (59, 3585), (74, 3681), (80, 3714), (88, 3801), (99, 3861), (104, 3903), (118, 4005),

Gene: SarFire_6 Start: 3182, Stop: 3883, Start Num: 18

Candidate Starts for SarFire_6:

(Start: 18 @3182 has 173 MA's), (Start: 19 @3191 has 54 MA's), (39, 3314), (41, 3323), (43, 3344), (49, 3386), (55, 3416), (59, 3446), (74, 3542), (80, 3575), (88, 3662), (99, 3722), (118, 3866),

Gene: SchoolBus_64 Start: 41336, Stop: 42022, Start Num: 19

Candidate Starts for SchoolBus_64:

(Start: 19 @41336 has 54 MA's), (23, 41363), (25, 41372), (26, 41390), (27, 41402), (30, 41423), (46, 41516), (48, 41525), (59, 41582), (61, 41594), (68, 41636), (82, 41741), (87, 41795), (100, 41864), (103, 41891), (109, 41933), (110, 41936), (113, 41963), (118, 42014),

Gene: Schuy_62 Start: 41127, Stop: 41813, Start Num: 19

Candidate Starts for Schuy_62:

(Start: 19 @41127 has 54 MA's), (23, 41154), (25, 41163), (26, 41181), (27, 41193), (30, 41214), (46, 41307), (48, 41316), (59, 41373), (61, 41385), (68, 41427), (82, 41532), (87, 41586), (100, 41655), (103, 41682), (109, 41724), (110, 41727), (113, 41754), (118, 41805),

Gene: Scowl_7 Start: 3865, Stop: 4575, Start Num: 18

Candidate Starts for Scowl_7:

(Start: 18 @3865 has 173 MA's), (Start: 19 @3874 has 54 MA's), (39, 3997), (43, 4027), (59, 4129), (60, 4138), (63, 4159), (74, 4231), (93, 4378), (99, 4411), (107, 4471), (118, 4558),

Gene: Seabiscuit_7 Start: 3080, Stop: 3769, Start Num: 18

Candidate Starts for Seabiscuit_7:

(Start: 18 @3080 has 173 MA's), (Start: 19 @3089 has 54 MA's), (59, 3341), (69, 3398), (102, 3644),

Gene: Seanderson_7 Start: 3844, Stop: 4554, Start Num: 18

Candidate Starts for Seanderson_7:

(Start: 18 @3844 has 173 MA's), (Start: 19 @3853 has 54 MA's), (39, 3976), (43, 4006), (59, 4108), (60, 4117), (63, 4138), (74, 4210), (93, 4357), (99, 4390), (107, 4450), (118, 4537),

Gene: Shida_64 Start: 41034, Stop: 41720, Start Num: 19

Candidate Starts for Shida_64:

(Start: 19 @41034 has 54 MA's), (23, 41061), (25, 41070), (26, 41088), (27, 41100), (30, 41121), (46, 41214), (48, 41223), (59, 41280), (61, 41292), (68, 41334), (82, 41439), (87, 41493), (100, 41562),

(103, 41589), (109, 41631), (110, 41634), (113, 41661), (118, 41712),

Gene: ShortQueendom_4 Start: 2779, Stop: 3480, Start Num: 18

Candidate Starts for ShortQueendom_4:

(Start: 18 @2779 has 173 MA's), (Start: 19 @2788 has 54 MA's), (39, 2911), (41, 2920), (43, 2941), (49, 2983), (55, 3013), (59, 3043), (74, 3139), (80, 3172), (88, 3259), (99, 3319), (104, 3361), (118, 3463),

Gene: Sibs6_7 Start: 3120, Stop: 3821, Start Num: 18

Candidate Starts for Sibs6_7:

(Start: 18 @3120 has 173 MA's), (Start: 19 @3129 has 54 MA's), (39, 3252), (41, 3261), (43, 3282), (49, 3324), (55, 3354), (59, 3384), (74, 3480), (80, 3513), (88, 3600), (104, 3702), (118, 3804),

Gene: Slagathor_6 Start: 2929, Stop: 3639, Start Num: 18

Candidate Starts for Slagathor_6:

(Start: 18 @2929 has 173 MA's), (Start: 19 @2938 has 54 MA's), (39, 3061), (43, 3091), (59, 3193), (60, 3202), (63, 3223), (74, 3295), (93, 3442), (99, 3475), (107, 3535), (118, 3622),

Gene: Smairt_7 Start: 3793, Stop: 4494, Start Num: 18

Candidate Starts for Smairt_7:

(Start: 18 @3793 has 173 MA's), (Start: 19 @3802 has 54 MA's), (39, 3925), (41, 3934), (43, 3955), (49, 3997), (55, 4027), (59, 4057), (74, 4153), (80, 4186), (88, 4273), (99, 4333), (104, 4375), (118, 4477),

Gene: Smeagol_7 Start: 4108, Stop: 4797, Start Num: 18

Candidate Starts for Smeagol_7:

(Start: 18 @4108 has 173 MA's), (Start: 19 @4117 has 54 MA's), (46, 4300), (47, 4306), (59, 4372), (73, 4465), (88, 4591), (95, 4624), (102, 4669), (106, 4696), (109, 4711), (110, 4714),

Gene: Smooch_67 Start: 43056, Stop: 43742, Start Num: 19

Candidate Starts for Smooch_67:

(Start: 19 @43056 has 54 MA's), (23, 43083), (25, 43092), (26, 43110), (27, 43122), (30, 43143), (37, 43173), (46, 43236), (48, 43245), (59, 43302), (61, 43314), (66, 43344), (68, 43356), (76, 43404), (82, 43461), (87, 43515), (100, 43584), (103, 43611), (109, 43653), (110, 43656), (113, 43683), (118, 43734),

Gene: Snazzy_4 Start: 2824, Stop: 3525, Start Num: 18

Candidate Starts for Snazzy_4:

(Start: 18 @2824 has 173 MA's), (Start: 19 @2833 has 54 MA's), (39, 2956), (41, 2965), (43, 2986), (49, 3028), (55, 3058), (59, 3088), (74, 3184), (80, 3217), (88, 3304), (99, 3364), (118, 3508),

Gene: Solon_5 Start: 2826, Stop: 3518, Start Num: 19

Candidate Starts for Solon_5:

(Start: 18 @2817 has 173 MA's), (Start: 19 @2826 has 54 MA's), (39, 2949), (41, 2958), (43, 2979), (49, 3021), (59, 3081), (74, 3177), (80, 3210), (88, 3297), (99, 3357), (104, 3399),

Gene: Sorpresa_5 Start: 3321, Stop: 4022, Start Num: 18

Candidate Starts for Sorpresa_5:

(Start: 18 @3321 has 173 MA's), (Start: 19 @3330 has 54 MA's), (39, 3453), (41, 3462), (42, 3474), (43, 3483), (49, 3525), (55, 3555), (59, 3585), (74, 3681), (80, 3714), (88, 3801), (99, 3861), (104, 3903), (118, 4005),

Gene: SpikeBT_6 Start: 3193, Stop: 3894, Start Num: 18

Candidate Starts for SpikeBT_6:

(Start: 18 @3193 has 173 MA's), (Start: 19 @3202 has 54 MA's), (39, 3325), (43, 3355), (49, 3397), (55, 3427), (59, 3457), (74, 3553), (80, 3586), (88, 3673), (99, 3733), (104, 3775), (118, 3877),

Gene: Squee_5 Start: 2943, Stop: 3623, Start Num: 18

Candidate Starts for Squee_5:

(Start: 18 @2943 has 173 MA's), (Start: 19 @2952 has 54 MA's), (44, 3108), (45, 3114), (47, 3132), (51, 3144), (53, 3150), (59, 3198), (69, 3255), (72, 3273), (74, 3294), (93, 3441), (96, 3450), (109, 3537),

Gene: StewieG_5 Start: 3192, Stop: 3893, Start Num: 18

Candidate Starts for StewieG_5:

(Start: 18 @3192 has 173 MA's), (Start: 19 @3201 has 54 MA's), (39, 3324), (41, 3333), (43, 3354), (49, 3396), (55, 3426), (59, 3456), (74, 3552), (80, 3585), (88, 3672), (99, 3732), (104, 3774), (118, 3876),

Gene: StrongArm_5 Start: 3035, Stop: 3730, Start Num: 18

Candidate Starts for StrongArm_5:

(Start: 18 @3035 has 173 MA's), (36, 3152), (55, 3269), (56, 3278), (59, 3299), (69, 3353), (71, 3362), (88, 3512), (94, 3542), (96, 3548), (105, 3617), (107, 3629),

Gene: Sumter_5 Start: 2916, Stop: 3617, Start Num: 18

Candidate Starts for Sumter_5:

(Start: 18 @2916 has 173 MA's), (Start: 19 @2925 has 54 MA's), (39, 3048), (41, 3057), (43, 3078), (49, 3120), (55, 3150), (59, 3180), (74, 3276), (80, 3309), (88, 3396), (99, 3456), (104, 3498), (118, 3600),

Gene: Sunshine924_5 Start: 2897, Stop: 3598, Start Num: 18

Candidate Starts for Sunshine924_5:

(Start: 18 @2897 has 173 MA's), (Start: 19 @2906 has 54 MA's), (39, 3029), (41, 3038), (43, 3059), (49, 3101), (55, 3131), (59, 3161), (74, 3257), (80, 3290), (88, 3377), (99, 3437), (104, 3479), (118, 3581),

Gene: SwissCheese_6 Start: 3359, Stop: 4060, Start Num: 18

Candidate Starts for SwissCheese_6:

(Start: 18 @3359 has 173 MA's), (Start: 19 @3368 has 54 MA's), (39, 3491), (41, 3500), (43, 3521), (49, 3563), (55, 3593), (59, 3623), (74, 3719), (80, 3752), (88, 3839), (99, 3899), (104, 3941), (118, 4043),

Gene: Switzer_6 Start: 2969, Stop: 3649, Start Num: 19

Candidate Starts for Switzer_6:

(Start: 18 @2960 has 173 MA's), (Start: 19 @2969 has 54 MA's), (59, 3221), (67, 3272),

Gene: Swole_8 Start: 3828, Stop: 4529, Start Num: 18

Candidate Starts for Swole_8:

(Start: 18 @3828 has 173 MA's), (Start: 19 @3837 has 54 MA's), (39, 3960), (41, 3969), (43, 3990), (49, 4032), (55, 4062), (59, 4092), (74, 4188), (80, 4221), (88, 4308), (99, 4368), (104, 4410), (118, 4512),

Gene: Target_7 Start: 3616, Stop: 4317, Start Num: 18

Candidate Starts for Target_7:

(Start: 18 @3616 has 173 MA's), (Start: 19 @3625 has 54 MA's), (39, 3748), (41, 3757), (49, 3820), (55, 3850), (59, 3880), (74, 3976), (76, 3982), (80, 4009), (88, 4096), (99, 4156), (118, 4300),

Gene: Tasp14_7 Start: 3616, Stop: 4305, Start Num: 18

Candidate Starts for Tasp14_7:

(Start: 18 @3616 has 173 MA's), (Start: 19 @3625 has 54 MA's), (36, 3727), (59, 3874), (69, 3928), (70, 3931), (76, 3973), (82, 4027), (86, 4072), (88, 4087), (91, 4111), (94, 4117), (105, 4192),

Gene: TelAviv_61 Start: 41309, Stop: 41995, Start Num: 19

Candidate Starts for TelAviv_61:

(Start: 19 @41309 has 54 MA's), (23, 41336), (25, 41345), (26, 41363), (27, 41375), (30, 41396), (46, 41489), (48, 41498), (59, 41555), (61, 41567), (68, 41609), (82, 41714), (87, 41768), (100, 41837), (103, 41864), (109, 41906), (110, 41909), (113, 41936), (118, 41987),

Gene: Teodoridan_4 Start: 2771, Stop: 3466, Start Num: 19

Candidate Starts for Teodoridan_4:

(Start: 18 @2762 has 173 MA's), (Start: 19 @2771 has 54 MA's), (40, 2900), (49, 2966), (59, 3026), (69, 3083), (84, 3203), (116, 3437),

Gene: TheloniousMonk_6 Start: 3244, Stop: 3945, Start Num: 18

Candidate Starts for TheloniousMonk_6:

(Start: 18 @3244 has 173 MA's), (Start: 19 @3253 has 54 MA's), (39, 3376), (41, 3385), (43, 3406), (49, 3448), (59, 3508), (74, 3604), (80, 3637), (88, 3724), (99, 3784), (104, 3826), (118, 3928),

Gene: Thor_6 Start: 3191, Stop: 3883, Start Num: 19

Candidate Starts for Thor_6:

(Start: 18 @3182 has 173 MA's), (Start: 19 @3191 has 54 MA's), (39, 3314), (41, 3323), (43, 3344), (49, 3386), (55, 3416), (59, 3446), (74, 3542), (80, 3575), (88, 3662), (99, 3722), (118, 3866),

Gene: Topgun_6 Start: 3108, Stop: 3809, Start Num: 18

Candidate Starts for Topgun_6:

(Start: 18 @3108 has 173 MA's), (Start: 19 @3117 has 54 MA's), (39, 3240), (41, 3249), (43, 3270), (49, 3312), (55, 3342), (59, 3372), (74, 3468), (80, 3501), (88, 3588), (99, 3648), (104, 3690), (118, 3792),

Gene: Topgun_35 Start: 27931, Stop: 28617, Start Num: 19

Candidate Starts for Topgun_35:

(Start: 19 @27931 has 54 MA's), (25, 27967), (46, 28114), (59, 28183), (60, 28192), (77, 28294), (78, 28306), (81, 28318), (89, 28408), (92, 28426), (103, 28489), (110, 28534), (111, 28543),

Gene: Tote_8 Start: 3828, Stop: 4529, Start Num: 18

Candidate Starts for Tote_8:

(Start: 18 @3828 has 173 MA's), (Start: 19 @3837 has 54 MA's), (39, 3960), (41, 3969), (43, 3990), (49, 4032), (55, 4062), (59, 4092), (74, 4188), (80, 4221), (88, 4308), (99, 4368), (104, 4410), (118, 4512),

Gene: Traft412_8 Start: 4006, Stop: 4716, Start Num: 18

Candidate Starts for Traft412_8:

(Start: 18 @4006 has 173 MA's), (Start: 19 @4015 has 54 MA's), (39, 4138), (43, 4168), (59, 4270), (60, 4279), (63, 4300), (74, 4372), (93, 4519), (99, 4552), (107, 4612), (118, 4699),

Gene: Treddle_6 Start: 3259, Stop: 3960, Start Num: 19

Candidate Starts for Treddle_6:

(Start: 18 @3250 has 173 MA's), (Start: 19 @3259 has 54 MA's), (39, 3382), (43, 3412), (59, 3514), (60, 3523), (63, 3544), (74, 3616), (93, 3763), (99, 3796), (107, 3856), (118, 3943),

Gene: Tripl3t_7 Start: 4022, Stop: 4717, Start Num: 18

Candidate Starts for Tripl3t_7:

(Start: 18 @4022 has 173 MA's), (36, 4139), (55, 4256), (56, 4265), (59, 4286), (69, 4340), (88, 4499), (94, 4529), (96, 4535), (107, 4616),

Gene: Trouble_6 Start: 3659, Stop: 4360, Start Num: 18

Candidate Starts for Trouble_6:

(Start: 18 @3659 has 173 MA's), (Start: 19 @3668 has 54 MA's), (39, 3791), (41, 3800), (43, 3821), (49, 3863), (55, 3893), (59, 3923), (74, 4019), (80, 4052), (88, 4139), (99, 4199), (104, 4241), (118, 4343),

Gene: Turj99_5 Start: 3094, Stop: 3804, Start Num: 18

Candidate Starts for Turj99_5:

(Start: 18 @3094 has 173 MA's), (Start: 19 @3103 has 54 MA's), (39, 3226), (43, 3256), (59, 3358), (60, 3367), (63, 3388), (74, 3460), (93, 3607), (99, 3640), (107, 3700), (118, 3787),

Gene: Tweety_21 Start: 22143, Stop: 23033, Start Num: 12

Candidate Starts for Tweety_21:

(9, 22095), (10, 22113), (11, 22116), (Start: 12 @22143 has 1 MA's), (13, 22161), (14, 22173), (16, 22218), (17, 22302), (22, 22362), (28, 22404), (29, 22422), (Start: 31 @22431 has 1 MA's), (36, 22455), (40, 22476), (49, 22542), (59, 22602), (69, 22659), (74, 22698), (79, 22731), (84, 22779), (97, 22869), (116, 23007),

Gene: TwoPeat_6 Start: 3621, Stop: 4322, Start Num: 18

Candidate Starts for TwoPeat_6:

(Start: 18 @3621 has 173 MA's), (Start: 19 @3630 has 54 MA's), (39, 3753), (41, 3762), (43, 3783), (49, 3825), (55, 3855), (59, 3885), (74, 3981), (80, 4014), (88, 4101), (99, 4161), (104, 4203), (118, 4305),

Gene: U2_5 Start: 2962, Stop: 3651, Start Num: 18

Candidate Starts for U2_5:

(Start: 18 @2962 has 173 MA's), (Start: 19 @2971 has 54 MA's), (59, 3223), (67, 3274),

Gene: Violet_5 Start: 2907, Stop: 3617, Start Num: 18

Candidate Starts for Violet_5:

(Start: 18 @2907 has 173 MA's), (Start: 19 @2916 has 54 MA's), (39, 3039), (43, 3069), (59, 3171), (60, 3180), (63, 3201), (74, 3273), (93, 3420), (99, 3453), (107, 3513), (118, 3600),

Gene: Vorrps_64 Start: 41384, Stop: 42070, Start Num: 19

Candidate Starts for Vorrps_64:

(Start: 19 @41384 has 54 MA's), (23, 41411), (25, 41420), (26, 41438), (27, 41450), (30, 41471), (46, 41564), (48, 41573), (59, 41630), (61, 41642), (68, 41684), (82, 41789), (87, 41843), (100, 41912), (103, 41939), (109, 41981), (110, 41984), (113, 42011), (118, 42062),

Gene: Watermelon_8 Start: 4201, Stop: 4911, Start Num: 18

Candidate Starts for Watermelon_8:

(Start: 18 @4201 has 173 MA's), (Start: 19 @4210 has 54 MA's), (39, 4333), (43, 4363), (59, 4465), (60, 4474), (63, 4495), (74, 4567), (93, 4714), (99, 4747), (107, 4807), (118, 4894),

Gene: Wheeler_6 Start: 3376, Stop: 4077, Start Num: 19

Candidate Starts for Wheeler_6:

(Start: 18 @3367 has 173 MA's), (Start: 19 @3376 has 54 MA's), (39, 3499), (43, 3529), (59, 3631), (60, 3640), (63, 3661), (74, 3733), (93, 3880), (99, 3913), (107, 3973), (118, 4060),

Gene: Wildflower_62 Start: 40896, Stop: 41582, Start Num: 19

Candidate Starts for Wildflower_62:

(Start: 19 @40896 has 54 MA's), (23, 40923), (25, 40932), (26, 40950), (27, 40962), (30, 40983), (37, 41013), (46, 41076), (48, 41085), (59, 41142), (61, 41154), (68, 41196), (82, 41301), (87, 41355), (100, 41424), (103, 41451), (109, 41493), (110, 41496), (113, 41523), (118, 41574),

Gene: Wilkins_35 Start: 27862, Stop: 28548, Start Num: 19

Candidate Starts for Wilkins_35:

(Start: 19 @27862 has 54 MA's), (25, 27898), (46, 28045), (59, 28114), (60, 28123), (77, 28225), (78, 28237), (81, 28249), (89, 28339), (92, 28357), (103, 28420), (110, 28465), (111, 28474),

Gene: Wilkins_6 Start: 3108, Stop: 3809, Start Num: 18

Candidate Starts for Wilkins_6:

(Start: 18 @3108 has 173 MA's), (Start: 19 @3117 has 54 MA's), (39, 3240), (41, 3249), (43, 3270), (49, 3312), (55, 3342), (59, 3372), (74, 3468), (80, 3501), (88, 3588), (99, 3648), (104, 3690), (118, 3792),

Gene: Winget_65 Start: 41602, Stop: 42288, Start Num: 19

Candidate Starts for Winget_65:

(Start: 19 @41602 has 54 MA's), (23, 41629), (25, 41638), (26, 41656), (27, 41668), (30, 41689), (46, 41782), (48, 41791), (59, 41848), (61, 41860), (68, 41902), (82, 42007), (87, 42061), (100, 42130), (103, 42157), (109, 42199), (110, 42202), (113, 42229), (118, 42280),

Gene: YungJamal_69 Start: 42794, Stop: 43480, Start Num: 19

Candidate Starts for YungJamal_69:

(Start: 19 @42794 has 54 MA's), (23, 42821), (25, 42830), (26, 42848), (27, 42860), (30, 42881), (37, 42911), (46, 42974), (48, 42983), (59, 43040), (61, 43052), (66, 43082), (68, 43094), (76, 43142), (82, 43199), (87, 43253), (100, 43322), (103, 43349), (109, 43391), (110, 43394), (113, 43421), (118, 43472),

Gene: Zakhe101_64 Start: 41442, Stop: 42128, Start Num: 19

Candidate Starts for Zakhe101_64:

(Start: 19 @41442 has 54 MA's), (23, 41469), (25, 41478), (26, 41496), (27, 41508), (30, 41529), (37, 41559), (46, 41622), (48, 41631), (59, 41688), (61, 41700), (68, 41742), (82, 41847), (87, 41901), (100, 41970), (103, 41997), (109, 42039), (110, 42042), (113, 42069), (118, 42120),

Gene: Zeeculate_5 Start: 3085, Stop: 3777, Start Num: 18

Candidate Starts for Zeeculate_5:

(Start: 18 @3085 has 173 MA's), (39, 3214), (52, 3295), (55, 3316), (56, 3325), (59, 3346), (62, 3370), (93, 3589), (114, 3724),

Gene: Zephyr_6 Start: 3214, Stop: 3915, Start Num: 18

Candidate Starts for Zephyr_6:

(Start: 18 @3214 has 173 MA's), (Start: 19 @3223 has 54 MA's), (39, 3346), (41, 3355), (43, 3376), (49, 3418), (55, 3448), (59, 3478), (74, 3574), (80, 3607), (88, 3694), (104, 3796), (118, 3898),

Gene: Zeuska_5 Start: 3138, Stop: 3839, Start Num: 18

Candidate Starts for Zeuska_5:

(Start: 18 @3138 has 173 MA's), (Start: 19 @3147 has 54 MA's), (39, 3270), (43, 3300), (49, 3342), (55, 3372), (59, 3402), (74, 3498), (80, 3531), (88, 3618), (99, 3678), (104, 3720), (118, 3822),

