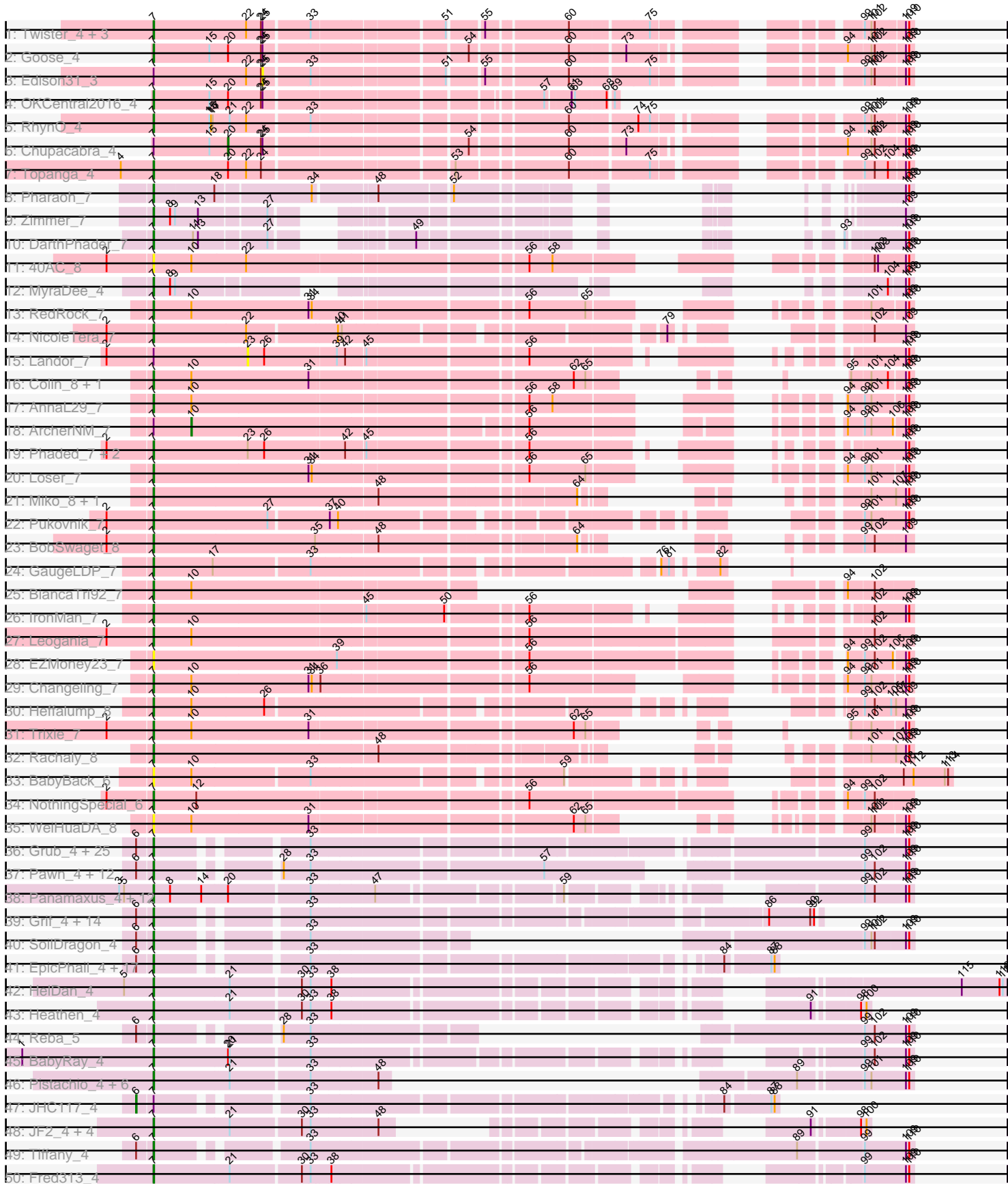


Pham 157518



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 157518 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157518 has 319 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Twister_4, Rebeuca_5, Kristoff_5, WalterMcMickey_4
- Track 2 : Goose_4
- Track 3 : Edison31_3
- Track 4 : OKCentral2016_4
- Track 5 : RhynO_4
- Track 6 : Chupacabra_4
- Track 7 : Topanga_4
- Track 8 : Pharaoh_7
- Track 9 : Zimmer_7
- Track 10 : DarthPhader_7
- Track 11 : 40AC_8
- Track 12 : MyraDee_4
- Track 13 : RedRock_7
- Track 14 : NicoleTera_7
- Track 15 : Landor_7
- Track 16 : Colin_8, Kalpine_7
- Track 17 : AnnaL29_7
- Track 18 : ArcherNM_7
- Track 19 : Phaded_7, Bactobuster_7, Jaan_7
- Track 20 : Loser_7
- Track 21 : Miko_8, Lökk_8
- Track 22 : Pukovnik_7
- Track 23 : BobSwaget_8
- Track 24 : GaugeLDP_7
- Track 25 : BiancaTri92_7
- Track 26 : IronMan_7
- Track 27 : Leogania_7
- Track 28 : EZMoney23_7
- Track 29 : Changeling_7
- Track 30 : Heffalump_8
- Track 31 : Trixie_7
- Track 32 : Rachaly_8
- Track 33 : BabyBack_6
- Track 34 : NothingSpecial_6
- Track 35 : WeiHuaDA_8
- Track 36 : Grub_4, BreSam8_4, SoYo_4, Microwolf_4, Sabia_4, Watson_4, Malinsilva_6, Aglet_4, GingkoMaracino_4, AugsMagnumOpus_6, DaHudson_4,

Stagni_4, GtownJaz_4, Lilith_4, PGHhamlin_6, MarQuardt_4, StepMih_4, MadMarie_4, Ollie_4, Pembroke_4, MuchMore_6, Farber_4, Mainiac_4, Dieselweasel_4, Wooldri_6, Snickers_4

- Track 37 : Pawn_4, HaveUMetTed_5, Kalb97_5, Marius_5, Manu_5, Groupthink_5, Gemma_4, Kalnoky_5, Phranny_5, PurpleHaze_4, Heliosoles_4, ACFishhook_4, JeppNRM_5
- Track 38 : Panamaxus_4, QuinnKiro_3, Todacoro_4, Popcicle_4, Pocahontas_4, Noella_4, ResDef_3, Caviar_4, Veracruz_3, Texage_3, Norbert_3, Lambert1_4, Hookmount_4
- Track 39 : Grif_4, Misomonster_6, LarryKay_4, Vix_4, Louie6_4, KADY_5, Bxz2_4, HashRod_5, Zetzy_4, BuzzBuzz_3, Phoxy_4, Spike509_4, Methuselah_4, Rummer_4, Soshari_6
- Track 40 : SoilDragon_4
- Track 41 : EpicPhail_4, Fernando_4, LBerry_4, Phoebe_4, Beauxregard13_4, Taurus_4, Grum1_4, JenCasNa_4, Colbster_4, Hercules11_4, P28Green_4, Cullens_4, LugYA_6, Sabinator_4, Penny1_4, Marie_4, PotatoSplit_5, MoneyMay_4
- Track 42 : HelDan_4
- Track 43 : Heathen_4
- Track 44 : Reba_5
- Track 45 : BabyRay_4
- Track 46 : Pistachio_4, Idleandcovert_3, SaturnRing_3, BlueBird_4, Bugatti_3, TNguyen7_4, Giroux_3
- Track 47 : JHC117_4
- Track 48 : JF2_4, Rockstar_4, JF4_4, B1_03, MK4_4
- Track 49 : Tiffany_4
- Track 50 : Fred313_4
- Track 51 : Anubis_6
- Track 52 : AgronaGT15_4
- Track 53 : Puppy_4
- Track 54 : Jobu08_4
- Track 55 : MA5_4
- Track 56 : Phantastic_4
- Track 57 : PhishRPhriends_4
- Track 58 : Isca_4
- Track 59 : Margo_4
- Track 60 : OlanP_4
- Track 61 : LittleGuy_4, Sabertooth_4, Blackmoor_4, ICleared_4, Flux_4, Cocoaberry_4, Taquarus_4, Millski_4, Avle17_4, TiroTheta9_4, Holli_4, Polymorphads_4, Kratark_4, BellusTerra_4, Kampy_4, Funston_4, Medusa_4, Palestino_4, Eros_4, TinaFeyge_4, Lunsford_4, Bruiser_4, Houdini22_4, Phontbonne_4, Lorenzo_4, TroyPia_4, Nemo27_4, MeeZee_4, Commander_4, LeoAvram_4, Broseidon_4, BubbleTrouble_4, Citius_4, Jaykayelowell_4, Clarenza_4, CentreCat_4, JetBlade_4, Lemur_4, Sparxx_4, Romney_4, Caelakin_4, Iceman_4, Nebs_4, NotAPhaseMom_4, Pipcraft_4, Arturo_3, Kyee_4, Maxo_4, Bombshell_4, YoSam321_4, Shaka_4, Skipitt_4, Nyxis_4, Bartimeaus_4, Ruin_4, TygerBlood_4, Relief_4, Eris_4, LappelDuVide_3, JoongJeon_4, Eapen_4, Druantia_4, Abdiel_4, Phacado_4, Roosevelt_4, Spino_4, Gadost_4, Eurydice_4, Ohfah_4, Albee_4, Florean_4, Thanksgivukkah_4, Connomayer_4, Maverick_4, NorthStar_4, Scamp_4, Eagle_3, LittleB_4, Morrow_4, Melvin_4, Baby16_4, Phelipe_4, Peaches_4, Burger_3, Deano_4, Mazhar510_4, Wizard007_4, Dhanush_4, Wilbur_4, Wander_4, Kingmustik0402_4, PeterPeter_4, Chaph_4
- Track 62 : BangNhom_3, ChampagnePapi_4, Iracema64_4, Obama12_4, AvatarAhPeg_4, Tinybot_3, SheldonCooper_4, Cintron_4, DirtyDunning_4,

Happiness_4, Cerulean_4, Stink_3, Phighter1804_4, LochMonster_4, Miramae_4, LHTSCC_4

- Track 63 : HamSlice_3
- Track 64 : Annyong_4
- Track 65 : Koreni_4, Alberto7_4
- Track 66 : Xena_4, Wile_4, Datway_4, PetiteSangsue_4, Badger_4, Morpher26_4, Katalie136_4, Achebe_4, Perplexer_4, Backyardigan_4, AbbysRanger_4, Bumblebee11_4, Cici_4
- Track 67 : OKaNui_4
- Track 68 : KFPoly_4
- Track 69 : Noelle_4
- Track 70 : Ulysses_4
- Track 71 : Stasia_4
- Track 72 : Pumbaa_4
- Track 73 : Shygu2_4
- Track 74 : Cindaradix_4
- Track 75 : Mundrea_4
- Track 76 : Camperdownii_4
- Track 77 : Maminiaina_7, ExplosioNervosa_7, Beemo_7, EmyBug_5, Alma_7, Scherzo_7, Pioneer_7, Phonnegut_7, Fayely_7, Ugenie5_5
- Track 78 : Phaeder_7, Catalina_7, HortumSL17_7, Aliter_7, PackMan_7, Tubs_7, Myxus_7
- Track 79 : Spouty_6, Eidsmoe_7, Priya_7, Conquerage_7, Qobbit_7
- Track 80 : Darrell_7
- Track 81 : LoneWolf_7
- Track 82 : BogosyJay_7
- Track 83 : Elephantoon_7

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

The start number called the most often in the published annotations is 7, it was called in 296 of the 300 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_8, ACFishhook_4, AbbysRanger_4, Abdiel_4, Achebe_4, Aglet_4, AgronaGT15_4, Albee_4, Alberto7_4, Aliter_7, Alma_7, AnnaL29_7, Annyong_4, Arturo_3, AugsMagnumOpus_6, AvatarAhPeg_4, Avle17_4, B1_03, Baby16_4, BabyBack_6, BabyRay_4, Backyardigan_4, Bactobuster_7, Badger_4, BangNhom_3, Bartimeaus_4, Beauxregard13_4, Beemo_7, BellusTerra_4, BiancaTri92_7, Blackmoor_4, BlueBird_4, BobSwaget_8, BogosyJay_7, Bombshell_4, BreSam8_4, Broseidon_4, Bruiser_4, BubbleTrouble_4, Bugatti_3, Bumblebee11_4, Burger_3, BuzzBuzz_3, Bxz2_4, Caelakin_4, Camperdownii_4, Catalina_7, Caviar_4, CentreCat_4, Cerulean_4, ChampagnePapi_4, Changeling_7, Chaph_4, Cici_4, Cindaradix_4, Cintron_4, Citius_4, Clarenza_4, Cocoaberry_4, Colbster_4, Colin_8, Commander_4, Connomayer_4, Conquerage_7, Cullens_4, DaHudson_4, Darrell_7, DarthPhader_7, Datway_4, Deano_4, Dhanush_4, Dieselweasel_4, DirtyDunning_4, Druantia_4, EZMoney23_7, Eagle_3, Eapen_4, Eidsmoe_7, Elephantoon_7, EmyBug_5, EpicPhail_4, Eris_4, Eros_4, Eurydice_4, ExplosioNervosa_7, Farber_4, Fayely_7, Fernando_4, Florean_4, Flux_4, Fred313_4, Funston_4, Gadost_4, GaugeLDP_7, Gemma_4, GingkoMaracino_4, Giroux_3, Goose_4, Grif_4,

Groupthink_5, Grub_4, Grum1_4, GtownJaz_4, HamSlice_3, Happiness_4, HashRod_5, HaveUMetTed_5, Heathen_4, Heffalump_8, HelDan_4, Heliosoles_4, Hercules11_4, Holli_4, Hookmount_4, HortumSL17_7, Houdini22_4, ICleared_4, Iceman_4, Idleandcovert_3, Iracema64_4, IronMan_7, Isca_4, JF2_4, JF4_4, Jaan_7, Jaykayelowell_4, JenCasNa_4, JeppNRM_5, JetBlade_4, Jobu08_4, JoongJeon_4, KADY_5, KFPoly_4, Kalb97_5, Kalnoky_5, Kalpine_7, Kampy_4, Katalie136_4, Kingmustik0402_4, Koreni_4, Kratark_4, Kristoff_5, Kyee_4, LBerry_4, LHTSCC_4, Lambert1_4, LappelDuVide_3, LarryKay_4, Lemur_4, LeoAvram_4, Leogania_7, Lilith_4, LittleB_4, LittleGuy_4, LochMonster_4, Lokk_8, LoneWolf_7, Lorenzo_4, Loser_7, Louie6_4, LugYA_6, Lunsford_4, MA5_4, MK4_4, MadMarie_4, Mainiac_4, Malinsilva_6, Maminiaina_7, Manu_5, MarQuardt_4, Margo_4, Marie_4, Marius_5, Maverick_4, Maxo_4, Mazhar510_4, Medusa_4, MeeZee_4, Melvin_4, Methuselah_4, Microwolf_4, Miko_8, Millski_4, Miramae_4, Misomonster_6, MoneyMay_4, Morpher26_4, Morrow_4, MuchMore_6, Mundrea_4, MyraDee_4, Myxus_7, Nebs_4, Nemo27_4, NicoleTera_7, Noella_4, Noelle_4, Norbert_3, NorthStar_4, NotAPhaseMom_4, NothingSpecial_6, Nyxis_4, OKCentral2016_4, OKaNui_4, Obama12_4, Ohfah_4, OlanP_4, Ollie_4, P28Green_4, PGHhamlin_6, PackMan_7, Palestino_4, Panamaxus_4, Pawn_4, Peaches_4, Pembroke_4, Penny1_4, Perplexer_4, PeterPeter_4, PetiteSangsue_4, Phacado_4, Phaded_7, Phaeder_7, Phantastic_4, Pharaoh_7, Phelipe_4, Phighter1804_4, PhishRPhriends_4, Phoebe_4, Phonnegut_7, Phontbonne_4, Phoxy_4, Phranny_5, Pioneer_7, Pipcraft_4, Pistachio_4, Pocahontas_4, Polymorphads_4, Popcicle_4, PotatoSplit_5, Priya_7, Pukovnik_7, Pumbaa_4, Puppy_4, PurpleHaze_4, Qobbit_7, QuinnKiro_3, Rachaly_8, Reba_5, Rebeuca_5, RedRock_7, Relief_4, ResDef_3, RhynO_4, Rockstar_4, Romney_4, Roosevelt_4, Ruin_4, Rummer_4, Sabertooth_4, Sabia_4, Sabinator_4, SaturnRing_3, Scamp_4, Scherzo_7, Shaka_4, SheldonCooper_4, Shygu2_4, Skipitt_4, Snickers_4, SoYo_4, SoilDragon_4, Soshari_6, Sparxx_4, Spike509_4, Spino_4, Spouty_6, Stagni_4, Stasia_4, StepMih_4, Stink_3, TNguyen7_4, Taquarus_4, Taurus_4, Texage_3, Thanksgivukkah_4, Tiffany_4, TinaFeyge_4, Tinybot_3, TiroTheta9_4, Todacoro_4, Topanga_4, Trixie_7, TroyPia_4, Tubs_7, Twister_4, TygerBlood_4, Ugenie5_5, Ulysses_4, Veracruz_3, Vix_4, WalterMcMickey_4, Wander_4, Watson_4, WeiHuaDA_8, Wilbur_4, Wile_4, Wizard007_4, Wooldri_6, Xena_4, YoSam321_4, Zetzy_4, Zimmer_7,

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

- Anubis_6, ArcherNM_7, Chupacabra_4, Edison31_3, JHC117_4, Landor_7,

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

-

Summary by start number:

Start 6:

- Found in 86 of 319 (27.0%) of genes in pham
- Manual Annotations of this start: 2 of 300
- Called 2.3% of time when present
- Phage (with cluster) where this start called: Anubis_6 (A3), JHC117_4 (A3),

Start 7:

- Found in 319 of 319 (100.0%) of genes in pham
- Manual Annotations of this start: 296 of 300
- Called 98.1% of time when present

• Phage (with cluster) where this start called: 40AC_8 (A17), ACFishhook_4 (A3), AbbysRanger_4 (A4), Abdiel_4 (A4), Achebe_4 (A4), Aglet_4 (A3), AgronaGT15_4 (A3), Albee_4 (A4), Alberto7_4 (A4), Aliter_7 (A9), Alma_7 (A9), AnnaL29_7 (A2), Annyong_4 (A4), Arturo_3 (A4), AugsMagnumOpus_6 (A3), AvatarAhPeg_4 (A4), Avle17_4 (A4), B1_03 (A3), Baby16_4 (A4), BabyBack_6 (A2), BabyRay_4 (A3), Backyardigan_4 (A4), Bactobuster_7 (A2), Badger_4 (A4), BangNhom_3 (A4), Bartimeaus_4 (A4), Beauxregard13_4 (A3), Beemo_7 (A9), BellusTerra_4 (A4), BiancaTri92_7 (A2), Blackmoor_4 (A4), BlueBird_4 (A3), BobSwaget_8 (A2), BogosyJay_7 (A9), Bombshell_4 (A4), BreSam8_4 (A3), Broseidon_4 (A4), Bruiser_4 (A4), BubbleTrouble_4 (A4), Bugatti_3 (A3), Bumblebee11_4 (A4), Burger_3 (A4), BuzzBuzz_3 (A3), Bxz2_4 (A3), Caelakin_4 (A4), Camperdownii_4 (A4), Catalina_7 (A9), Caviar_4 (A3), CentreCat_4 (A4), Cerulean_4 (A4), ChampagnePapi_4 (A4), Changeling_7 (A2), Chaph_4 (A4), Cici_4 (A4), Cindaradix_4 (A4), Cintron_4 (A4), Citius_4 (A4), Clarenza_4 (A4), Cocoaberry_4 (A4), Colbster_4 (A3), Colin_8 (A2), Commander_4 (A4), Connomayer_4 (A4), Conquerage_7 (A9), Cullens_4 (A3), DaHudson_4 (A3), Darrell_7 (A9), DarthPhader_7 (A12), Datway_4 (A4), Deano_4 (A4), Dhanush_4 (A4), Dieselweasel_4 (A3), DirtyDunning_4 (A4), Druantia_4 (A4), EZMoney23_7 (A2), Eagle_3 (A4), Eapen_4 (A4), Eidsmoe_7 (A9), Elephantoon_7 (A9), EmyBug_5 (A9), EpicPhail_4 (A3), Eris_4 (A4), Eros_4 (A4), Eurydice_4 (A4), ExplosioNervosa_7 (A9), Farber_4 (A3), Fayely_7 (A9), Fernando_4 (A3), Florean_4 (A4), Flux_4 (A4), Fred313_4 (A3), Funston_4 (A4), Gadost_4 (A4), GaugeLDP_7 (A2), Gemma_4 (A3), GingkoMaracino_4 (A3), Giroux_3 (A3), Goose_4 (A10), Grif_4 (A3), Groupthink_5 (A3), Grub_4 (A3), Grum1_4 (A3), GtownJaz_4 (A3), HamSlice_3 (A4), Happiness_4 (A4), HashRod_5 (A3), HaveUMetTed_5 (A3), Heathen_4 (A3), Heffalump_8 (A2), HelDan_4 (A3), Heliosoles_4 (A3), Hercules11_4 (A3), Holli_4 (A4), Hookmount_4 (A3), HortumSL17_7 (A9), Houdini22_4 (A4), ICleared_4 (A4), Iceman_4 (A4), Idleandcovert_3 (A3), Iracema64_4 (A4), IronMan_7 (A2), Isca_4 (A3), JF2_4 (A3), JF4_4 (A3), Jaan_7 (A2), Jaykayelowell_4 (A4), JenCasNa_4 (A3), JeppNRM_5 (A3), JetBlade_4 (A4), Jobu08_4 (A3), JoongJeon_4 (A4), KADY_5 (A3), KFPoly_4 (A4), Kalb97_5 (A3), Kalnoky_5 (A3), Kalpine_7 (A2), Kamy_4 (A4), Katalie136_4 (A4), Kingmustik0402_4 (A4), Koreni_4 (A4), Kratak_4 (A4), Kristoff_5 (A10), Kyee_4 (A4), LBerry_4 (A3), LHTSCC_4 (A4), Lambert1_4 (A3), LappelDuVide_3 (A4), LarryKay_4 (A3), Lemur_4 (A4), LeoAvram_4 (A4), Leogania_7 (A2), Lilith_4 (A3), LittleB_4 (A4), LittleGuy_4 (A4), LochMonster_4 (A4), Lolk_8 (A2), LoneWolf_7 (A9), Lorenzo_4 (A4), Loser_7 (A2), Louie6_4 (A3), LugYA_6 (A3), Lunsford_4 (A4), MA5_4 (A3), MK4_4 (A3), MadMarie_4 (A3), Mainiac_4 (A3), Malinsilva_6 (A3), Maminiaina_7 (A9), Manu_5 (A3), MarQuardt_4 (A3), Margo_4 (A3), Marie_4 (A3), Marius_5 (A3), Maverick_4 (A4), Maxo_4 (A4), Mazhar510_4 (A4), Medusa_4 (A4), MeeZee_4 (A4), Melvin_4 (A4), Methuselah_4 (A3), Microwolf_4 (A3), Miko_8 (A2), Millski_4 (A4), Miramae_4 (A4), Misomonster_6 (A3), MoneyMay_4 (A3), Morpher26_4 (A4), Morrow_4 (A4), MuchMore_6 (A3), Mundrea_4 (A4), MyraDee_4 (A18), Myxus_7 (A9), Nebs_4 (A4), Nemo27_4 (A4), NicoleTera_7 (A2), Noella_4 (A3), Noelle_4 (A4), Norbert_3 (A3), NorthStar_4 (A4), NotAPhaseMom_4 (A4), NothingSpecial_6 (A2), Nyxis_4 (A4), OKCentral2016_4 (A10), OKaNui_4 (A4), Obama12_4 (A4), Ohfah_4 (A4), OlanP_4 (A3), Ollie_4 (A3), P28Green_4 (A3), PGHhamlin_6 (A3), PackMan_7 (A9), Palestino_4 (A4), Panamaxus_4 (A3), Pawn_4 (A3), Peaches_4 (A4), Pembroke_4 (A3), Penny1_4 (A3), Perplexer_4 (A4), PeterPeter_4 (A4), PetiteSangsue_4 (A4), Phacado_4 (A4), Phaded_7 (A2), Phaeder_7 (A9), Phantastic_4 (A3), Pharaoh_7 (A12), Phelipe_4 (A4), Phighter1804_4 (A4), PhishRPhriends_4 (A3), Phoebe_4 (A3), Phonnegut_7 (A9), Phontbonne_4 (A4), Phoxy_4 (A3), Phranny_5 (A3), Pioneer_7 (A9), Pipcraft_4 (A4), Pistachio_4 (A3), Pocahontas_4 (A3), Polymorphads_4 (A4), Popcicle_4 (A3), PotatoSplit_5 (A3), Priya_7 (A9), Pukovnik_7 (A2), Pumbaa_4 (A4), Puppy_4 (A3),

PurpleHaze_4 (A3), Qobbit_7 (A9), QuinnKiro_3 (A3), Rachaly_8 (A2), Reba_5 (A3), Rebeuca_5 (A10), RedRock_7 (A2), Relief_4 (A4), ResDef_3 (A3), RhynO_4 (A10), Rockstar_4 (A3), Romney_4 (A4), Roosevelt_4 (A4), Ruin_4 (A4), Rummer_4 (A3), Sabertooth_4 (A4), Sabia_4 (A3), Sabinator_4 (A3), SaturnRing_3 (A3), Scamp_4 (A4), Scherzo_7 (A9), Shaka_4 (A4), SheldonCooper_4 (A4), Shygu2_4 (A4), Skipitt_4 (A4), Snickers_4 (A3), SoYo_4 (A3), SoilDragon_4 (A3), Soshari_6 (A3), Sparxx_4 (A4), Spike509_4 (A3), Spino_4 (A4), Spouty_6 (A9), Stagni_4 (A3), Stasia_4 (A4), StepMih_4 (A3), Stink_3 (A4), TNguyen7_4 (A3), Taquarus_4 (A4), Taurus_4 (A3), Texage_3 (A3), Thanksgivukkah_4 (A4), Tiffany_4 (A3), TinaFeyge_4 (A4), Tinybot_3 (A4), TiroTheta9_4 (A4), Todacoro_4 (A3), Topanga_4 (A10), Trixie_7 (A2), TroyPia_4 (A4), Tubs_7 (A9), Twister_4 (A10), TygerBlood_4 (A4), Ugenie5_5 (A9), Ulysses_4 (A4), Veracruz_3 (A3), Vix_4 (A3), WalterMcMickey_4 (A10), Wander_4 (A4), Watson_4 (A3), WeiHuaDA_8 (A2), Wilbur_4 (A4), Wile_4 (A4), Wizard007_4 (A4), Wooldri_6 (A3), Xena_4 (A4), YoSam321_4 (A4), Zetzy_4 (A3), Zimmer_7 (A12),

Start 10:

- Found in 13 of 319 (4.1%) of genes in pham
- Manual Annotations of this start: 1 of 300
- Called 7.7% of time when present
- Phage (with cluster) where this start called: ArcherNM_7 (A2),

Start 20:

- Found in 19 of 319 (6.0%) of genes in pham
- Manual Annotations of this start: 1 of 300
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Chupacabra_4 (A10),

Start 23:

- Found in 4 of 319 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Landor_7 (A2),

Start 25:

- Found in 9 of 319 (2.8%) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Edison31_3 (A10),

Summary by clusters:

There are 8 clusters represented in this pham: A17, A10, A12, A18, A3, A2, A4, A9,

Info for manual annotations of cluster A10:

- Start number 7 was manually annotated 8 times for cluster A10.
- Start number 20 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A12:

- Start number 7 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A18:

- Start number 7 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 7 was manually annotated 21 times for cluster A2.
- Start number 10 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A3:

- Start number 6 was manually annotated 2 times for cluster A3.
- Start number 7 was manually annotated 107 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 7 was manually annotated 133 times for cluster A4.

Info for manual annotations of cluster A9:

- Start number 7 was manually annotated 23 times for cluster A9.

Gene Information:

Gene: 40AC_8 Start: 4152, Stop: 5285, Start Num: 7

Candidate Starts for 40AC_8:

(2, 4071), (Start: 7 @4152 has 296 MA's), (Start: 10 @4221 has 1 MA's), (22, 4320), (56, 4791), (58, 4833), (102, 5217), (103, 5223), (109, 5271), (110, 5277),

Gene: ACFishhook_4 Start: 1685, Stop: 2965, Start Num: 7

Candidate Starts for ACFishhook_4:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2879), (102, 2897), (109, 2951), (110, 2957),

Gene: AbbysRanger_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for AbbysRanger_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Abdiel_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Abdiel_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Achebe_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Achebe_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Aglet_4 Start: 1681, Stop: 2895, Start Num: 7

Candidate Starts for Aglet_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2809), (109, 2881), (110, 2887),

Gene: AgronaGT15_4 Start: 1682, Stop: 2536, Start Num: 7

Candidate Starts for AgronaGT15_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (78, 2450), (83, 2522), (85, 2528),

Gene: Albee_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Albee_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Alberto7_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Alberto7_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (97, 2624), (99, 2630), (102, 2648), (109, 2705), (110, 2711),

Gene: Aliter_7 Start: 4192, Stop: 5163, Start Num: 7

Candidate Starts for Aliter_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5080), (101, 5092), (109, 5149), (110, 5155),

Gene: Alma_7 Start: 4190, Stop: 5221, Start Num: 7

Candidate Starts for Alma_7:

(Start: 7 @4190 has 296 MA's), (99, 5138), (101, 5150), (109, 5207), (110, 5213),

Gene: AnnaL29_7 Start: 4133, Stop: 5236, Start Num: 7

Candidate Starts for AnnaL29_7:

(Start: 7 @4133 has 296 MA's), (Start: 10 @4202 has 1 MA's), (56, 4772), (58, 4814), (94, 5126), (99, 5153), (101, 5165), (109, 5222), (110, 5228),

Gene: Annyong_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Annyong_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (102, 2648), (109, 2705), (110, 2711),

Gene: Anubis_6 Start: 1654, Stop: 2805, Start Num: 6

Candidate Starts for Anubis_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2719), (109, 2791), (110, 2797),

Gene: ArcherNM_7 Start: 4221, Stop: 5246, Start Num: 10

Candidate Starts for ArcherNM_7:

(Start: 7 @4152 has 296 MA's), (Start: 10 @4221 has 1 MA's), (56, 4782), (94, 5136), (99, 5163), (101, 5175), (106, 5214), (109, 5232), (110, 5238),

Gene: Arturo_3 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Arturo_3:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: AugsMagnumOpus_6 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for AugsMagnumOpus_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: AvatarAhPeg_4 Start: 1638, Stop: 2714, Start Num: 7

Candidate Starts for AvatarAhPeg_4:

(4, 1578), (Start: 7 @1638 has 296 MA's), (17, 1746), (27, 1842), (40, 1956), (99, 2625), (102, 2643), (109, 2700), (110, 2706),

Gene: Avle17_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Avle17_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: B1_03 Start: 1608, Stop: 2510, Start Num: 7

Candidate Starts for B1_03:

(Start: 7 @1608 has 296 MA's), (21, 1743), (30, 1866), (33, 1881), (48, 1995), (91, 2424), (98, 2496), (100, 2502),

Gene: Baby16_4 Start: 1645, Stop: 2727, Start Num: 7

Candidate Starts for Baby16_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2620), (102, 2656), (109, 2713), (110, 2719),

Gene: BabyBack_6 Start: 3957, Stop: 5108, Start Num: 7

Candidate Starts for BabyBack_6:

(Start: 7 @3957 has 296 MA's), (Start: 10 @4026 has 1 MA's), (33, 4233), (59, 4629), (108, 5019), (112, 5037), (113, 5094), (114, 5100),

Gene: BabyRay_4 Start: 1650, Stop: 2777, Start Num: 7

Candidate Starts for BabyRay_4:

(1, 1410), (Start: 7 @1650 has 296 MA's), (Start: 20 @1782 has 1 MA's), (21, 1785), (33, 1923), (99, 2691), (102, 2709), (109, 2763), (110, 2769),

Gene: Backyardigan_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Backyardigan_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Bactobuster_7 Start: 3964, Stop: 5064, Start Num: 7

Candidate Starts for Bactobuster_7:

(2, 3883), (Start: 7 @3964 has 296 MA's), (23, 4135), (26, 4165), (42, 4306), (45, 4339), (56, 4603), (109, 5050), (110, 5056),

Gene: Badger_4 Start: 1645, Stop: 2730, Start Num: 7

Candidate Starts for Badger_4:

(Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (48, 2035), (102, 2659), (109, 2716), (110, 2722),

Gene: BangNhom_3 Start: 1642, Stop: 2718, Start Num: 7

Candidate Starts for BangNhom_3:

(4, 1582), (Start: 7 @1642 has 296 MA's), (17, 1750), (27, 1846), (40, 1960), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: Bartimeaus_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Bartimeaus_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Beauxregard13_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Beauxregard13_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Beemo_7 Start: 4193, Stop: 5224, Start Num: 7

Candidate Starts for Beemo_7:

(Start: 7 @4193 has 296 MA's), (99, 5141), (101, 5153), (109, 5210), (110, 5216),

Gene: BellusTerra_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for BellusTerra_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: BiancaTri92_7 Start: 4180, Stop: 5040, Start Num: 7

Candidate Starts for BiancaTri92_7:

(Start: 7 @4180 has 296 MA's), (Start: 10 @4249 has 1 MA's), (94, 4927), (102, 4972),

Gene: Blackmoor_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Blackmoor_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: BlueBird_4 Start: 1612, Stop: 2826, Start Num: 7

Candidate Starts for BlueBird_4:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2641), (99, 2743), (101, 2755), (109, 2812), (110, 2818),

Gene: BobSwaget_8 Start: 4394, Stop: 5380, Start Num: 7

Candidate Starts for BobSwaget_8:

(2, 4313), (Start: 7 @4394 has 296 MA's), (35, 4688), (48, 4793), (64, 5111), (99, 5294), (102, 5312), (109, 5366),

Gene: BogosyJay_7 Start: 3953, Stop: 5005, Start Num: 7

Candidate Starts for BogosyJay_7:

(Start: 7 @3953 has 296 MA's), (19, 4070), (39, 4286), (99, 4922), (101, 4934), (109, 4991), (110, 4997),

Gene: Bombshell_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Bombshell_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: BreSam8_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for BreSam8_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Broseidon_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Broseidon_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Bruiser_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Bruiser_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: BubbleTrouble_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for BubbleTrouble_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Bugatti_3 Start: 1612, Stop: 2826, Start Num: 7

Candidate Starts for Bugatti_3:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2641), (99, 2743), (101, 2755), (109, 2812), (110, 2818),

Gene: Bumblebee11_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Bumblebee11_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Burger_3 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Burger_3:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: BuzzBuzz_3 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for BuzzBuzz_3:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Bxz2_4 Start: 1692, Stop: 2726, Start Num: 7

Candidate Starts for Bxz2_4:

(Start: 6 @1665 has 2 MA's), (Start: 7 @1692 has 296 MA's), (33, 1920), (86, 2640), (90, 2712), (92, 2718),

Gene: Caelakin_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Caelakin_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Camperdownii_4 Start: 1646, Stop: 2725, Start Num: 7

Candidate Starts for Camperdownii_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (99, 2639), (109, 2711),

Gene: Catalina_7 Start: 4193, Stop: 5236, Start Num: 7

Candidate Starts for Catalina_7:

(Start: 7 @4193 has 296 MA's), (39, 4526), (99, 5153), (101, 5165), (109, 5222), (110, 5228),

Gene: Caviar_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Caviar_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: CentreCat_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for CentreCat_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Cerulean_4 Start: 1643, Stop: 2719, Start Num: 7

Candidate Starts for Cerulean_4:

(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (27, 1847), (40, 1961), (99, 2630), (102, 2648), (109, 2705), (110, 2711),

Gene: ChampagnePapi_4 Start: 1642, Stop: 2718, Start Num: 7

Candidate Starts for ChampagnePapi_4:

(4, 1582), (Start: 7 @1642 has 296 MA's), (17, 1750), (27, 1846), (40, 1960), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: Changeling_7 Start: 4153, Stop: 5271, Start Num: 7

Candidate Starts for Changeling_7:

(Start: 7 @4153 has 296 MA's), (Start: 10 @4222 has 1 MA's), (31, 4435), (34, 4441), (36, 4456), (56, 4798), (94, 5161), (99, 5188), (101, 5200), (109, 5257), (110, 5263),

Gene: Chaph_4 Start: 1645, Stop: 2727, Start Num: 7

Candidate Starts for Chaph_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2620), (102, 2656), (109, 2713), (110, 2719),

Gene: Chupacabra_4 Start: 1765, Stop: 2814, Start Num: 20

Candidate Starts for Chupacabra_4:

(Start: 7 @1633 has 296 MA's), (15, 1735), (Start: 20 @1765 has 1 MA's), (24, 1825), (25, 1828), (54, 2158), (60, 2314), (73, 2407), (94, 2704), (101, 2743), (102, 2749), (109, 2800), (110, 2806),

Gene: Cici_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Cici_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Cindaradix_4 Start: 1642, Stop: 2718, Start Num: 7

Candidate Starts for Cindaradix_4:

(Start: 7 @1642 has 296 MA's), (17, 1750), (27, 1846), (40, 1960), (102, 2647), (109, 2704), (110, 2710),

Gene: Cintron_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Cintron_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: Citius_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Citius_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Clarenza_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Clarenza_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Cocoaberry_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Cocoaberry_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Colbster_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Colbster_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Colin_8 Start: 4293, Stop: 5243, Start Num: 7

Candidate Starts for Colin_8:

(Start: 7 @4293 has 296 MA's), (Start: 10 @4362 has 1 MA's), (31, 4575), (62, 5013), (65, 5034), (95, 5139), (101, 5172), (104, 5202), (109, 5229), (110, 5235),

Gene: Commander_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Commander_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Connomayer_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Connomayer_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Conquerage_7 Start: 4189, Stop: 5220, Start Num: 7

Candidate Starts for Conquerage_7:

(Start: 6 @4162 has 2 MA's), (Start: 7 @4189 has 296 MA's), (99, 5137), (101, 5149), (109, 5206), (110, 5212),

Gene: Cullens_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Cullens_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: DaHudson_4 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for DaHudson_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: Darrell_7 Start: 4069, Stop: 5115, Start Num: 7

Candidate Starts for Darrell_7:

(Start: 7 @4069 has 296 MA's), (19, 4186), (32, 4354), (36, 4372), (99, 5029), (102, 5047), (109, 5101), (110, 5107),

Gene: DarthPhader_7 Start: 4505, Stop: 5314, Start Num: 7

Candidate Starts for DarthPhader_7:

(Start: 7 @4505 has 296 MA's), (11, 4577), (13, 4586), (27, 4697), (49, 4865), (93, 5201), (109, 5300), (110, 5306),

Gene: Datway_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Datway_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Deano_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Deano_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Dhanush_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Dhanush_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: Dieselweasel_4 Start: 1681, Stop: 2895, Start Num: 7

Candidate Starts for Dieselweasel_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2809), (109, 2881), (110, 2887),

Gene: DirtyDunning_4 Start: 1643, Stop: 2716, Start Num: 7

Candidate Starts for DirtyDunning_4:

(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (27, 1847), (40, 1961), (99, 2627), (102, 2645), (109, 2702), (110, 2708),

Gene: Druantia_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Druantia_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: EZMoney23_7 Start: 4151, Stop: 5341, Start Num: 7

Candidate Starts for EZMoney23_7:

(Start: 7 @4151 has 296 MA's), (39, 4484), (56, 4796), (94, 5231), (99, 5258), (102, 5276), (106, 5309), (109, 5327), (110, 5333),

Gene: Eagle_3 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Eagle_3:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Eapen_4 Start: 1647, Stop: 2720, Start Num: 7

Candidate Starts for Eapen_4:

(4, 1587), (Start: 7 @1647 has 296 MA's), (17, 1755), (27, 1851), (40, 1965), (96, 2613), (102, 2649), (109, 2706), (110, 2712),

Gene: Edison31_3 Start: 1857, Stop: 2834, Start Num: 25

Candidate Starts for Edison31_3:

(Start: 7 @1662 has 296 MA's), (22, 1827), (24, 1854), (25, 1857), (33, 1935), (51, 2154), (55, 2208), (60, 2343), (75, 2478), (99, 2751), (101, 2763), (102, 2769), (109, 2820), (110, 2826),

Gene: Eidsmoe_7 Start: 4189, Stop: 5220, Start Num: 7

Candidate Starts for Eidsmoe_7:

(Start: 6 @4162 has 2 MA's), (Start: 7 @4189 has 296 MA's), (99, 5137), (101, 5149), (109, 5206), (110, 5212),

Gene: Elephantoon_7 Start: 3947, Stop: 4801, Start Num: 7

Candidate Starts for Elephantoon_7:

(Start: 7 @3947 has 296 MA's), (19, 4064), (32, 4232), (44, 4310), (109, 4787), (110, 4793),

Gene: EmyBug_5 Start: 4189, Stop: 5220, Start Num: 7

Candidate Starts for EmyBug_5:

(Start: 7 @4189 has 296 MA's), (99, 5137), (101, 5149), (109, 5206), (110, 5212),

Gene: EpicPhail_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for EpicPhail_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Eris_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Eris_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Eros_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Eros_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Eurydice_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Eurydice_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: ExplosioNervosa_7 Start: 4192, Stop: 5223, Start Num: 7

Candidate Starts for ExplosioNervosa_7:

(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Farber_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for Farber_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Fayely_7 Start: 4192, Stop: 5223, Start Num: 7

Candidate Starts for Fayely_7:

(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Fernando_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Fernando_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Florean_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Florean_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Flux_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Flux_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Fred313_4 Start: 1605, Stop: 2732, Start Num: 7

Candidate Starts for Fred313_4:

(Start: 7 @1605 has 296 MA's), (21, 1740), (30, 1863), (33, 1878), (38, 1911), (99, 2646), (109, 2718), (110, 2724),

Gene: Funston_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Funston_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Gadost_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Gadost_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: GaugeLDP_7 Start: 3954, Stop: 4844, Start Num: 7

Candidate Starts for GaugeLDP_7:

(Start: 7 @3954 has 296 MA's), (17, 4062), (33, 4230), (76, 4761), (81, 4773), (82, 4830),

Gene: Gemma_4 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Gemma_4:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: GingkoMaracino_4 Start: 1681, Stop: 2805, Start Num: 7

Candidate Starts for GingkoMaracino_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2719), (109, 2791), (110, 2797),

Gene: Giroux_3 Start: 1612, Stop: 2826, Start Num: 7

Candidate Starts for Giroux_3:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2641), (99, 2743), (101, 2755), (109, 2812), (110, 2818),

Gene: Goose_4 Start: 1635, Stop: 2816, Start Num: 7

Candidate Starts for Goose_4:

(Start: 7 @1635 has 296 MA's), (15, 1737), (Start: 20 @1767 has 1 MA's), (24, 1827), (25, 1830), (54, 2160), (60, 2316), (73, 2409), (94, 2706), (101, 2745), (102, 2751), (109, 2802), (110, 2808),

Gene: Grif_4 Start: 1681, Stop: 2715, Start Num: 7

Candidate Starts for Grif_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (86, 2629), (90, 2701), (92, 2707),

Gene: Groupthink_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Groupthink_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Grub_4 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for Grub_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: Grum1_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Grum1_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: GtownJaz_4 Start: 1681, Stop: 2895, Start Num: 7

Candidate Starts for GtownJaz_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2809), (109, 2881), (110, 2887),

Gene: HamSlice_3 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for HamSlice_3:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (21, 1781), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Happiness_4 Start: 1644, Stop: 2720, Start Num: 7

Candidate Starts for Happiness_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (99, 2631), (102, 2649), (109, 2706), (110, 2712),

Gene: HashRod_5 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for HashRod_5:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: HaveUMetTed_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for HaveUMetTed_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Heathen_4 Start: 1605, Stop: 2657, Start Num: 7

Candidate Starts for Heathen_4:

(Start: 7 @1605 has 296 MA's), (21, 1740), (30, 1863), (33, 1878), (38, 1911), (91, 2574), (98, 2643), (100, 2649),

Gene: Heffalump_8 Start: 4531, Stop: 5598, Start Num: 7

Candidate Starts for Heffalump_8:

(Start: 7 @4531 has 296 MA's), (Start: 10 @4600 has 1 MA's), (26, 4732), (99, 5512), (102, 5530), (105, 5560), (107, 5566), (109, 5584),

Gene: HelDan_4 Start: 1605, Stop: 2909, Start Num: 7

Candidate Starts for HelDan_4:

(5, 1551), (Start: 7 @1605 has 296 MA's), (21, 1740), (30, 1863), (33, 1878), (38, 1911), (115, 2826), (116, 2895), (117, 2901),

Gene: Heliosoles_4 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Heliosoles_4:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Hercules11_4 Start: 1681, Stop: 2634, Start Num: 7

Candidate Starts for Hercules11_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2548), (87, 2620), (88, 2626),

Gene: Holli_4 Start: 1645, Stop: 2511, Start Num: 7

Candidate Starts for Holli_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2404), (102, 2440), (109, 2497), (110, 2503),

Gene: Hookmount_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Hookmount_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: HortumSL17_7 Start: 4192, Stop: 5235, Start Num: 7

Candidate Starts for HortumSL17_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5152), (101, 5164), (109, 5221), (110, 5227),

Gene: Houdini22_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Houdini22_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: ICleared_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for ICleared_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Iceman_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Iceman_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Idleandcovert_3 Start: 1612, Stop: 2826, Start Num: 7

Candidate Starts for Idleandcovert_3:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2641), (99, 2743), (101, 2755), (109, 2812), (110, 2818),

Gene: Iracema64_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Iracema64_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: IronMan_7 Start: 3972, Stop: 5072, Start Num: 7

Candidate Starts for IronMan_7:

(Start: 7 @3972 has 296 MA's), (45, 4347), (50, 4482), (56, 4611), (102, 5001), (109, 5058), (110, 5064),

Gene: Isca_4 Start: 1610, Stop: 2746, Start Num: 7

Candidate Starts for Isca_4:

(3, 1547), (Start: 7 @1610 has 296 MA's), (21, 1745), (30, 1868), (33, 1883), (48, 1997), (91, 2660), (98, 2732), (100, 2738),

Gene: JF2_4 Start: 1608, Stop: 2510, Start Num: 7

Candidate Starts for JF2_4:

(Start: 7 @1608 has 296 MA's), (21, 1743), (30, 1866), (33, 1881), (48, 1995), (91, 2424), (98, 2496), (100, 2502),

Gene: JF4_4 Start: 1608, Stop: 2510, Start Num: 7

Candidate Starts for JF4_4:

(Start: 7 @1608 has 296 MA's), (21, 1743), (30, 1866), (33, 1881), (48, 1995), (91, 2424), (98, 2496), (100, 2502),

Gene: JHC117_4 Start: 1654, Stop: 2625, Start Num: 6

Candidate Starts for JHC117_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Jaan_7 Start: 3968, Stop: 5068, Start Num: 7

Candidate Starts for Jaan_7:

(2, 3887), (Start: 7 @3968 has 296 MA's), (23, 4139), (26, 4169), (42, 4310), (45, 4343), (56, 4607), (109, 5054), (110, 5060),

Gene: Jaykayelowell_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Jaykayelowell_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: JenCasNa_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for JenCasNa_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: JeppNRM_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for JeppNRM_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: JetBlade_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for JetBlade_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Jobu08_4 Start: 1681, Stop: 2958, Start Num: 7

Candidate Starts for Jobu08_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (28, 1861), (33, 1909), (57, 2305), (99, 2875), (101, 2887), (102, 2893), (109, 2944), (110, 2950),

Gene: JoongJeon_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for JoongJeon_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: KADY_5 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for KADY_5:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: KFPoly_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for KFPoly_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (54, 2176), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Kalb97_5 Start: 1683, Stop: 2882, Start Num: 7

Candidate Starts for Kalb97_5:

(Start: 6 @1656 has 2 MA's), (Start: 7 @1683 has 296 MA's), (28, 1863), (33, 1911), (57, 2307), (99, 2796), (102, 2814), (109, 2868), (110, 2874),

Gene: Kalnoky_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Kalnoky_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Kalpine_7 Start: 4413, Stop: 5363, Start Num: 7

Candidate Starts for Kalpine_7:

(Start: 7 @4413 has 296 MA's), (Start: 10 @4482 has 1 MA's), (31, 4695), (62, 5133), (65, 5154), (95, 5259), (101, 5292), (104, 5322), (109, 5349), (110, 5355),

Gene: Kampy_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Kampy_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Katalie136_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Katalie136_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Kingmustik0402_4 Start: 1646, Stop: 2710, Start Num: 7

Candidate Starts for Kingmustik0402_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2603), (102, 2639), (109, 2696), (110, 2702),

Gene: Koreni_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Koreni_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (97, 2623), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: Kratark_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Kratark_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Kristoff_5 Start: 1827, Stop: 2999, Start Num: 7

Candidate Starts for Kristoff_5:

(Start: 7 @1827 has 296 MA's), (22, 1992), (24, 2019), (25, 2022), (33, 2100), (51, 2319), (55, 2373), (60, 2508), (75, 2643), (99, 2916), (101, 2928), (102, 2934), (109, 2985), (110, 2991),

Gene: Kyee_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Kyee_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: LBerry_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for LBerry_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: LHTSCC_4 Start: 1642, Stop: 2718, Start Num: 7

Candidate Starts for LHTSCC_4:

(4, 1582), (Start: 7 @1642 has 296 MA's), (17, 1750), (27, 1846), (40, 1960), (99, 2629), (102, 2647), (109, 2704), (110, 2710),

Gene: Lambert1_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Lambert1_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Landor_7 Start: 4141, Stop: 5070, Start Num: 23

Candidate Starts for Landor_7:

(2, 3889), (Start: 7 @3970 has 296 MA's), (23, 4141), (26, 4171), (39, 4297), (42, 4312), (45, 4345), (56, 4609), (109, 5056), (110, 5062),

Gene: LappelDuVide_3 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for LappelDuVide_3:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: LarryKay_4 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for LarryKay_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Lemur_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Lemur_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: LeoAvram_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for LeoAvram_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Leogania_7 Start: 4183, Stop: 5397, Start Num: 7

Candidate Starts for Leogania_7:

(2, 4102), (Start: 7 @4183 has 296 MA's), (Start: 10 @4252 has 1 MA's), (56, 4822), (102, 5329),

Gene: Lilith_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for Lilith_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: LittleB_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for LittleB_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: LittleGuy_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for LittleGuy_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: LochMonster_4 Start: 1643, Stop: 2716, Start Num: 7

Candidate Starts for LochMonster_4:

(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (27, 1847), (40, 1961), (99, 2627), (102, 2645), (109, 2702), (110, 2708),

Gene: Lokk_8 Start: 4396, Stop: 5382, Start Num: 7

Candidate Starts for Lokk_8:

(Start: 7 @4396 has 296 MA's), (48, 4795), (64, 5113), (101, 5308), (107, 5350), (109, 5368), (110, 5374),

Gene: LoneWolf_7 Start: 3950, Stop: 4993, Start Num: 7

Candidate Starts for LoneWolf_7:

(Start: 7 @3950 has 296 MA's), (109, 4979), (110, 4985),

Gene: Lorenzo_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Lorenzo_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Loser_7 Start: 4131, Stop: 5249, Start Num: 7

Candidate Starts for Loser_7:

(Start: 7 @4131 has 296 MA's), (31, 4413), (34, 4419), (56, 4776), (65, 4878), (94, 5139), (99, 5166), (101, 5178), (109, 5235), (110, 5241),

Gene: Louie6_4 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for Louie6_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: LugYA_6 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for LugYA_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Lunsford_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Lunsford_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: MA5_4 Start: 1622, Stop: 2464, Start Num: 7

Candidate Starts for MA5_4:

(Start: 7 @1622 has 296 MA's), (21, 1757), (99, 2381), (102, 2399), (109, 2450), (110, 2456),

Gene: MK4_4 Start: 1608, Stop: 2744, Start Num: 7

Candidate Starts for MK4_4:

(Start: 7 @1608 has 296 MA's), (21, 1743), (30, 1866), (33, 1881), (48, 1995), (91, 2658), (98, 2730), (100, 2736),

Gene: MadMarie_4 Start: 1682, Stop: 2896, Start Num: 7

Candidate Starts for MadMarie_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2810), (109, 2882), (110, 2888),

Gene: Mainiac_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for Mainiac_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Malinsilva_6 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for Malinsilva_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: Maminiaina_7 Start: 3953, Stop: 4984, Start Num: 7

Candidate Starts for Maminiaina_7:

(Start: 7 @3953 has 296 MA's), (99, 4901), (101, 4913), (109, 4970), (110, 4976),

Gene: Manu_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Manu_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: MarQuardt_4 Start: 1681, Stop: 2895, Start Num: 7

Candidate Starts for MarQuardt_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2809), (109, 2881), (110, 2887),

Gene: Margo_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Margo_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (109, 2746), (110, 2752),

Gene: Marie_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Marie_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Marius_5 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Marius_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Maverick_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Maverick_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Maxo_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Maxo_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Mazhar510_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Mazhar510_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Medusa_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Medusa_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: MeeZee_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for MeeZee_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Melvin_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Melvin_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Methuselah_4 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for Methuselah_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Microwolf_4 Start: 1681, Stop: 2895, Start Num: 7

Candidate Starts for Microwolf_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2809), (109, 2881), (110, 2887),

Gene: Miko_8 Start: 4374, Stop: 5360, Start Num: 7

Candidate Starts for Miko_8:

(Start: 7 @4374 has 296 MA's), (48, 4773), (64, 5091), (101, 5286), (107, 5328), (109, 5346), (110, 5352),

Gene: Millski_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Millski_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Miramae_4 Start: 1638, Stop: 2714, Start Num: 7

Candidate Starts for Miramae_4:

(4, 1578), (Start: 7 @1638 has 296 MA's), (17, 1746), (27, 1842), (40, 1956), (99, 2625), (102, 2643), (109, 2700), (110, 2706),

Gene: Misomonster_6 Start: 1681, Stop: 2715, Start Num: 7

Candidate Starts for Misomonster_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (86, 2629), (90, 2701), (92, 2707),

Gene: MoneyMay_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for MoneyMay_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Morpher26_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Morpher26_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Morrow_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Morrow_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: MuchMore_6 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for MuchMore_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: Mundrea_4 Start: 1642, Stop: 2709, Start Num: 7

Candidate Starts for Mundrea_4:

(Start: 7 @1642 has 296 MA's), (17, 1750), (27, 1846), (40, 1960), (99, 2620), (102, 2638), (109, 2695), (110, 2701),

Gene: MyraDee_4 Start: 1517, Stop: 2386, Start Num: 7

Candidate Starts for MyraDee_4:

(Start: 7 @1517 has 296 MA's), (8, 1547), (9, 1556), (104, 2345), (109, 2372), (110, 2378),

Gene: Myxus_7 Start: 4192, Stop: 5235, Start Num: 7

Candidate Starts for Myxus_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5152), (101, 5164), (109, 5221), (110, 5227),

Gene: Nebs_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Nebs_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Nemo27_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Nemo27_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: NicoleTera_7 Start: 4172, Stop: 5248, Start Num: 7

Candidate Starts for NicoleTera_7:

(2, 4091), (Start: 7 @4172 has 296 MA's), (22, 4340), (40, 4496), (41, 4502), (79, 4988), (102, 5180), (109, 5234),

Gene: Noella_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Noella_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Noelle_4 Start: 1629, Stop: 2783, Start Num: 7

Candidate Starts for Noelle_4:

(Start: 7 @1629 has 296 MA's), (25, 1824), (40, 1947), (48, 2016), (96, 2676), (102, 2712), (109, 2769), (110, 2775),

Gene: Norbert_3 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Norbert_3:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: NorthStar_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for NorthStar_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: NotAPhaseMom_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for NotAPhaseMom_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: NothingSpecial_6 Start: 4006, Stop: 5202, Start Num: 7

Candidate Starts for NothingSpecial_6:

(2, 3925), (Start: 7 @4006 has 296 MA's), (12, 4084), (56, 4645), (94, 5089), (99, 5116), (102, 5134),

Gene: Nyxis_4 Start: 1648, Stop: 2721, Start Num: 7

Candidate Starts for Nyxis_4:

(4, 1588), (Start: 7 @1648 has 296 MA's), (17, 1756), (27, 1852), (40, 1966), (96, 2614), (102, 2650), (109, 2707), (110, 2713),

Gene: OKCentral2016_4 Start: 1637, Stop: 2374, Start Num: 7

Candidate Starts for OKCentral2016_4:

(Start: 7 @1637 has 296 MA's), (15, 1739), (Start: 20 @1769 has 1 MA's), (24, 1829), (25, 1832), (57, 2264), (61, 2303), (63, 2309), (68, 2360), (69, 2366),

Gene: OKaNui_4 Start: 1644, Stop: 2483, Start Num: 7

Candidate Starts for OKaNui_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (67, 2376), (71, 2412), (77, 2469), (80, 2475),

Gene: Obama12_4 Start: 1644, Stop: 2720, Start Num: 7

Candidate Starts for Obama12_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (99, 2631), (102, 2649), (109, 2706), (110, 2712),

Gene: Ohfah_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Ohfah_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: OlanP_4 Start: 1864, Stop: 3102, Start Num: 7

Candidate Starts for OlanP_4:

(Start: 6 @1837 has 2 MA's), (Start: 7 @1864 has 296 MA's), (28, 2044), (33, 2092), (57, 2488), (99, 2977), (102, 2995), (109, 3049), (110, 3055), (111, 3061),

Gene: Ollie_4 Start: 1681, Stop: 2805, Start Num: 7

Candidate Starts for Ollie_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2719), (109, 2791), (110, 2797),

Gene: P28Green_4 Start: 1682, Stop: 2626, Start Num: 7

Candidate Starts for P28Green_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (84, 2540), (87, 2612), (88, 2618),

Gene: PGHhamlin_6 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for PGHhamlin_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: PackMan_7 Start: 4192, Stop: 5235, Start Num: 7

Candidate Starts for PackMan_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5152), (101, 5164), (109, 5221), (110, 5227),

Gene: Palestino_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Palestino_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Panamaxus_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Panamaxus_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Pawn_4 Start: 1685, Stop: 2884, Start Num: 7

Candidate Starts for Pawn_4:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99, 2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Peaches_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Peaches_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Pembroke_4 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for Pembroke_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: Penny1_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Penny1_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Perplexer_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Perplexer_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: PeterPeter_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for PeterPeter_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: PetiteSangsue_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for PetiteSangsue_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: Phacado_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Phacado_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: Phaded_7 Start: 3967, Stop: 5067, Start Num: 7

Candidate Starts for Phaded_7:

(2, 3886), (Start: 7 @3967 has 296 MA's), (23, 4138), (26, 4168), (42, 4309), (45, 4342), (56, 4606), (109, 5053), (110, 5059),

Gene: Phaeder_7 Start: 4192, Stop: 5235, Start Num: 7

Candidate Starts for Phaeder_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5152), (101, 5164), (109, 5221), (110, 5227),

Gene: Phantastic_4 Start: 1617, Stop: 2831, Start Num: 7

Candidate Starts for Phantastic_4:

(Start: 7 @1617 has 296 MA's), (21, 1752), (27, 1821), (33, 1890), (69, 2376), (102, 2766), (109, 2817), (110, 2823),

Gene: Pharaoh_7 Start: 4476, Stop: 5333, Start Num: 7

Candidate Starts for Pharaoh_7:

(Start: 7 @4476 has 296 MA's), (18, 4584), (34, 4746), (48, 4845), (52, 4968), (109, 5319), (110, 5325),

Gene: Phelipe_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Phelipe_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Phighter1804_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Phighter1804_4:
(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (99, 2628), (102, 2646),
(109, 2703), (110, 2709),

Gene: PhishRPhriends_4 Start: 1686, Stop: 2396, Start Num: 7
Candidate Starts for PhishRPhriends_4:
(Start: 6 @1659 has 2 MA's), (Start: 7 @1686 has 296 MA's), (28, 1866), (33, 1914), (60, 2310), (66,
2328), (70, 2382), (72, 2388),

Gene: Phoebe_4 Start: 1681, Stop: 2625, Start Num: 7
Candidate Starts for Phoebe_4:
(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88,
2617),

Gene: Phonnegut_7 Start: 4192, Stop: 5223, Start Num: 7
Candidate Starts for Phonnegut_7:
(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Phontbonne_4 Start: 1643, Stop: 2716, Start Num: 7
Candidate Starts for Phontbonne_4:
(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (27, 1847), (40, 1961), (96, 2609), (102, 2645),
(109, 2702), (110, 2708),

Gene: Phoxy_4 Start: 1682, Stop: 2716, Start Num: 7
Candidate Starts for Phoxy_4:
(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92,
2708),

Gene: Phranny_5 Start: 1685, Stop: 2884, Start Num: 7
Candidate Starts for Phranny_5:
(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (57, 2309), (99,
2798), (102, 2816), (109, 2870), (110, 2876),

Gene: Pioneer_7 Start: 4192, Stop: 5223, Start Num: 7
Candidate Starts for Pioneer_7:
(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Pipcraft_4 Start: 1645, Stop: 2718, Start Num: 7
Candidate Starts for Pipcraft_4:
(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647),
(109, 2704), (110, 2710),

Gene: Pistachio_4 Start: 1612, Stop: 2373, Start Num: 7
Candidate Starts for Pistachio_4:
(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2188), (99, 2290), (101, 2302),
(109, 2359), (110, 2365),

Gene: Pocahontas_4 Start: 1633, Stop: 2760, Start Num: 7
Candidate Starts for Pocahontas_4:
(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1
MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Polymorphads_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Polymorphads_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Popcicle_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Popcicle_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: PotatoSplit_5 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for PotatoSplit_5:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Priya_7 Start: 4190, Stop: 5221, Start Num: 7

Candidate Starts for Priya_7:

(Start: 6 @4163 has 2 MA's), (Start: 7 @4190 has 296 MA's), (99, 5138), (101, 5150), (109, 5207), (110, 5213),

Gene: Pukovnik_7 Start: 3940, Stop: 5010, Start Num: 7

Candidate Starts for Pukovnik_7:

(2, 3859), (Start: 7 @3940 has 296 MA's), (27, 4147), (37, 4246), (40, 4261), (99, 4927), (101, 4939), (109, 4996), (110, 5002),

Gene: Pumbaa_4 Start: 1643, Stop: 2716, Start Num: 7

Candidate Starts for Pumbaa_4:

(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (21, 1778), (27, 1847), (40, 1961), (99, 2627), (102, 2645), (109, 2702), (110, 2708),

Gene: Puppy_4 Start: 1612, Stop: 2445, Start Num: 7

Candidate Starts for Puppy_4:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2260), (101, 2374), (109, 2431), (110, 2437),

Gene: PurpleHaze_4 Start: 1684, Stop: 2883, Start Num: 7

Candidate Starts for PurpleHaze_4:

(Start: 6 @1657 has 2 MA's), (Start: 7 @1684 has 296 MA's), (28, 1864), (33, 1912), (57, 2308), (99, 2797), (102, 2815), (109, 2869), (110, 2875),

Gene: Qobbit_7 Start: 4189, Stop: 5220, Start Num: 7

Candidate Starts for Qobbit_7:

(Start: 6 @4162 has 2 MA's), (Start: 7 @4189 has 296 MA's), (99, 5137), (101, 5149), (109, 5206), (110, 5212),

Gene: QuinnKiro_3 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for QuinnKiro_3:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Rachaly_8 Start: 4394, Stop: 5380, Start Num: 7

Candidate Starts for Rachaly_8:

(Start: 7 @4394 has 296 MA's), (48, 4793), (101, 5306), (107, 5348), (109, 5366), (110, 5372),

Gene: Reba_5 Start: 1685, Stop: 2557, Start Num: 7

Candidate Starts for Reba_5:

(Start: 6 @1658 has 2 MA's), (Start: 7 @1685 has 296 MA's), (28, 1865), (33, 1913), (99, 2471), (102, 2489), (109, 2543), (110, 2549),

Gene: Rebeuca_5 Start: 1828, Stop: 3000, Start Num: 7

Candidate Starts for Rebeuca_5:

(Start: 7 @1828 has 296 MA's), (22, 1993), (24, 2020), (25, 2023), (33, 2101), (51, 2320), (55, 2374), (60, 2509), (75, 2644), (99, 2917), (101, 2929), (102, 2935), (109, 2986), (110, 2992),

Gene: RedRock_7 Start: 4133, Stop: 5242, Start Num: 7

Candidate Starts for RedRock_7:

(Start: 7 @4133 has 296 MA's), (Start: 10 @4202 has 1 MA's), (31, 4415), (34, 4421), (56, 4778), (65, 4880), (101, 5171), (109, 5228), (110, 5234),

Gene: Relief_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Relief_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: ResDef_3 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for ResDef_3:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: RhynO_4 Start: 1673, Stop: 2839, Start Num: 7

Candidate Starts for RhynO_4:

(Start: 7 @1673 has 296 MA's), (15, 1775), (16, 1778), (17, 1781), (21, 1811), (22, 1841), (33, 1949), (60, 2357), (74, 2471), (75, 2492), (99, 2756), (101, 2768), (102, 2774), (109, 2825), (110, 2831),

Gene: Rockstar_4 Start: 1608, Stop: 2744, Start Num: 7

Candidate Starts for Rockstar_4:

(Start: 7 @1608 has 296 MA's), (21, 1743), (30, 1866), (33, 1881), (48, 1995), (91, 2658), (98, 2730), (100, 2736),

Gene: Romney_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Romney_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: Roosevelt_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Roosevelt_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Ruin_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Ruin_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: Rummer_4 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for Rummer_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Sabertooth_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Sabertooth_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Sabia_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for Sabia_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Sabinator_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Sabinator_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: SaturnRing_3 Start: 1612, Stop: 2826, Start Num: 7

Candidate Starts for SaturnRing_3:

(Start: 7 @1612 has 296 MA's), (21, 1747), (33, 1885), (48, 1999), (89, 2641), (99, 2743), (101, 2755), (109, 2812), (110, 2818),

Gene: Scamp_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Scamp_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Scherzo_7 Start: 4192, Stop: 5223, Start Num: 7

Candidate Starts for Scherzo_7:

(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Shaka_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Shaka_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: SheldonCooper_4 Start: 1643, Stop: 2719, Start Num: 7

Candidate Starts for SheldonCooper_4:

(4, 1583), (Start: 7 @1643 has 296 MA's), (17, 1751), (27, 1847), (40, 1961), (99, 2630), (102, 2648), (109, 2705), (110, 2711),

Gene: Shygu2_4 Start: 1644, Stop: 2720, Start Num: 7

Candidate Starts for Shygu2_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (99, 2631), (102, 2649), (109, 2706), (110, 2712),

Gene: Skipitt_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Skipitt_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Snickers_4 Start: 1681, Stop: 2868, Start Num: 7

Candidate Starts for Snickers_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2782), (109, 2854), (110, 2860),

Gene: SoYo_4 Start: 1681, Stop: 2805, Start Num: 7

Candidate Starts for SoYo_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2719), (109, 2791), (110, 2797),

Gene: SoilDragon_4 Start: 1681, Stop: 2568, Start Num: 7

Candidate Starts for SoilDragon_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2485), (101, 2497), (102, 2503), (109, 2554), (110, 2560),

Gene: Soshari_6 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for Soshari_6:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Sparxx_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Sparxx_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Spike509_4 Start: 1682, Stop: 2716, Start Num: 7

Candidate Starts for Spike509_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (86, 2630), (90, 2702), (92, 2708),

Gene: Spino_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Spino_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Spouty_6 Start: 4189, Stop: 5220, Start Num: 7

Candidate Starts for Spouty_6:

(Start: 6 @4162 has 2 MA's), (Start: 7 @4189 has 296 MA's), (99, 5137), (101, 5149), (109, 5206), (110, 5212),

Gene: Stagni_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for Stagni_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Stasia_4 Start: 1647, Stop: 2741, Start Num: 7

Candidate Starts for Stasia_4:

(Start: 7 @1647 has 296 MA's), (17, 1755), (29, 1890), (39, 1968), (43, 1986), (46, 2025), (60, 2316), (73, 2418), (102, 2670), (109, 2727), (110, 2733),

Gene: StepMih_4 Start: 1682, Stop: 2887, Start Num: 7

Candidate Starts for StepMih_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (99, 2801), (109, 2873), (110, 2879),

Gene: Stink_3 Start: 1639, Stop: 2715, Start Num: 7

Candidate Starts for Stink_3:

(4, 1579), (Start: 7 @1639 has 296 MA's), (17, 1747), (27, 1843), (40, 1957), (99, 2626), (102, 2644), (109, 2701), (110, 2707),

Gene: TNguyen7_4 Start: 1610, Stop: 2824, Start Num: 7

Candidate Starts for TNguyen7_4:

(Start: 7 @1610 has 296 MA's), (21, 1745), (33, 1883), (48, 1997), (89, 2639), (99, 2741), (101, 2753), (109, 2810), (110, 2816),

Gene: Taquarus_4 Start: 1648, Stop: 2721, Start Num: 7

Candidate Starts for Taquarus_4:

(4, 1588), (Start: 7 @1648 has 296 MA's), (17, 1756), (27, 1852), (40, 1966), (96, 2614), (102, 2650), (109, 2707), (110, 2713),

Gene: Taurus_4 Start: 1681, Stop: 2625, Start Num: 7

Candidate Starts for Taurus_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (84, 2539), (87, 2611), (88, 2617),

Gene: Texage_3 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Texage_3:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Thanksgivukkah_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Thanksgivukkah_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (27, 1850), (40, 1964), (96, 2612), (102, 2648), (109, 2705), (110, 2711),

Gene: Tiffany_4 Start: 1682, Stop: 2896, Start Num: 7

Candidate Starts for Tiffany_4:

(Start: 6 @1655 has 2 MA's), (Start: 7 @1682 has 296 MA's), (33, 1910), (89, 2699), (99, 2810), (109, 2882), (110, 2888),

Gene: TinaFeyge_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for TinaFeyge_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Tinybot_3 Start: 1645, Stop: 2721, Start Num: 7

Candidate Starts for Tinybot_3:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (99, 2632), (102, 2650), (109, 2707), (110, 2713),

Gene: TiroTheta9_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for TiroTheta9_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Todacoro_4 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Todacoro_4:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Topanga_4 Start: 1711, Stop: 2889, Start Num: 7

Candidate Starts for Topanga_4:

(4, 1651), (Start: 7 @1711 has 296 MA's), (Start: 20 @1843 has 1 MA's), (22, 1876), (24, 1903), (53, 2218), (60, 2398), (75, 2533), (99, 2806), (102, 2824), (104, 2848), (109, 2875), (110, 2881),

Gene: Trixie_7 Start: 4278, Stop: 5228, Start Num: 7

Candidate Starts for Trixie_7:

(2, 4197), (Start: 7 @4278 has 296 MA's), (Start: 10 @4347 has 1 MA's), (31, 4560), (62, 4998), (65, 5019), (95, 5124), (101, 5157), (109, 5214), (110, 5220),

Gene: TroyPia_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for TroyPia_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Tubs_7 Start: 4192, Stop: 5235, Start Num: 7

Candidate Starts for Tubs_7:

(Start: 7 @4192 has 296 MA's), (39, 4525), (99, 5152), (101, 5164), (109, 5221), (110, 5227),

Gene: Twister_4 Start: 1661, Stop: 2833, Start Num: 7

Candidate Starts for Twister_4:

(Start: 7 @1661 has 296 MA's), (22, 1826), (24, 1853), (25, 1856), (33, 1934), (51, 2153), (55, 2207), (60, 2342), (75, 2477), (99, 2750), (101, 2762), (102, 2768), (109, 2819), (110, 2825),

Gene: TygerBlood_4 Start: 1647, Stop: 2720, Start Num: 7

Candidate Starts for TygerBlood_4:

(4, 1587), (Start: 7 @1647 has 296 MA's), (17, 1755), (27, 1851), (40, 1965), (96, 2613), (102, 2649), (109, 2706), (110, 2712),

Gene: Ugenie5_5 Start: 4192, Stop: 5223, Start Num: 7

Candidate Starts for Ugenie5_5:

(Start: 7 @4192 has 296 MA's), (99, 5140), (101, 5152), (109, 5209), (110, 5215),

Gene: Ulysses_4 Start: 1646, Stop: 2719, Start Num: 7

Candidate Starts for Ulysses_4:

(4, 1586), (Start: 7 @1646 has 296 MA's), (17, 1754), (21, 1781), (27, 1850), (40, 1964), (102, 2648), (109, 2705), (110, 2711),

Gene: Veracruz_3 Start: 1633, Stop: 2760, Start Num: 7

Candidate Starts for Veracruz_3:

(3, 1570), (5, 1579), (Start: 7 @1633 has 296 MA's), (8, 1663), (14, 1720), (Start: 20 @1765 has 1 MA's), (33, 1906), (47, 2014), (59, 2302), (99, 2674), (102, 2692), (109, 2746), (110, 2752),

Gene: Vix_4 Start: 1681, Stop: 2715, Start Num: 7

Candidate Starts for Vix_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (86, 2629), (90, 2701), (92, 2707),

Gene: WalterMcMickey_4 Start: 1661, Stop: 2833, Start Num: 7

Candidate Starts for WalterMcMickey_4:

(Start: 7 @1661 has 296 MA's), (22, 1826), (24, 1853), (25, 1856), (33, 1934), (51, 2153), (55, 2207), (60, 2342), (75, 2477), (99, 2750), (101, 2762), (102, 2768), (109, 2819), (110, 2825),

Gene: Wander_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for Wander_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Watson_4 Start: 1681, Stop: 2886, Start Num: 7

Candidate Starts for Watson_4:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2800), (109, 2872), (110, 2878),

Gene: WeiHuaDA_8 Start: 4411, Stop: 5442, Start Num: 7

Candidate Starts for WeiHuaDA_8:

(Start: 7 @4411 has 296 MA's), (Start: 10 @4480 has 1 MA's), (31, 4693), (62, 5131), (65, 5152), (101, 5371), (102, 5377), (109, 5428), (110, 5434),

Gene: Wilbur_4 Start: 1644, Stop: 2717, Start Num: 7

Candidate Starts for Wilbur_4:

(4, 1584), (Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (96, 2610), (102, 2646), (109, 2703), (110, 2709),

Gene: Wile_4 Start: 1645, Stop: 2730, Start Num: 7

Candidate Starts for Wile_4:

(Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (48, 2035), (102, 2659), (109, 2716), (110, 2722),

Gene: Wizard007_4 Start: 1647, Stop: 2720, Start Num: 7

Candidate Starts for Wizard007_4:

(4, 1587), (Start: 7 @1647 has 296 MA's), (17, 1755), (27, 1851), (40, 1965), (96, 2613), (102, 2649), (109, 2706), (110, 2712),

Gene: Wooldri_6 Start: 1681, Stop: 2805, Start Num: 7

Candidate Starts for Wooldri_6:

(Start: 6 @1654 has 2 MA's), (Start: 7 @1681 has 296 MA's), (33, 1909), (99, 2719), (109, 2791), (110, 2797),

Gene: Xena_4 Start: 1644, Stop: 2729, Start Num: 7

Candidate Starts for Xena_4:

(Start: 7 @1644 has 296 MA's), (17, 1752), (27, 1848), (40, 1962), (48, 2034), (102, 2658), (109, 2715), (110, 2721),

Gene: YoSam321_4 Start: 1645, Stop: 2718, Start Num: 7

Candidate Starts for YoSam321_4:

(4, 1585), (Start: 7 @1645 has 296 MA's), (17, 1753), (27, 1849), (40, 1963), (96, 2611), (102, 2647), (109, 2704), (110, 2710),

Gene: Zetzy_4 Start: 1683, Stop: 2717, Start Num: 7

Candidate Starts for Zetzy_4:

(Start: 6 @1656 has 2 MA's), (Start: 7 @1683 has 296 MA's), (33, 1911), (86, 2631), (90, 2703), (92, 2709),

Gene: Zimmer_7 Start: 4514, Stop: 5293, Start Num: 7

Candidate Starts for Zimmer_7:

(Start: 7 @4514 has 296 MA's), (8, 4544), (9, 4553), (13, 4595), (27, 4706), (109, 5279),