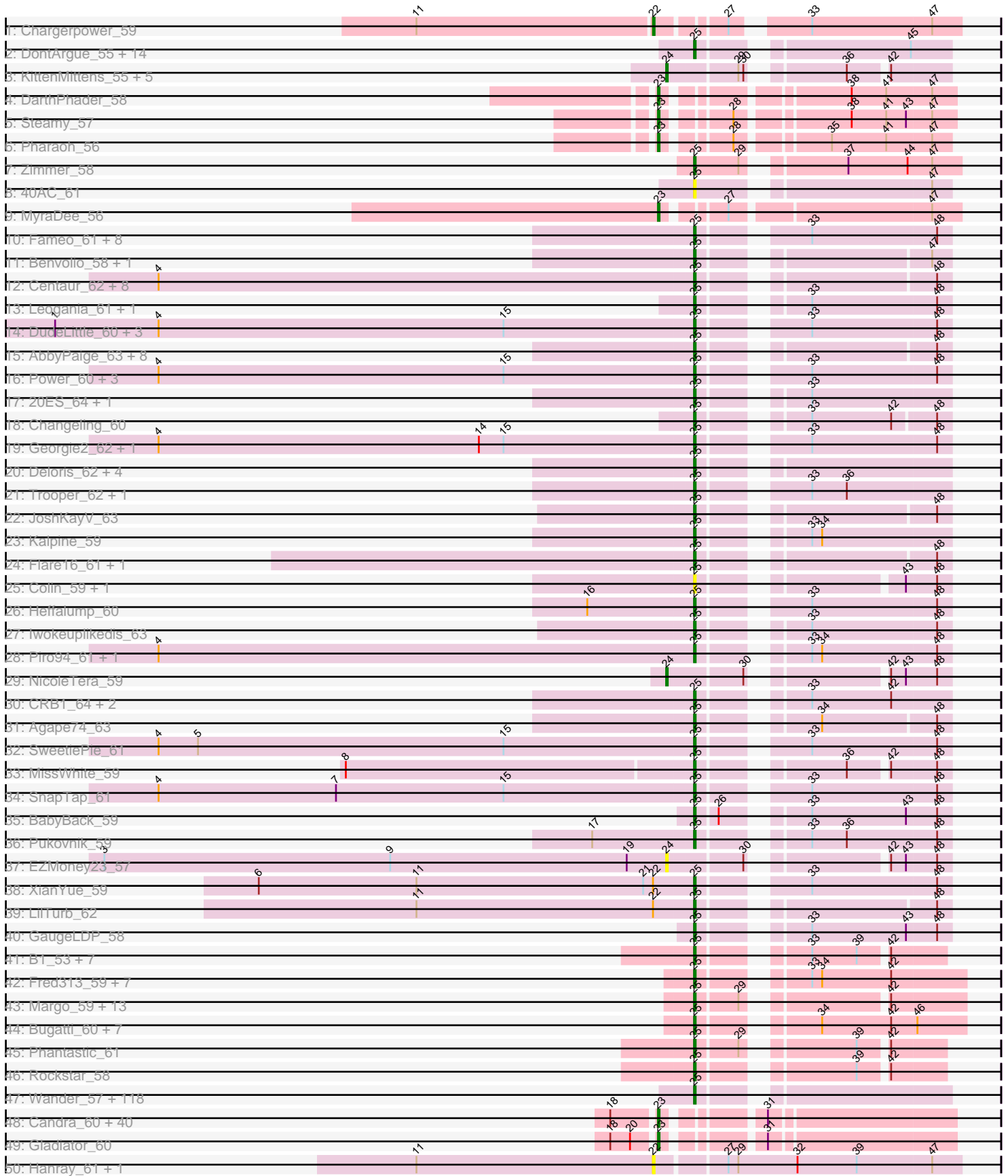
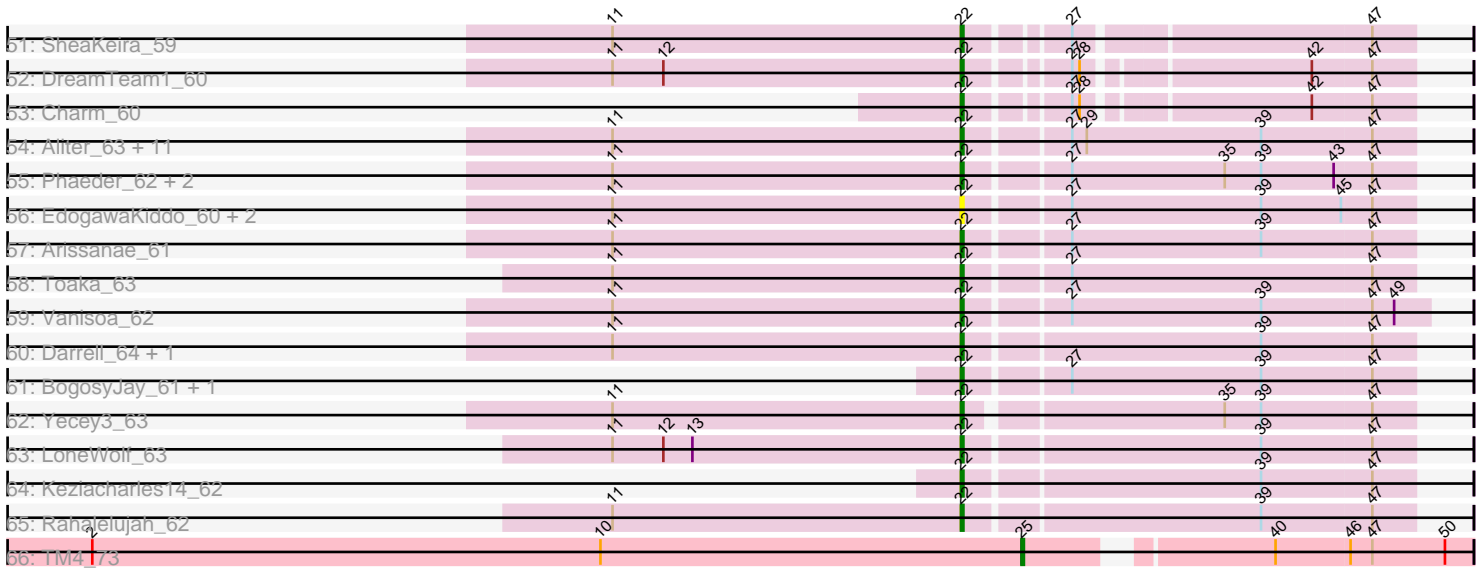


Pham 215738



Pham 215738



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 215738 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215738 has 339 members, 44 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_59
- Track 2 : DontArgue_55, Edison31_55, DustyMartin_60, Topanga_55, Chupacabra_56, Eaglepride_59, Goose_58, OKCentral2016_57, WalterMcMickey_56, RhynO_58, Rowdy_60, Shapes_60, Kristoff_57, Rebeuca_58, Twister_56
- Track 3 : KittenMittens_55, Severus_56, Trike_55, Drake94_56, PeaceMeal1_56, Poompha_56
- Track 4 : DarthPhader_58
- Track 5 : Steamy_57
- Track 6 : Pharaoh_56
- Track 7 : Zimmer_58
- Track 8 : 40AC_61
- Track 9 : MyraDee_56
- Track 10 : Fameo_61, Bactobuster_59, Landor_61, QueenB2_60, ChipMunk_63, IronMan_60, Jaan_61, Tristan_57, KingCyrus_62
- Track 11 : Benvolio_58, Echild_61
- Track 12 : Centaur_62, Sknot_61, MiculUcigas_61, Gratitude_59, WideWale_62, Baehexic_60, Updawg_62, Terrific_62, Equemioh13_61
- Track 13 : Leogania_61, BiancaTri92_61
- Track 14 : DudeLittle_60, Dalmatian_62, Retro23_62, Anselm_62
- Track 15 : AbbyPaige_63, Jerm_63, LionsBait_62, Leviathan_63, Smeagan_64, Turbido_62, Buggy_63, Dignity_63, Whabigail7_62
- Track 16 : Power_60, FiringLine_61, QueenBeesly_61, SemperFi_62
- Track 17 : 20ES_64, HarryHoudini_62
- Track 18 : Changeling_60
- Track 19 : Georgie2_62, Crucio_61
- Track 20 : Deloris_62, LadyBird_66, BengiVuitton_62, AN3_64, VA6_62
- Track 21 : Trooper_62, TarsusIV_58
- Track 22 : JoshKayV_63
- Track 23 : Kalpine_59
- Track 24 : Flare16_61, NaSiaTalie_61
- Track 25 : Colin_59, WeiHuaDA_61
- Track 26 : Heffalump_60
- Track 27 : Iwokeuplikedis_63
- Track 28 : Piro94_61, Drake55_63
- Track 29 : NicoleTera_59
- Track 30 : CRB1_64, First_0063, Trixie_59

- Track 31 : Agape74_63
- Track 32 : SweetiePie_61
- Track 33 : MissWhite_59
- Track 34 : SnapTap_61
- Track 35 : BabyBack_59
- Track 36 : Pukovnik_59
- Track 37 : EZMoney23_57
- Track 38 : XianYue_59
- Track 39 : LilTurb_62
- Track 40 : GaugeLDP_58
- Track 41 : B1_53, BabyJohn_56, MA5_60, JF2_58, Isca_59, Chiqui_56, MK4_60, JF4_58
- Track 42 : Fred313_59, Kachowdy_59, Scout_60, DropBear_59, Marchesa_59, BabyRay_60, Heathen_60, HelDan_60
- Track 43 : Margo_59, Panamaxus_57, Lambert1_59, QuinnKiro_58, Texage_58, Caviar_59, Pocahontas_59, Todacoro_59, Norbert_57, Popcicle_59, Hookmount_59, Veracruz_58, Noella_59, ResDef_59
- Track 44 : Bugatti_60, Giroux_60, BlueBird_62, TNguyen7_61, Idleandcovert_60, SaturnRing_60, Pistachio_61, Puppy_61
- Track 45 : Phantastic_61
- Track 46 : Rockstar_58
- Track 47 : Wander_57, TygerBlood_57, Romney_56, Eurydice_58, Flux_57, Lemur_57, Rosa24_55, Millski_56, Gadost_57, Commander_57, TinaFeyge_56, Nebs_58, HamSlice_55, Avle17_57, Bombshell_57, Medusa_57, NotAPhaseMom_57, SenorClean_54, BellusTerra_58, Ulysses_56, Chaph_57, Connomayer_57, SheldonCooper_58, JetBlade_57, Ruin_57, Phelipe_58, Mayonnaise_56, Cerulean_58, Caelakin_57, Eros_57, Sabertooth_57, Anyyong_57, Clarenza_56, Druantia_57, TroyPia_58, Polymorphads_58, BangNhom_57, Bartimeaus_57, LittleB_57, Eagle_57, Deano_56, Huxley_56, Morrow_58, Obama12_58, LHTSCC_59, Jaykayelowell_55, Nemo27_57, Bruiser_56, Alberto7_58, Iceman_57, Koan_54, DirtyDunning_56, Phacado_57, Baby16_57, CentreCat_57, LittleGuy_57, Iracema64_58, Albee_57, Scamp_57, Eapen_57, Wizard007_57, Citius_57, Shaka_56, Houdini22_57, Maxo_58, Dhanush_57, LappelDuVide_57, Cintron_56, LeoAvram_56, Tinybot_56, Skipitt_56, Thanksgivukkah_56, Happiness_56, Peaches_56, Phontbonne_57, Koreni_56, Phighter1804_57, Nyxis_57, Ohfah_58, Eris_56, Kampy_56, Lunsford_58, Taquarus_57, Palestino_56, Kremtemulon_57, Funston_56, Burger_55, Abdiel_57, PeterPeter_57, OKaNui_57, Blackmoor_57, TiroTheta9_57, Broseidon_57, Holli_56, Pumbaa_57, Camperdownii_55, Lorenzo_57, MeeZee_57, Roosevelt_56, Florean_57, ICleared_57, YoSam321_57, Spino_56, Kingmustik0402_57, Pipcraft_55, KFPoly_56, Wilbur_57, LochMonster_58, Relief_56, Maverick_57, Cocoaberry_57, JoongJeon_56, Mazhar510_57, Kyee_57, BubbleTrouble_56, Sparxx_58, NorthStar_56, Melvin_59, ChampagnePapi_59
- Track 48 : Candra_60, Temprado_64, Polyphemus_62, Jeffabunny_63, ToneTone_60, Isiphiwo_60, Wiks_62, Kazan_63, Zaka_63, Artemis2UCLA_63, Cookiedough_62, CloudWang3_64, Koko_65, Kipper29_62, Chartreuse_59, WunderPhul_63, McFly_62, EricB_61, Newrala_62, Garak_64, Zulu_64, SuperCallie99_59, DaVinci_60, BlessJoy_62, Neeharika16_61, Yokurt_62, Tucker_63, Hexamo_63, Dorothea_62, Pmask_61, Gruunaga_63, Hoot_57, Roksolana_64, Indra_66, Helmet_64, Rifter_63, Lilbunny_62, BABullseye_55, SmellyB_62, SuperAwesome_62, VohminGhazi_62
- Track 49 : Gladiator_60
- Track 50 : Hanray_61, Halex_61

- Track 51 : SheaKeira_59
- Track 52 : DreamTeam1_60
- Track 53 : Charm_60
- Track 54 : Aliter_63, HortumSL17_63, Scherzo_63, Catalina_64, Phonnegut_63, Pioneer_63, Jiawan_60, RyeScarlet_64, Onglai_61, Ugenie5_59, Myxus_62, Beemo_63
- Track 55 : Phaeder_62, Tubs_62, PackMan_61
- Track 56 : EdogawaKiddo_60, Lilleskat_59, Sachima_58
- Track 57 : Arissanae_61
- Track 58 : Toaka_63
- Track 59 : Vanisoa_62
- Track 60 : Darrell_64, Elephantoon_61
- Track 61 : BogosyJay_61, Maminiaina_61
- Track 62 : Yecey3_63
- Track 63 : LoneWolf_63
- Track 64 : Keziacharles14_62
- Track 65 : Rahalelujah_62
- Track 66 : TM4_73

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

The start number called the most often in the published annotations is 25, it was called in 222 of the 295 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES_64, 40AC_61, AN3_64, AbbyPaige_63, Abdiel_57, Agape74_63, Albee_57, Alberto7_58, Annyong_57, Anselm_62, Avle17_57, B1_53, Baby16_57, BabyBack_59, BabyJohn_56, BabyRay_60, Bactobuster_59, Baehexic_60, BangNhom_57, Bartimeaus_57, BellusTerra_58, BengiVuitton_62, Benvolio_58, BiancaTri92_61, Blackmoor_57, BlueBird_62, Bombshell_57, Broseidon_57, Bruiser_56, BubbleTrouble_56, Bugatti_60, Buggy_63, Burger_55, CRB1_64, Caelakin_57, Camperdownii_55, Caviar_59, Centaur_62, CentreCat_57, Cerulean_58, ChampagnePapi_59, Changeling_60, Chaph_57, ChipMunk_63, Chiqui_56, Chupacabra_56, Cintron_56, Citius_57, Clarenza_56, Cocoaberry_57, Colin_59, Commander_57, Connomayer_57, Crucio_61, Dalmatian_62, Deano_56, Deloris_62, Dhanush_57, Dignity_63, DirtyDunning_56, DontArgue_55, Drake55_63, DropBear_59, Druantia_57, DudeLittle_60, DustyMartin_60, Eagle_57, Eaglepride_59, Eapen_57, Echild_61, Edison31_55, Equemioh13_61, Eris_56, Eros_57, Eurydice_58, Fameo_61, FiringLine_61, First_0063, Flare16_61, Floean_57, Flux_57, Fred313_59, Funston_56, Gadost_57, GaugeLDP_58, Georgie2_62, Giroux_60, Goose_58, Gratitude_59, HamSlice_55, Happiness_56, HarryHoudini_62, Heathen_60, Heffalump_60, HelDan_60, Holli_56, Hookmount_59, Houdini22_57, Huxley_56, ICleared_57, Iceman_57, Idleandcovert_60, Iracema64_58, IronMan_60, Isca_59, Iwokeuplikedis_63, JF2_58, JF4_58, Jaan_61, Jaykayelowell_55, Jerm_63, JetBlade_57, JoongJeon_56, JoshKayV_63, KFPoly_56, Kachowdy_59, Kalpine_59, Kampy_56, KingCyrus_62, Kingmustik0402_57, Koan_54, Koreni_56, Kremtemulon_57, Kristoff_57, Kyee_57, LHTSCC_59, LadyBird_66, Lambert1_59, Landor_61, LappelDuVide_57, Lemur_57, LeoAvram_56, Leogania_61, Leviathan_63, LiITurb_62, LionsBait_62, LittleB_57, LittleGuy_57, LochMonster_58, Lorenzo_57, Lunsford_58, MA5_60, MK4_60, Marchesa_59,

Margo_59, Maverick_57, Maxo_58, Mayonnaise_56, Mazhar510_57, Medusa_57, MeeZee_57, Melvin_59, MiculUcigas_61, Millski_56, MissWhite_59, Morrow_58, NaSiaTalie_61, Nebs_58, Nemo27_57, Noella_59, Norbert_57, NorthStar_56, NotAPhaseMom_57, Nyxis_57, OKCentral2016_57, OKaNui_57, Obama12_58, Ohfah_58, Palestino_56, Panamaxus_57, Peaches_56, PeterPeter_57, Phacado_57, Phantastic_61, Phelipe_58, Phighter1804_57, Phontbonne_57, Pipcraft_55, Piro94_61, Pistachio_61, Pocahontas_59, Polymorphads_58, Popcicle_59, Power_60, Pukovnik_59, Pumbaa_57, Puppy_61, QueenB2_60, QueenBeesly_61, QuinnKiro_58, Rebeuca_58, Relief_56, ResDef_59, Retro23_62, RhynO_58, Rockstar_58, Romney_56, Roosevelt_56, Rosa24_55, Rowdy_60, Ruin_57, Sabertooth_57, SaturnRing_60, Scamp_57, Scout_60, SemperFi_62, SenorClean_54, Shaka_56, Shapes_60, SheldonCooper_58, Skipitt_56, Sknot_61, Smeagan_64, SnapTap_61, Sparxx_58, Spino_56, SweetiePie_61, TM4_73, TNguyen7_61, Taquarus_57, TarsusIV_58, Terrific_62, Texage_58, Thanksgivukkah_56, TinaFeyge_56, Tinybot_56, TiroTheta9_57, Todacoro_59, Topanga_55, Tristan_57, Trixie_59, Trooper_62, TroyPia_58, Turbido_62, Twister_56, TygerBlood_57, Ulysses_56, Updawg_62, VA6_62, Veracruz_58, WalterMcMickey_56, Wander_57, WeiHuaDA_61, Whabigail7_62, WideWale_62, Wilbur_57, Wizard007_57, XianYue_59, YoSam321_57, Zimmer_58,

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

-

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

- Aliter_63, Arissanae_61, Artemis2UCLA_63, BABullseye_55, Beemo_63, BlessJoy_62, BogosyJay_61, Candra_60, Catalina_64, Chargerpower_59, Charm_60, Chartreuse_59, CloudWang3_64, Cookiedough_62, DaVinci_60, Darrell_64, DarthPhader_58, Dorothea_62, Drake94_56, DreamTeam1_60, EZMoney23_57, EdogawaKiddo_60, Elephantoon_61, EricB_61, Garak_64, Gladiator_60, Gruunaga_63, Hanray_61, Helmet_64, Hexamo_63, Halex_61, Hoot_57, HortumSL17_63, Indra_66, Isiphiwo_60, Jeffabunny_63, Jiawan_60, Kazan_63, Keziacharles14_62, Kipper29_62, KittenMittens_55, Koko_65, Lilbunny_62, Lilleskat_59, LoneWolf_63, Maminiana_61, McFly_62, MyraDee_56, Myxus_62, Neeharika16_61, Newrala_62, NicoleTera_59, Onglai_61, PackMan_61, PeaceMeal1_56, Phaeder_62, Pharaoh_56, Phonnegut_63, Pioneer_63, Pmask_61, Polyphemus_62, Poompha_56, Rahalelujah_62, Rifter_63, Roksolana_64, RyeScarlet_64, Sachima_58, Scherzo_63, Severus_56, SheaKeira_59, SmellyB_62, Steamy_57, SuperAwesome_62, SuperCallie99_59, Temprado_64, Toaka_63, ToneTone_60, Trike_55, Tubs_62, Tucker_63, Ugenie5_59, Vanisoa_62, VohminGhazi_62, Wiks_62, WunderPhul_63, Yecey3_63, Yokurt_62, Zaka_63, Zulu_64,

Summary by start number:

Start 22:

- Found in 37 of 339 (10.9%) of genes in pham
- Manual Annotations of this start: 27 of 295
- Called 94.6% of time when present
- Phage (with cluster) where this start called: Aliter_63 (A9), Arissanae_61 (A9), Beemo_63 (A9), BogosyJay_61 (A9), Catalina_64 (A9), Chargerpower_59 (A), Charm_60 (A9), Darrell_64 (A9), DreamTeam1_60 (A9), EdogawaKiddo_60 (A9), Elephantoon_61 (A9), Hanray_61 (A9), Halex_61 (A9), HortumSL17_63 (A9), Jiawan_60 (A9), Keziacharles14_62 (A9), Lilleskat_59 (A9), LoneWolf_63 (A9),

Maminiaina_61 (A9), Myxus_62 (A9), Onglai_61 (A9), PackMan_61 (A9), Phaeder_62 (A9), Phonnegut_63 (A9), Pioneer_63 (A9), Rahalelujah_62 (A9), RyeScarlet_64 (A9), Sachima_58 (A9), Scherzo_63 (A9), SheaKeira_59 (A9), Toaka_63 (A9), Tubs_62 (A9), Ugenie5_59 (A9), Vanisoa_62 (A9), Yecey3_63 (A9),

Start 23:

- Found in 46 of 339 (13.6%) of genes in pham
- Manual Annotations of this start: 39 of 295
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA_63 (A6), BABullseye_55 (A6), BlessJoy_62 (A6), Candra_60 (A6), Chartreuse_59 (A6), CloudWang3_64 (A6), Cookiedough_62 (A6), DaVinci_60 (A6), DarthPhader_58 (A12), Dorothea_62 (A6), EricB_61 (A6), Garak_64 (A6), Gladiator_60 (A6), Gruunaga_63 (A6), Helmet_64 (A6), Hexamo_63 (A6), Hoot_57 (A6), Indra_66 (A6), Isiphiwo_60 (A6), Jeffabunny_63 (A6), Kazan_63 (A6), Kipper29_62 (A6), Koko_65 (A6), Lilbunny_62 (A6), McFly_62 (A6), MyraDee_56 (A18), Neeharika16_61 (A6), Newrala_62 (A6), Pharaoh_56 (A12), Pmask_61 (A6), Polyphemus_62 (A6), Rifter_63 (A6), Roksolana_64 (A6), SmellyB_62 (A6), Steamy_57 (A12), SuperAwesome_62 (A6), SuperCallie99_59 (A6), Temprado_64 (A6), ToneTone_60 (A6), Tucker_63 (A6), VohminGhazi_62 (A6), Wiks_62 (A6), WunderPhul_63 (A6), Yokurt_62 (A6), Zaka_63 (A6), Zulu_64 (A6),

Start 24:

- Found in 8 of 339 (2.4%) of genes in pham
- Manual Annotations of this start: 7 of 295
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Drake94_56 (A10), EZMoney23_57 (A2), KittenMittens_55 (A10), NicoleTera_59 (A2), PeaceMeal1_56 (A10), Poompha_56 (A10), Severus_56 (A10), Trike_55 (A10),

Start 25:

- Found in 250 of 339 (73.7%) of genes in pham
- Manual Annotations of this start: 222 of 295
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 20ES_64 (A2), 40AC_61 (A17), AN3_64 (A2), AbbyPaige_63 (A2), Abdiel_57 (A4), Agape74_63 (A2), Albee_57 (A4), Alberto7_58 (A4), Annyong_57 (A4), Anselm_62 (A2), Avle17_57 (A4), B1_53 (A3), Baby16_57 (A4), BabyBack_59 (A2), BabyJohn_56 (A3), BabyRay_60 (A3), Bactobuster_59 (A2), Baehexic_60 (A2), BangNhom_57 (A4), Bartimeaus_57 (A4), BellusTerra_58 (A4), BengiVuitton_62 (A2), Benvolio_58 (A2), BiancaTri92_61 (A2), Blackmoor_57 (A4), BlueBird_62 (A3), Bombshell_57 (A4), Broseidon_57 (A4), Bruiser_56 (A4), BubbleTrouble_56 (A4), Bugatti_60 (A3), Buggy_63 (A2), Burger_55 (A4), CRB1_64 (A2), Caelakin_57 (A4), Camperdownii_55 (A4), Caviar_59 (A3), Centaur_62 (A2), CentreCat_57 (A4), Cerulean_58 (A4), ChampagnePapi_59 (A4), Changeling_60 (A2), Chaph_57 (A4), ChipMunk_63 (A2), Chiqui_56 (A3), Chupacabra_56 (A10), Cintron_56 (A4), Citius_57 (A4), Clarenza_56 (A4), Cocoaberry_57 (A4), Colin_59 (A2), Commander_57 (A4), Connomayer_57 (A4), Crucio_61 (A2), Dalmatian_62 (A2), Deano_56 (A4), Deloris_62 (A2), Dhanush_57 (A4), Dignity_63 (A2), DirtyDunning_56 (A4), DontArgue_55 (A10), Drake55_63 (A2), DropBear_59 (A3), Druantia_57 (A4), DudeLittle_60 (A2), DustyMartin_60 (A10), Eagle_57 (A4), Eaglepride_59 (A10), Eapen_57 (A4), Echild_61 (A2), Edison31_55 (A10), Equemioh13_61 (A2), Eris_56 (A4), Eros_57 (A4), Eurydice_58 (A4), Fameo_61 (A2), FiringLine_61 (A2), First_0063 (A2), Flare16_61 (A2), Florean_57

(A4), Flux_57 (A4), Fred313_59 (A3), Funston_56 (A4), Gadost_57 (A4), GaugeLDP_58 (A2), Georgie2_62 (A2), Giroux_60 (A3), Goose_58 (A10), Gratitude_59 (A2), HamSlice_55 (A4), Happiness_56 (A4), HarryHoudini_62 (A2), Heathen_60 (A3), Heffalump_60 (A2), HelDan_60 (A3), Holli_56 (A4), Hookmount_59 (A3), Houdini22_57 (A4), Huxley_56 (A4), ICleared_57 (A4), Iceman_57 (A4), Idleandcovert_60 (A3), Iracema64_58 (A4), IronMan_60 (A2), Isca_59 (A3), Iwokeuplikedis_63 (A2), JF2_58 (A3), JF4_58 (A3), Jaan_61 (A2), Jaykayelowell_55 (A4), Jerm_63 (A2), JetBlade_57 (A4), JoongJeon_56 (A4), JoshKayV_63 (A2), KFPoly_56 (A4), Kachowdy_59 (A3), Kalpine_59 (A2), Kampy_56 (A4), KingCyrus_62 (A2), Kingmustik0402_57 (A4), Koan_54 (A4), Koreni_56 (A4), Kremtemulon_57 (A4), Kristoff_57 (A10), Kyee_57 (A4), LHTSCC_59 (A4), LadyBird_66 (A2), Lambert1_59 (A3), Landor_61 (A2), LappelDuVide_57 (A4), Lemur_57 (A4), LeoAvram_56 (A4), Leogania_61 (A2), Leviathan_63 (A2), LilTurb_62 (A2), LionsBait_62 (A2), LittleB_57 (A4), LittleGuy_57 (A4), LochMonster_58 (A4), Lorenzo_57 (A4), Lunsford_58 (A4), MA5_60 (A3), MK4_60 (A3), Marchesa_59 (A3), Margo_59 (A3), Maverick_57 (A4), Maxo_58 (A4), Mayonnaise_56 (A4), Mazhar510_57 (A4), Medusa_57 (A4), MeeZee_57 (A4), Melvin_59 (A4), MiculUcigas_61 (A2), Millski_56 (A4), MissWhite_59 (A2), Morrow_58 (A4), NaSiaTalie_61 (A2), Nebs_58 (A4), Nemo27_57 (A4), Noella_59 (A3), Norbert_57 (A3), NorthStar_56 (A4), NotAPhaseMom_57 (A4), Nyxis_57 (A4), OKCentral2016_57 (A10), OKaNui_57 (A4), Obama12_58 (A4), Ohfah_58 (A4), Palestino_56 (A4), Panamaxus_57 (A3), Peaches_56 (A4), PeterPeter_57 (A4), Phacado_57 (A4), Phantastic_61 (A3), Felipe_58 (A4), Phighter1804_57 (A4), Phontbonne_57 (A4), Pipcraft_55 (A4), Piro94_61 (A2), Pistachio_61 (A3), Pocahontas_59 (A3), Polymorphads_58 (A4), Popcicle_59 (A3), Power_60 (A2), Pukovnik_59 (A2), Pumbaa_57 (A4), Puppy_61 (A3), QueenB2_60 (A2), QueenBeesly_61 (A2), QuinnKiro_58 (A3), Rebeuca_58 (A10), Relief_56 (A4), ResDef_59 (A3), Retro23_62 (A2), RhynO_58 (A10), Rockstar_58 (A3), Romney_56 (A4), Roosevelt_56 (A4), Rosa24_55 (A4), Rowdy_60 (A10), Ruin_57 (A4), Sabertooth_57 (A4), SaturnRing_60 (A3), Scamp_57 (A4), Scout_60 (A3), SemperFi_62 (A2), SenorClean_54 (A4), Shaka_56 (A4), Shapes_60 (A10), SheldonCooper_58 (A4), Skipitt_56 (A4), Sknot_61 (A2), Smeagan_64 (A2), SnapTap_61 (A2), Sparxx_58 (A4), Spino_56 (A4), SweetiePie_61 (A2), TM4_73 (K2), TNguyen7_61 (A3), Taquarus_57 (A4), TarsusIV_58 (A2), Terrific_62 (A2), Texage_58 (A3), Thanksgivukkah_56 (A4), TinaFeyge_56 (A4), Tinybot_56 (A4), TiroTheta9_57 (A4), Todacoro_59 (A3), Topanga_55 (A10), Tristan_57 (A2), Trixie_59 (A2), Trooper_62 (A2), TroyPia_58 (A4), Turbido_62 (A2), Twister_56 (A10), TygerBlood_57 (A4), Ulysses_56 (A4), Updawg_62 (A2), VA6_62 (A2), Veracruz_58 (A3), WalterMcMickey_56 (A10), Wander_57 (A4), WeiHuaDA_61 (A2), Whabigail7_62 (A2), WideWale_62 (A2), Wilbur_57 (A4), Wizard007_57 (A4), XianYue_59 (A2), YoSam321_57 (A4), Zimmer_58 (A12),

Summary by clusters:

There are 11 clusters represented in this pham: A, A17, A10, A12, A18, K2, A3, A2, A4, A6, A9,

Info for manual annotations of cluster A:

- Start number 22 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A10:

- Start number 24 was manually annotated 6 times for cluster A10.
- Start number 25 was manually annotated 11 times for cluster A10.

Info for manual annotations of cluster A12:

- Start number 23 was manually annotated 3 times for cluster A12.
- Start number 25 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A18:

- Start number 23 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 24 was manually annotated 1 time for cluster A2.
- Start number 25 was manually annotated 63 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 25 was manually annotated 32 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 25 was manually annotated 114 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 23 was manually annotated 35 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 22 was manually annotated 26 times for cluster A9.

Info for manual annotations of cluster K2:

- Start number 25 was manually annotated 1 time for cluster K2.

Gene Information:

Gene: 20ES_64 Start: 39776, Stop: 39642, Start Num: 25

Candidate Starts for 20ES_64:

(Start: 25 @39776 has 222 MA's), (33, 39725),

Gene: 40AC_61 Start: 40519, Stop: 40382, Start Num: 25

Candidate Starts for 40AC_61:

(Start: 25 @40519 has 222 MA's), (47, 40393),

Gene: AN3_64 Start: 38491, Stop: 38357, Start Num: 25

Candidate Starts for AN3_64:

(Start: 25 @38491 has 222 MA's),

Gene: AbbyPaige_63 Start: 39745, Stop: 39614, Start Num: 25

Candidate Starts for AbbyPaige_63:

(Start: 25 @39745 has 222 MA's), (48, 39622),

Gene: Abdiel_57 Start: 38487, Stop: 38353, Start Num: 25

Candidate Starts for Abdiel_57:

(Start: 25 @38487 has 222 MA's),

Gene: Agape74_63 Start: 39739, Stop: 39608, Start Num: 25

Candidate Starts for Agape74_63:
(Start: 25 @39739 has 222 MA's), (34, 39682), (48, 39616),

Gene: Albee_57 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Albee_57:
(Start: 25 @38486 has 222 MA's),

Gene: Alberto7_58 Start: 38823, Stop: 38689, Start Num: 25
Candidate Starts for Alberto7_58:
(Start: 25 @38823 has 222 MA's),

Gene: Aliter_63 Start: 39504, Stop: 39325, Start Num: 22
Candidate Starts for Aliter_63:
(11, 39648), (Start: 22 @39504 has 27 MA's), (27, 39465), (29, 39459), (39, 39387), (47, 39342),

Gene: Annyong_57 Start: 38531, Stop: 38397, Start Num: 25
Candidate Starts for Annyong_57:
(Start: 25 @38531 has 222 MA's),

Gene: Anselm_62 Start: 39655, Stop: 39518, Start Num: 25
Candidate Starts for Anselm_62:
(1, 40042), (4, 39979), (15, 39769), (Start: 25 @39655 has 222 MA's), (33, 39601), (48, 39526),

Gene: Arissanae_61 Start: 40070, Stop: 39891, Start Num: 22
Candidate Starts for Arissanae_61:
(11, 40214), (Start: 22 @40070 has 27 MA's), (27, 40031), (39, 39953), (47, 39908),

Gene: Artemis2UCLA_63 Start: 38204, Stop: 38049, Start Num: 23
Candidate Starts for Artemis2UCLA_63:
(18, 38228), (Start: 23 @38204 has 39 MA's), (31, 38156),

Gene: Avle17_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Avle17_57:
(Start: 25 @38483 has 222 MA's),

Gene: B1_53 Start: 37064, Stop: 36939, Start Num: 25
Candidate Starts for B1_53:
(Start: 25 @37064 has 222 MA's), (33, 37013), (39, 36986), (42, 36971),

Gene: BABullseye_55 Start: 35759, Stop: 35604, Start Num: 23
Candidate Starts for BABullseye_55:
(18, 35783), (Start: 23 @35759 has 39 MA's), (31, 35711),

Gene: Baby16_57 Start: 38497, Stop: 38363, Start Num: 25
Candidate Starts for Baby16_57:
(Start: 25 @38497 has 222 MA's),

Gene: BabyBack_59 Start: 39746, Stop: 39612, Start Num: 25
Candidate Starts for BabyBack_59:
(Start: 25 @39746 has 222 MA's), (26, 39734), (33, 39695), (43, 39638), (48, 39620),

Gene: BabyJohn_56 Start: 38882, Stop: 38757, Start Num: 25
Candidate Starts for BabyJohn_56:

(Start: 25 @38882 has 222 MA's), (33, 38831), (39, 38804), (42, 38789),

Gene: BabyRay_60 Start: 38861, Stop: 38718, Start Num: 25

Candidate Starts for BabyRay_60:

(Start: 25 @38861 has 222 MA's), (33, 38810), (34, 38804), (42, 38762),

Gene: Bactobuster_59 Start: 40060, Stop: 39926, Start Num: 25

Candidate Starts for Bactobuster_59:

(Start: 25 @40060 has 222 MA's), (33, 40009), (48, 39934),

Gene: Baehexic_60 Start: 39220, Stop: 39089, Start Num: 25

Candidate Starts for Baehexic_60:

(4, 39544), (Start: 25 @39220 has 222 MA's), (48, 39097),

Gene: BangNhom_57 Start: 38889, Stop: 38755, Start Num: 25

Candidate Starts for BangNhom_57:

(Start: 25 @38889 has 222 MA's),

Gene: Bartimeaus_57 Start: 38488, Stop: 38354, Start Num: 25

Candidate Starts for Bartimeaus_57:

(Start: 25 @38488 has 222 MA's),

Gene: Beemo_63 Start: 39674, Stop: 39495, Start Num: 22

Candidate Starts for Beemo_63:

(11, 39818), (Start: 22 @39674 has 27 MA's), (27, 39635), (29, 39629), (39, 39557), (47, 39512),

Gene: BellusTerra_58 Start: 38487, Stop: 38353, Start Num: 25

Candidate Starts for BellusTerra_58:

(Start: 25 @38487 has 222 MA's),

Gene: BengiVuitton_62 Start: 39747, Stop: 39613, Start Num: 25

Candidate Starts for BengiVuitton_62:

(Start: 25 @39747 has 222 MA's),

Gene: Benvolio_58 Start: 38762, Stop: 38631, Start Num: 25

Candidate Starts for Benvolio_58:

(Start: 25 @38762 has 222 MA's), (47, 38642),

Gene: BiancaTri92_61 Start: 39816, Stop: 39682, Start Num: 25

Candidate Starts for BiancaTri92_61:

(Start: 25 @39816 has 222 MA's), (33, 39765), (48, 39690),

Gene: Blackmoor_57 Start: 38488, Stop: 38354, Start Num: 25

Candidate Starts for Blackmoor_57:

(Start: 25 @38488 has 222 MA's),

Gene: BlessJoy_62 Start: 38630, Stop: 38475, Start Num: 23

Candidate Starts for BlessJoy_62:

(18, 38654), (Start: 23 @38630 has 39 MA's), (31, 38582),

Gene: BlueBird_62 Start: 38905, Stop: 38762, Start Num: 25

Candidate Starts for BlueBird_62:

(Start: 25 @38905 has 222 MA's), (34, 38848), (42, 38806), (46, 38791),

Gene: BogosyJay_61 Start: 39471, Stop: 39292, Start Num: 22
Candidate Starts for BogosyJay_61:
(Start: 22 @39471 has 27 MA's), (27, 39432), (39, 39354), (47, 39309),

Gene: Bombshell_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Bombshell_57:
(Start: 25 @38483 has 222 MA's),

Gene: Broseidon_57 Start: 38488, Stop: 38354, Start Num: 25
Candidate Starts for Broseidon_57:
(Start: 25 @38488 has 222 MA's),

Gene: Bruiser_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Bruiser_56:
(Start: 25 @38486 has 222 MA's),

Gene: BubbleTrouble_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for BubbleTrouble_56:
(Start: 25 @38486 has 222 MA's),

Gene: Bugatti_60 Start: 38905, Stop: 38762, Start Num: 25
Candidate Starts for Bugatti_60:
(Start: 25 @38905 has 222 MA's), (34, 38848), (42, 38806), (46, 38791),

Gene: Buggy_63 Start: 39796, Stop: 39665, Start Num: 25
Candidate Starts for Buggy_63:
(Start: 25 @39796 has 222 MA's), (48, 39673),

Gene: Burger_55 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Burger_55:
(Start: 25 @38486 has 222 MA's),

Gene: CRB1_64 Start: 40293, Stop: 40159, Start Num: 25
Candidate Starts for CRB1_64:
(Start: 25 @40293 has 222 MA's), (33, 40242), (42, 40194),

Gene: Caelakin_57 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Caelakin_57:
(Start: 25 @38486 has 222 MA's),

Gene: Camperdownii_55 Start: 38160, Stop: 38026, Start Num: 25
Candidate Starts for Camperdownii_55:
(Start: 25 @38160 has 222 MA's),

Gene: Candra_60 Start: 38123, Stop: 37968, Start Num: 23
Candidate Starts for Candra_60:
(18, 38147), (Start: 23 @38123 has 39 MA's), (31, 38075),

Gene: Catalina_64 Start: 39577, Stop: 39398, Start Num: 22
Candidate Starts for Catalina_64:
(11, 39721), (Start: 22 @39577 has 27 MA's), (27, 39538), (29, 39532), (39, 39460), (47, 39415),

Gene: Caviar_59 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for Caviar_59:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: Centaur_62 Start: 39434, Stop: 39303, Start Num: 25
Candidate Starts for Centaur_62:
(4, 39758), (Start: 25 @39434 has 222 MA's), (48, 39311),

Gene: CentreCat_57 Start: 38489, Stop: 38355, Start Num: 25
Candidate Starts for CentreCat_57:
(Start: 25 @38489 has 222 MA's),

Gene: Cerulean_58 Start: 38890, Stop: 38756, Start Num: 25
Candidate Starts for Cerulean_58:
(Start: 25 @38890 has 222 MA's),

Gene: ChampagnePapi_59 Start: 38889, Stop: 38755, Start Num: 25
Candidate Starts for ChampagnePapi_59:
(Start: 25 @38889 has 222 MA's),

Gene: Changeling_60 Start: 39850, Stop: 39719, Start Num: 25
Candidate Starts for Changeling_60:
(Start: 25 @39850 has 222 MA's), (33, 39799), (42, 39751), (48, 39727),

Gene: Chaph_57 Start: 38497, Stop: 38363, Start Num: 25
Candidate Starts for Chaph_57:
(Start: 25 @38497 has 222 MA's),

Gene: Chargerpower_59 Start: 38011, Stop: 37850, Start Num: 22
Candidate Starts for Chargerpower_59:
(11, 38152), (Start: 22 @38011 has 27 MA's), (27, 37975), (33, 37939), (47, 37867),

Gene: Charm_60 Start: 39202, Stop: 39038, Start Num: 22
Candidate Starts for Charm_60:
(Start: 22 @39202 has 27 MA's), (27, 39166), (28, 39163), (42, 39079), (47, 39055),

Gene: Chartreuse_59 Start: 37474, Stop: 37319, Start Num: 23
Candidate Starts for Chartreuse_59:
(18, 37498), (Start: 23 @37474 has 39 MA's), (31, 37426),

Gene: ChipMunk_63 Start: 41005, Stop: 40868, Start Num: 25
Candidate Starts for ChipMunk_63:
(Start: 25 @41005 has 222 MA's), (33, 40951), (48, 40876),

Gene: Chiqui_56 Start: 38891, Stop: 38766, Start Num: 25
Candidate Starts for Chiqui_56:
(Start: 25 @38891 has 222 MA's), (33, 38840), (39, 38813), (42, 38798),

Gene: Chupacabra_56 Start: 38375, Stop: 38241, Start Num: 25
Candidate Starts for Chupacabra_56:
(Start: 25 @38375 has 222 MA's), (45, 38264),

Gene: Cintron_56 Start: 38463, Stop: 38329, Start Num: 25

Candidate Starts for Cintron_56:
(Start: 25 @38463 has 222 MA's),

Gene: Citius_57 Start: 38507, Stop: 38373, Start Num: 25
Candidate Starts for Citius_57:
(Start: 25 @38507 has 222 MA's),

Gene: Clarenza_56 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Clarenza_56:
(Start: 25 @38483 has 222 MA's),

Gene: CloudWang3_64 Start: 38716, Stop: 38564, Start Num: 23
Candidate Starts for CloudWang3_64:
(18, 38740), (Start: 23 @38716 has 39 MA's), (31, 38668),

Gene: Cocoaberry_57 Start: 38490, Stop: 38356, Start Num: 25
Candidate Starts for Cocoaberry_57:
(Start: 25 @38490 has 222 MA's),

Gene: Colin_59 Start: 39562, Stop: 39434, Start Num: 25
Candidate Starts for Colin_59:
(Start: 25 @39562 has 222 MA's), (43, 39460), (48, 39442),

Gene: Commander_57 Start: 38485, Stop: 38351, Start Num: 25
Candidate Starts for Commander_57:
(Start: 25 @38485 has 222 MA's),

Gene: Connomayer_57 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Connomayer_57:
(Start: 25 @38486 has 222 MA's),

Gene: Cookiedough_62 Start: 38102, Stop: 37947, Start Num: 23
Candidate Starts for Cookiedough_62:
(18, 38126), (Start: 23 @38102 has 39 MA's), (31, 38054),

Gene: Crucio_61 Start: 39422, Stop: 39285, Start Num: 25
Candidate Starts for Crucio_61:
(4, 39746), (14, 39551), (15, 39536), (Start: 25 @39422 has 222 MA's), (33, 39368), (48, 39293),

Gene: DaVinci_60 Start: 37528, Stop: 37373, Start Num: 23
Candidate Starts for DaVinci_60:
(18, 37552), (Start: 23 @37528 has 39 MA's), (31, 37480),

Gene: Dalmatian_62 Start: 39628, Stop: 39491, Start Num: 25
Candidate Starts for Dalmatian_62:
(1, 40015), (4, 39952), (15, 39742), (Start: 25 @39628 has 222 MA's), (33, 39574), (48, 39499),

Gene: Darrell_64 Start: 40145, Stop: 39966, Start Num: 22
Candidate Starts for Darrell_64:
(11, 40289), (Start: 22 @40145 has 27 MA's), (39, 40028), (47, 39983),

Gene: DarthPhader_58 Start: 40398, Stop: 40243, Start Num: 23
Candidate Starts for DarthPhader_58:

(Start: 23 @40398 has 39 MA's), (38, 40305), (41, 40284), (47, 40257),

Gene: Deano_56 Start: 38494, Stop: 38360, Start Num: 25

Candidate Starts for Deano_56:

(Start: 25 @38494 has 222 MA's),

Gene: Deloris_62 Start: 39443, Stop: 39309, Start Num: 25

Candidate Starts for Deloris_62:

(Start: 25 @39443 has 222 MA's),

Gene: Dhanush_57 Start: 38489, Stop: 38355, Start Num: 25

Candidate Starts for Dhanush_57:

(Start: 25 @38489 has 222 MA's),

Gene: Dignity_63 Start: 39819, Stop: 39688, Start Num: 25

Candidate Starts for Dignity_63:

(Start: 25 @39819 has 222 MA's), (48, 39696),

Gene: DirtyDunning_56 Start: 38498, Stop: 38364, Start Num: 25

Candidate Starts for DirtyDunning_56:

(Start: 25 @38498 has 222 MA's),

Gene: DontArgue_55 Start: 37561, Stop: 37427, Start Num: 25

Candidate Starts for DontArgue_55:

(Start: 25 @37561 has 222 MA's), (45, 37450),

Gene: Dorothea_62 Start: 38100, Stop: 37945, Start Num: 23

Candidate Starts for Dorothea_62:

(18, 38124), (Start: 23 @38100 has 39 MA's), (31, 38052),

Gene: Drake55_63 Start: 39519, Stop: 39385, Start Num: 25

Candidate Starts for Drake55_63:

(4, 39843), (Start: 25 @39519 has 222 MA's), (33, 39468), (34, 39462), (48, 39393),

Gene: Drake94_56 Start: 37622, Stop: 37479, Start Num: 24

Candidate Starts for Drake94_56:

(Start: 24 @37622 has 7 MA's), (29, 37583), (30, 37580), (36, 37535), (42, 37514),

Gene: DreamTeam1_60 Start: 39034, Stop: 38870, Start Num: 22

Candidate Starts for DreamTeam1_60:

(11, 39178), (12, 39157), (Start: 22 @39034 has 27 MA's), (27, 38998), (28, 38995), (42, 38911), (47, 38887),

Gene: DropBear_59 Start: 38807, Stop: 38664, Start Num: 25

Candidate Starts for DropBear_59:

(Start: 25 @38807 has 222 MA's), (33, 38756), (34, 38750), (42, 38708),

Gene: Druantia_57 Start: 38489, Stop: 38355, Start Num: 25

Candidate Starts for Druantia_57:

(Start: 25 @38489 has 222 MA's),

Gene: DudeLittle_60 Start: 39394, Stop: 39257, Start Num: 25

Candidate Starts for DudeLittle_60:

(1, 39781), (4, 39718), (15, 39508), (Start: 25 @39394 has 222 MA's), (33, 39340), (48, 39265),

Gene: DustyMartin_60 Start: 38480, Stop: 38346, Start Num: 25

Candidate Starts for DustyMartin_60:

(Start: 25 @38480 has 222 MA's), (45, 38369),

Gene: EZMoney23_57 Start: 38920, Stop: 38777, Start Num: 24

Candidate Starts for EZMoney23_57:

(3, 39262), (9, 39088), (19, 38944), (Start: 24 @38920 has 7 MA's), (30, 38878), (42, 38812), (43, 38803), (48, 38785),

Gene: Eagle_57 Start: 38511, Stop: 38377, Start Num: 25

Candidate Starts for Eagle_57:

(Start: 25 @38511 has 222 MA's),

Gene: Eaglepride_59 Start: 38565, Stop: 38431, Start Num: 25

Candidate Starts for Eaglepride_59:

(Start: 25 @38565 has 222 MA's), (45, 38454),

Gene: Eapen_57 Start: 38481, Stop: 38347, Start Num: 25

Candidate Starts for Eapen_57:

(Start: 25 @38481 has 222 MA's),

Gene: Echild_61 Start: 38786, Stop: 38655, Start Num: 25

Candidate Starts for Echild_61:

(Start: 25 @38786 has 222 MA's), (47, 38666),

Gene: Edison31_55 Start: 38408, Stop: 38274, Start Num: 25

Candidate Starts for Edison31_55:

(Start: 25 @38408 has 222 MA's), (45, 38297),

Gene: EdogawaKiddo_60 Start: 39541, Stop: 39362, Start Num: 22

Candidate Starts for EdogawaKiddo_60:

(11, 39685), (Start: 22 @39541 has 27 MA's), (27, 39502), (39, 39424), (45, 39391), (47, 39379),

Gene: Elephantoon_61 Start: 38884, Stop: 38705, Start Num: 22

Candidate Starts for Elephantoon_61:

(11, 39028), (Start: 22 @38884 has 27 MA's), (39, 38767), (47, 38722),

Gene: Equemioh13_61 Start: 39339, Stop: 39208, Start Num: 25

Candidate Starts for Equemioh13_61:

(4, 39663), (Start: 25 @39339 has 222 MA's), (48, 39216),

Gene: EricB_61 Start: 38080, Stop: 37925, Start Num: 23

Candidate Starts for EricB_61:

(18, 38104), (Start: 23 @38080 has 39 MA's), (31, 38032),

Gene: Eris_56 Start: 38486, Stop: 38352, Start Num: 25

Candidate Starts for Eris_56:

(Start: 25 @38486 has 222 MA's),

Gene: Eros_57 Start: 38488, Stop: 38354, Start Num: 25

Candidate Starts for Eros_57:

(Start: 25 @38488 has 222 MA's),

Gene: Eurydice_58 Start: 38483, Stop: 38349, Start Num: 25

Candidate Starts for Eurydice_58:

(Start: 25 @38483 has 222 MA's),

Gene: Fameo_61 Start: 39753, Stop: 39616, Start Num: 25

Candidate Starts for Fameo_61:

(Start: 25 @39753 has 222 MA's), (33, 39699), (48, 39624),

Gene: FiringLine_61 Start: 39403, Stop: 39266, Start Num: 25

Candidate Starts for FiringLine_61:

(4, 39727), (15, 39517), (Start: 25 @39403 has 222 MA's), (33, 39349), (48, 39274),

Gene: First_0063 Start: 39676, Stop: 39542, Start Num: 25

Candidate Starts for First_0063:

(Start: 25 @39676 has 222 MA's), (33, 39625), (42, 39577),

Gene: Flare16_61 Start: 39095, Stop: 38964, Start Num: 25

Candidate Starts for Flare16_61:

(Start: 25 @39095 has 222 MA's), (48, 38972),

Gene: Florean_57 Start: 38485, Stop: 38351, Start Num: 25

Candidate Starts for Florean_57:

(Start: 25 @38485 has 222 MA's),

Gene: Flux_57 Start: 38485, Stop: 38351, Start Num: 25

Candidate Starts for Flux_57:

(Start: 25 @38485 has 222 MA's),

Gene: Fred313_59 Start: 38498, Stop: 38355, Start Num: 25

Candidate Starts for Fred313_59:

(Start: 25 @38498 has 222 MA's), (33, 38447), (34, 38441), (42, 38399),

Gene: Funston_56 Start: 38486, Stop: 38352, Start Num: 25

Candidate Starts for Funston_56:

(Start: 25 @38486 has 222 MA's),

Gene: Gadost_57 Start: 38490, Stop: 38356, Start Num: 25

Candidate Starts for Gadost_57:

(Start: 25 @38490 has 222 MA's),

Gene: Garak_64 Start: 38571, Stop: 38416, Start Num: 23

Candidate Starts for Garak_64:

(18, 38595), (Start: 23 @38571 has 39 MA's), (31, 38523),

Gene: GaugeLDP_58 Start: 39299, Stop: 39165, Start Num: 25

Candidate Starts for GaugeLDP_58:

(Start: 25 @39299 has 222 MA's), (33, 39248), (43, 39191), (48, 39173),

Gene: Georgie2_62 Start: 39448, Stop: 39311, Start Num: 25

Candidate Starts for Georgie2_62:

(4, 39772), (14, 39577), (15, 39562), (Start: 25 @39448 has 222 MA's), (33, 39394), (48, 39319),

Gene: Giroux_60 Start: 38904, Stop: 38761, Start Num: 25
Candidate Starts for Giroux_60:
(Start: 25 @38904 has 222 MA's), (34, 38847), (42, 38805), (46, 38790),

Gene: Gladiator_60 Start: 37796, Stop: 37641, Start Num: 23
Candidate Starts for Gladiator_60:
(18, 37820), (20, 37808), (Start: 23 @37796 has 39 MA's), (31, 37748),

Gene: Goose_58 Start: 38191, Stop: 38057, Start Num: 25
Candidate Starts for Goose_58:
(Start: 25 @38191 has 222 MA's), (45, 38080),

Gene: Gratitude_59 Start: 39339, Stop: 39208, Start Num: 25
Candidate Starts for Gratitude_59:
(4, 39663), (Start: 25 @39339 has 222 MA's), (48, 39216),

Gene: Gruunaga_63 Start: 38495, Stop: 38340, Start Num: 23
Candidate Starts for Gruunaga_63:
(18, 38519), (Start: 23 @38495 has 39 MA's), (31, 38447),

Gene: HamSlice_55 Start: 38484, Stop: 38350, Start Num: 25
Candidate Starts for HamSlice_55:
(Start: 25 @38484 has 222 MA's),

Gene: Hanray_61 Start: 39629, Stop: 39450, Start Num: 22
Candidate Starts for Hanray_61:
(11, 39773), (Start: 22 @39629 has 27 MA's), (27, 39590), (29, 39584), (32, 39548), (39, 39512), (47, 39467),

Gene: Happiness_56 Start: 38472, Stop: 38338, Start Num: 25
Candidate Starts for Happiness_56:
(Start: 25 @38472 has 222 MA's),

Gene: HarryHoudini_62 Start: 39538, Stop: 39401, Start Num: 25
Candidate Starts for HarryHoudini_62:
(Start: 25 @39538 has 222 MA's), (33, 39484),

Gene: Heathen_60 Start: 38596, Stop: 38453, Start Num: 25
Candidate Starts for Heathen_60:
(Start: 25 @38596 has 222 MA's), (33, 38545), (34, 38539), (42, 38497),

Gene: Heffalump_60 Start: 40221, Stop: 40084, Start Num: 25
Candidate Starts for Heffalump_60:
(16, 40284), (Start: 25 @40221 has 222 MA's), (33, 40167), (48, 40092),

Gene: HelDan_60 Start: 38812, Stop: 38669, Start Num: 25
Candidate Starts for HelDan_60:
(Start: 25 @38812 has 222 MA's), (33, 38761), (34, 38755), (42, 38713),

Gene: Helmet_64 Start: 38571, Stop: 38416, Start Num: 23
Candidate Starts for Helmet_64:
(18, 38595), (Start: 23 @38571 has 39 MA's), (31, 38523),

Gene: Hexamo_63 Start: 38201, Stop: 38046, Start Num: 23
Candidate Starts for Hexamo_63:
(18, 38225), (Start: 23 @38201 has 39 MA's), (31, 38153),

Gene: Horex_61 Start: 39645, Stop: 39466, Start Num: 22
Candidate Starts for Horex_61:
(11, 39789), (Start: 22 @39645 has 27 MA's), (27, 39606), (29, 39600), (32, 39564), (39, 39528), (47, 39483),

Gene: Holli_56 Start: 38276, Stop: 38142, Start Num: 25
Candidate Starts for Holli_56:
(Start: 25 @38276 has 222 MA's),

Gene: Hookmount_59 Start: 38865, Stop: 38728, Start Num: 25
Candidate Starts for Hookmount_59:
(Start: 25 @38865 has 222 MA's), (29, 38841), (42, 38772),

Gene: Hoot_57 Start: 35938, Stop: 35783, Start Num: 23
Candidate Starts for Hoot_57:
(18, 35962), (Start: 23 @35938 has 39 MA's), (31, 35890),

Gene: HortumSL17_63 Start: 39576, Stop: 39397, Start Num: 22
Candidate Starts for HortumSL17_63:
(11, 39720), (Start: 22 @39576 has 27 MA's), (27, 39537), (29, 39531), (39, 39459), (47, 39414),

Gene: Houdini22_57 Start: 38490, Stop: 38356, Start Num: 25
Candidate Starts for Houdini22_57:
(Start: 25 @38490 has 222 MA's),

Gene: Huxley_56 Start: 38547, Stop: 38413, Start Num: 25
Candidate Starts for Huxley_56:
(Start: 25 @38547 has 222 MA's),

Gene: ICleared_57 Start: 38515, Stop: 38381, Start Num: 25
Candidate Starts for ICleared_57:
(Start: 25 @38515 has 222 MA's),

Gene: Iceman_57 Start: 38772, Stop: 38638, Start Num: 25
Candidate Starts for Iceman_57:
(Start: 25 @38772 has 222 MA's),

Gene: Idleandcovert_60 Start: 38905, Stop: 38762, Start Num: 25
Candidate Starts for Idleandcovert_60:
(Start: 25 @38905 has 222 MA's), (34, 38848), (42, 38806), (46, 38791),

Gene: Indra_66 Start: 38572, Stop: 38417, Start Num: 23
Candidate Starts for Indra_66:
(18, 38596), (Start: 23 @38572 has 39 MA's), (31, 38524),

Gene: Iracema64_58 Start: 38750, Stop: 38616, Start Num: 25
Candidate Starts for Iracema64_58:
(Start: 25 @38750 has 222 MA's),

Gene: IronMan_60 Start: 40243, Stop: 40109, Start Num: 25
Candidate Starts for IronMan_60:
(Start: 25 @40243 has 222 MA's), (33, 40192), (48, 40117),

Gene: Isca_59 Start: 38363, Stop: 38238, Start Num: 25
Candidate Starts for Isca_59:
(Start: 25 @38363 has 222 MA's), (33, 38312), (39, 38285), (42, 38270),

Gene: Isiphiwo_60 Start: 37654, Stop: 37499, Start Num: 23
Candidate Starts for Isiphiwo_60:
(18, 37678), (Start: 23 @37654 has 39 MA's), (31, 37606),

Gene: Iwokeuplikedis_63 Start: 39240, Stop: 39106, Start Num: 25
Candidate Starts for Iwokeuplikedis_63:
(Start: 25 @39240 has 222 MA's), (33, 39189), (48, 39114),

Gene: JF2_58 Start: 37064, Stop: 36939, Start Num: 25
Candidate Starts for JF2_58:
(Start: 25 @37064 has 222 MA's), (33, 37013), (39, 36986), (42, 36971),

Gene: JF4_58 Start: 37064, Stop: 36939, Start Num: 25
Candidate Starts for JF4_58:
(Start: 25 @37064 has 222 MA's), (33, 37013), (39, 36986), (42, 36971),

Gene: Jaan_61 Start: 40403, Stop: 40269, Start Num: 25
Candidate Starts for Jaan_61:
(Start: 25 @40403 has 222 MA's), (33, 40352), (48, 40277),

Gene: Jaykayelowell_55 Start: 38479, Stop: 38345, Start Num: 25
Candidate Starts for Jaykayelowell_55:
(Start: 25 @38479 has 222 MA's),

Gene: Jeffabunny_63 Start: 38198, Stop: 38043, Start Num: 23
Candidate Starts for Jeffabunny_63:
(18, 38222), (Start: 23 @38198 has 39 MA's), (31, 38150),

Gene: Jerm_63 Start: 39811, Stop: 39680, Start Num: 25
Candidate Starts for Jerm_63:
(Start: 25 @39811 has 222 MA's), (48, 39688),

Gene: JetBlade_57 Start: 38480, Stop: 38346, Start Num: 25
Candidate Starts for JetBlade_57:
(Start: 25 @38480 has 222 MA's),

Gene: Jiawan_60 Start: 39661, Stop: 39482, Start Num: 22
Candidate Starts for Jiawan_60:
(11, 39805), (Start: 22 @39661 has 27 MA's), (27, 39622), (29, 39616), (39, 39544), (47, 39499),

Gene: JoongJeon_56 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for JoongJeon_56:
(Start: 25 @38483 has 222 MA's),

Gene: JoshKayV_63 Start: 39875, Stop: 39744, Start Num: 25
Candidate Starts for JoshKayV_63:
(Start: 25 @39875 has 222 MA's), (48, 39752),

Gene: KFPoly_56 Start: 38480, Stop: 38346, Start Num: 25
Candidate Starts for KFPoly_56:
(Start: 25 @38480 has 222 MA's),

Gene: Kachowdy_59 Start: 38848, Stop: 38705, Start Num: 25
Candidate Starts for Kachowdy_59:
(Start: 25 @38848 has 222 MA's), (33, 38797), (34, 38791), (42, 38749),

Gene: Kalpine_59 Start: 39521, Stop: 39387, Start Num: 25
Candidate Starts for Kalpine_59:
(Start: 25 @39521 has 222 MA's), (33, 39470), (34, 39464),

Gene: Kampy_56 Start: 38488, Stop: 38354, Start Num: 25
Candidate Starts for Kampy_56:
(Start: 25 @38488 has 222 MA's),

Gene: Kazan_63 Start: 38093, Stop: 37938, Start Num: 23
Candidate Starts for Kazan_63:
(18, 38117), (Start: 23 @38093 has 39 MA's), (31, 38045),

Gene: Keziacharles14_62 Start: 40639, Stop: 40460, Start Num: 22
Candidate Starts for Keziacharles14_62:
(Start: 22 @40639 has 27 MA's), (39, 40522), (47, 40477),

Gene: KingCyrus_62 Start: 41001, Stop: 40864, Start Num: 25
Candidate Starts for KingCyrus_62:
(Start: 25 @41001 has 222 MA's), (33, 40947), (48, 40872),

Gene: Kingmustik0402_57 Start: 38475, Stop: 38341, Start Num: 25
Candidate Starts for Kingmustik0402_57:
(Start: 25 @38475 has 222 MA's),

Gene: Kipper29_62 Start: 38106, Stop: 37951, Start Num: 23
Candidate Starts for Kipper29_62:
(18, 38130), (Start: 23 @38106 has 39 MA's), (31, 38058),

Gene: KittenMittens_55 Start: 37630, Stop: 37487, Start Num: 24
Candidate Starts for KittenMittens_55:
(Start: 24 @37630 has 7 MA's), (29, 37591), (30, 37588), (36, 37543), (42, 37522),

Gene: Koan_54 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Koan_54:
(Start: 25 @38486 has 222 MA's),

Gene: Koko_65 Start: 39056, Stop: 38904, Start Num: 23
Candidate Starts for Koko_65:
(18, 39080), (Start: 23 @39056 has 39 MA's), (31, 39008),

Gene: Koreni_56 Start: 38167, Stop: 38033, Start Num: 25

Candidate Starts for Koreni_56:
(Start: 25 @38167 has 222 MA's),

Gene: Kremtemulon_57 Start: 38434, Stop: 38300, Start Num: 25
Candidate Starts for Kremtemulon_57:
(Start: 25 @38434 has 222 MA's),

Gene: Kristoff_57 Start: 38766, Stop: 38632, Start Num: 25
Candidate Starts for Kristoff_57:
(Start: 25 @38766 has 222 MA's), (45, 38655),

Gene: Kyee_57 Start: 38484, Stop: 38350, Start Num: 25
Candidate Starts for Kyee_57:
(Start: 25 @38484 has 222 MA's),

Gene: LHTSCC_59 Start: 38889, Stop: 38755, Start Num: 25
Candidate Starts for LHTSCC_59:
(Start: 25 @38889 has 222 MA's),

Gene: LadyBird_66 Start: 40255, Stop: 40121, Start Num: 25
Candidate Starts for LadyBird_66:
(Start: 25 @40255 has 222 MA's),

Gene: Lambert1_59 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for Lambert1_59:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: Landor_61 Start: 40321, Stop: 40187, Start Num: 25
Candidate Starts for Landor_61:
(Start: 25 @40321 has 222 MA's), (33, 40270), (48, 40195),

Gene: LappelDuVide_57 Start: 38485, Stop: 38351, Start Num: 25
Candidate Starts for LappelDuVide_57:
(Start: 25 @38485 has 222 MA's),

Gene: Lemur_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Lemur_57:
(Start: 25 @38483 has 222 MA's),

Gene: LeoAvram_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for LeoAvram_56:
(Start: 25 @38486 has 222 MA's),

Gene: Leogania_61 Start: 40194, Stop: 40060, Start Num: 25
Candidate Starts for Leogania_61:
(Start: 25 @40194 has 222 MA's), (33, 40143), (48, 40068),

Gene: Leviathan_63 Start: 39868, Stop: 39737, Start Num: 25
Candidate Starts for Leviathan_63:
(Start: 25 @39868 has 222 MA's), (48, 39745),

Gene: LilTurb_62 Start: 39692, Stop: 39561, Start Num: 25
Candidate Starts for LilTurb_62:

(11, 39860), (Start: 22 @39716 has 27 MA's), (Start: 25 @39692 has 222 MA's), (48, 39569),

Gene: Lilbunny_62 Start: 38202, Stop: 38047, Start Num: 23

Candidate Starts for Lilbunny_62:

(18, 38226), (Start: 23 @38202 has 39 MA's), (31, 38154),

Gene: Lilleskat_59 Start: 39494, Stop: 39315, Start Num: 22

Candidate Starts for Lilleskat_59:

(11, 39638), (Start: 22 @39494 has 27 MA's), (27, 39455), (39, 39377), (45, 39344), (47, 39332),

Gene: LionsBait_62 Start: 40847, Stop: 40716, Start Num: 25

Candidate Starts for LionsBait_62:

(Start: 25 @40847 has 222 MA's), (48, 40724),

Gene: LittleB_57 Start: 38487, Stop: 38353, Start Num: 25

Candidate Starts for LittleB_57:

(Start: 25 @38487 has 222 MA's),

Gene: LittleGuy_57 Start: 38382, Stop: 38248, Start Num: 25

Candidate Starts for LittleGuy_57:

(Start: 25 @38382 has 222 MA's),

Gene: LochMonster_58 Start: 38722, Stop: 38588, Start Num: 25

Candidate Starts for LochMonster_58:

(Start: 25 @38722 has 222 MA's),

Gene: LoneWolf_63 Start: 39606, Stop: 39427, Start Num: 22

Candidate Starts for LoneWolf_63:

(11, 39750), (12, 39729), (13, 39717), (Start: 22 @39606 has 27 MA's), (39, 39489), (47, 39444),

Gene: Lorenzo_57 Start: 38486, Stop: 38352, Start Num: 25

Candidate Starts for Lorenzo_57:

(Start: 25 @38486 has 222 MA's),

Gene: Lunsford_58 Start: 38480, Stop: 38346, Start Num: 25

Candidate Starts for Lunsford_58:

(Start: 25 @38480 has 222 MA's),

Gene: MA5_60 Start: 38264, Stop: 38139, Start Num: 25

Candidate Starts for MA5_60:

(Start: 25 @38264 has 222 MA's), (33, 38213), (39, 38186), (42, 38171),

Gene: MK4_60 Start: 38348, Stop: 38223, Start Num: 25

Candidate Starts for MK4_60:

(Start: 25 @38348 has 222 MA's), (33, 38297), (39, 38270), (42, 38255),

Gene: Maminiaina_61 Start: 39453, Stop: 39274, Start Num: 22

Candidate Starts for Maminiaina_61:

(Start: 22 @39453 has 27 MA's), (27, 39414), (39, 39336), (47, 39291),

Gene: Marchesa_59 Start: 38798, Stop: 38655, Start Num: 25

Candidate Starts for Marchesa_59:

(Start: 25 @38798 has 222 MA's), (33, 38747), (34, 38741), (42, 38699),

Gene: Margo_59 Start: 38890, Stop: 38753, Start Num: 25
Candidate Starts for Margo_59:
(Start: 25 @38890 has 222 MA's), (29, 38866), (42, 38797),

Gene: Maverick_57 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Maverick_57:
(Start: 25 @38486 has 222 MA's),

Gene: Maxo_58 Start: 38488, Stop: 38354, Start Num: 25
Candidate Starts for Maxo_58:
(Start: 25 @38488 has 222 MA's),

Gene: Mayonnaise_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Mayonnaise_56:
(Start: 25 @38486 has 222 MA's),

Gene: Mazhar510_57 Start: 38487, Stop: 38353, Start Num: 25
Candidate Starts for Mazhar510_57:
(Start: 25 @38487 has 222 MA's),

Gene: McFly_62 Start: 38087, Stop: 37932, Start Num: 23
Candidate Starts for McFly_62:
(18, 38111), (Start: 23 @38087 has 39 MA's), (31, 38039),

Gene: Medusa_57 Start: 38485, Stop: 38351, Start Num: 25
Candidate Starts for Medusa_57:
(Start: 25 @38485 has 222 MA's),

Gene: MeeZee_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for MeeZee_57:
(Start: 25 @38483 has 222 MA's),

Gene: Melvin_59 Start: 38481, Stop: 38347, Start Num: 25
Candidate Starts for Melvin_59:
(Start: 25 @38481 has 222 MA's),

Gene: MiculUcigas_61 Start: 38998, Stop: 38867, Start Num: 25
Candidate Starts for MiculUcigas_61:
(4, 39322), (Start: 25 @38998 has 222 MA's), (48, 38875),

Gene: Millski_56 Start: 38487, Stop: 38353, Start Num: 25
Candidate Starts for Millski_56:
(Start: 25 @38487 has 222 MA's),

Gene: MissWhite_59 Start: 37895, Stop: 37767, Start Num: 25
Candidate Starts for MissWhite_59:
(8, 38102), (Start: 25 @37895 has 222 MA's), (36, 37823), (42, 37802), (48, 37775),

Gene: Morrow_58 Start: 38492, Stop: 38358, Start Num: 25
Candidate Starts for Morrow_58:
(Start: 25 @38492 has 222 MA's),

Gene: MyraDee_56 Start: 36038, Stop: 35877, Start Num: 23

Candidate Starts for MyraDee_56:

(Start: 23 @36038 has 39 MA's), (27, 36008), (47, 35894),

Gene: Myxus_62 Start: 39576, Stop: 39397, Start Num: 22

Candidate Starts for Myxus_62:

(11, 39720), (Start: 22 @39576 has 27 MA's), (27, 39537), (29, 39531), (39, 39459), (47, 39414),

Gene: NaSiaTalie_61 Start: 39092, Stop: 38961, Start Num: 25

Candidate Starts for NaSiaTalie_61:

(Start: 25 @39092 has 222 MA's), (48, 38969),

Gene: Nebs_58 Start: 38486, Stop: 38352, Start Num: 25

Candidate Starts for Nebs_58:

(Start: 25 @38486 has 222 MA's),

Gene: Neeharika16_61 Start: 37547, Stop: 37392, Start Num: 23

Candidate Starts for Neeharika16_61:

(18, 37571), (Start: 23 @37547 has 39 MA's), (31, 37499),

Gene: Nemo27_57 Start: 38485, Stop: 38351, Start Num: 25

Candidate Starts for Nemo27_57:

(Start: 25 @38485 has 222 MA's),

Gene: Newrala_62 Start: 38089, Stop: 37934, Start Num: 23

Candidate Starts for Newrala_62:

(18, 38113), (Start: 23 @38089 has 39 MA's), (31, 38041),

Gene: NicoleTera_59 Start: 39399, Stop: 39256, Start Num: 24

Candidate Starts for NicoleTera_59:

(Start: 24 @39399 has 7 MA's), (30, 39357), (42, 39291), (43, 39282), (48, 39264),

Gene: Noella_59 Start: 38865, Stop: 38728, Start Num: 25

Candidate Starts for Noella_59:

(Start: 25 @38865 has 222 MA's), (29, 38841), (42, 38772),

Gene: Norbert_57 Start: 38864, Stop: 38727, Start Num: 25

Candidate Starts for Norbert_57:

(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: NorthStar_56 Start: 38486, Stop: 38352, Start Num: 25

Candidate Starts for NorthStar_56:

(Start: 25 @38486 has 222 MA's),

Gene: NotAPhaseMom_57 Start: 38490, Stop: 38356, Start Num: 25

Candidate Starts for NotAPhaseMom_57:

(Start: 25 @38490 has 222 MA's),

Gene: Nyxis_57 Start: 38376, Stop: 38242, Start Num: 25

Candidate Starts for Nyxis_57:

(Start: 25 @38376 has 222 MA's),

Gene: OKCentral2016_57 Start: 38094, Stop: 37960, Start Num: 25

Candidate Starts for OKCentral2016_57:
(Start: 25 @38094 has 222 MA's), (45, 37983),

Gene: OKaNui_57 Start: 38536, Stop: 38402, Start Num: 25
Candidate Starts for OKaNui_57:
(Start: 25 @38536 has 222 MA's),

Gene: Obama12_58 Start: 38873, Stop: 38739, Start Num: 25
Candidate Starts for Obama12_58:
(Start: 25 @38873 has 222 MA's),

Gene: Ohfah_58 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Ohfah_58:
(Start: 25 @38486 has 222 MA's),

Gene: Onglai_61 Start: 37917, Stop: 37738, Start Num: 22
Candidate Starts for Onglai_61:
(11, 38061), (Start: 22 @37917 has 27 MA's), (27, 37878), (29, 37872), (39, 37800), (47, 37755),

Gene: PackMan_61 Start: 39451, Stop: 39272, Start Num: 22
Candidate Starts for PackMan_61:
(11, 39595), (Start: 22 @39451 has 27 MA's), (27, 39412), (35, 39349), (39, 39334), (43, 39304), (47, 39289),

Gene: Palestino_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Palestino_56:
(Start: 25 @38486 has 222 MA's),

Gene: Panamaxus_57 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for Panamaxus_57:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: PeaceMeal1_56 Start: 37631, Stop: 37488, Start Num: 24
Candidate Starts for PeaceMeal1_56:
(Start: 24 @37631 has 7 MA's), (29, 37592), (30, 37589), (36, 37544), (42, 37523),

Gene: Peaches_56 Start: 38485, Stop: 38351, Start Num: 25
Candidate Starts for Peaches_56:
(Start: 25 @38485 has 222 MA's),

Gene: PeterPeter_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for PeterPeter_57:
(Start: 25 @38483 has 222 MA's),

Gene: Phacado_57 Start: 38485, Stop: 38351, Start Num: 25
Candidate Starts for Phacado_57:
(Start: 25 @38485 has 222 MA's),

Gene: Phaeder_62 Start: 39451, Stop: 39272, Start Num: 22
Candidate Starts for Phaeder_62:
(11, 39595), (Start: 22 @39451 has 27 MA's), (27, 39412), (35, 39349), (39, 39334), (43, 39304), (47, 39289),

Gene: Phantastic_61 Start: 38525, Stop: 38400, Start Num: 25
Candidate Starts for Phantastic_61:
(Start: 25 @38525 has 222 MA's), (29, 38501), (39, 38447), (42, 38432),

Gene: Pharaoh_56 Start: 39272, Stop: 39120, Start Num: 23
Candidate Starts for Pharaoh_56:
(Start: 23 @39272 has 39 MA's), (28, 39239), (35, 39191), (41, 39158), (47, 39131),

Gene: Phelipe_58 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Phelipe_58:
(Start: 25 @38486 has 222 MA's),

Gene: Phighter1804_57 Start: 38547, Stop: 38413, Start Num: 25
Candidate Starts for Phighter1804_57:
(Start: 25 @38547 has 222 MA's),

Gene: Phonnegut_63 Start: 39673, Stop: 39494, Start Num: 22
Candidate Starts for Phonnegut_63:
(11, 39817), (Start: 22 @39673 has 27 MA's), (27, 39634), (29, 39628), (39, 39556), (47, 39511),

Gene: Phontbonne_57 Start: 38377, Stop: 38243, Start Num: 25
Candidate Starts for Phontbonne_57:
(Start: 25 @38377 has 222 MA's),

Gene: Pioneer_63 Start: 39673, Stop: 39494, Start Num: 22
Candidate Starts for Pioneer_63:
(11, 39817), (Start: 22 @39673 has 27 MA's), (27, 39634), (29, 39628), (39, 39556), (47, 39511),

Gene: Pipcraft_55 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Pipcraft_55:
(Start: 25 @38486 has 222 MA's),

Gene: Piro94_61 Start: 39445, Stop: 39311, Start Num: 25
Candidate Starts for Piro94_61:
(4, 39769), (Start: 25 @39445 has 222 MA's), (33, 39394), (34, 39388), (48, 39319),

Gene: Pistachio_61 Start: 38452, Stop: 38309, Start Num: 25
Candidate Starts for Pistachio_61:
(Start: 25 @38452 has 222 MA's), (34, 38395), (42, 38353), (46, 38338),

Gene: Pmask_61 Start: 38090, Stop: 37935, Start Num: 23
Candidate Starts for Pmask_61:
(18, 38114), (Start: 23 @38090 has 39 MA's), (31, 38042),

Gene: Pocahontas_59 Start: 38861, Stop: 38724, Start Num: 25
Candidate Starts for Pocahontas_59:
(Start: 25 @38861 has 222 MA's), (29, 38837), (42, 38768),

Gene: Polymorphads_58 Start: 38479, Stop: 38345, Start Num: 25
Candidate Starts for Polymorphads_58:
(Start: 25 @38479 has 222 MA's),

Gene: Polyphemus_62 Start: 38475, Stop: 38320, Start Num: 23

Candidate Starts for Polyphemus_62:
(18, 38499), (Start: 23 @38475 has 39 MA's), (31, 38427),

Gene: Poompha_56 Start: 37629, Stop: 37486, Start Num: 24
Candidate Starts for Poompha_56:
(Start: 24 @37629 has 7 MA's), (29, 37590), (30, 37587), (36, 37542), (42, 37521),

Gene: Popcicle_59 Start: 38861, Stop: 38724, Start Num: 25
Candidate Starts for Popcicle_59:
(Start: 25 @38861 has 222 MA's), (29, 38837), (42, 38768),

Gene: Power_60 Start: 39456, Stop: 39319, Start Num: 25
Candidate Starts for Power_60:
(4, 39780), (15, 39570), (Start: 25 @39456 has 222 MA's), (33, 39402), (48, 39327),

Gene: Pukovnik_59 Start: 39949, Stop: 39815, Start Num: 25
Candidate Starts for Pukovnik_59:
(17, 40009), (Start: 25 @39949 has 222 MA's), (33, 39898), (36, 39877), (48, 39823),

Gene: Pumbaa_57 Start: 38431, Stop: 38297, Start Num: 25
Candidate Starts for Pumbaa_57:
(Start: 25 @38431 has 222 MA's),

Gene: Puppy_61 Start: 38524, Stop: 38381, Start Num: 25
Candidate Starts for Puppy_61:
(Start: 25 @38524 has 222 MA's), (34, 38467), (42, 38425), (46, 38410),

Gene: QueenB2_60 Start: 39434, Stop: 39297, Start Num: 25
Candidate Starts for QueenB2_60:
(Start: 25 @39434 has 222 MA's), (33, 39380), (48, 39305),

Gene: QueenBeesly_61 Start: 39403, Stop: 39266, Start Num: 25
Candidate Starts for QueenBeesly_61:
(4, 39727), (15, 39517), (Start: 25 @39403 has 222 MA's), (33, 39349), (48, 39274),

Gene: QuinnKiro_58 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for QuinnKiro_58:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: Rahalelujah_62 Start: 39206, Stop: 39027, Start Num: 22
Candidate Starts for Rahalelujah_62:
(11, 39350), (Start: 22 @39206 has 27 MA's), (39, 39089), (47, 39044),

Gene: Rebeuca_58 Start: 38767, Stop: 38633, Start Num: 25
Candidate Starts for Rebeuca_58:
(Start: 25 @38767 has 222 MA's), (45, 38656),

Gene: Relief_56 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Relief_56:
(Start: 25 @38483 has 222 MA's),

Gene: ResDef_59 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for ResDef_59:

(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: Retro23_62 Start: 39648, Stop: 39511, Start Num: 25

Candidate Starts for Retro23_62:

(1, 40035), (4, 39972), (15, 39762), (Start: 25 @39648 has 222 MA's), (33, 39594), (48, 39519),

Gene: RhynO_58 Start: 38569, Stop: 38435, Start Num: 25

Candidate Starts for RhynO_58:

(Start: 25 @38569 has 222 MA's), (45, 38458),

Gene: Rifter_63 Start: 37698, Stop: 37543, Start Num: 23

Candidate Starts for Rifter_63:

(18, 37722), (Start: 23 @37698 has 39 MA's), (31, 37650),

Gene: Rockstar_58 Start: 38357, Stop: 38232, Start Num: 25

Candidate Starts for Rockstar_58:

(Start: 25 @38357 has 222 MA's), (39, 38279), (42, 38264),

Gene: Roksolana_64 Start: 38532, Stop: 38377, Start Num: 23

Candidate Starts for Roksolana_64:

(18, 38556), (Start: 23 @38532 has 39 MA's), (31, 38484),

Gene: Romney_56 Start: 38483, Stop: 38349, Start Num: 25

Candidate Starts for Romney_56:

(Start: 25 @38483 has 222 MA's),

Gene: Roosevelt_56 Start: 38488, Stop: 38354, Start Num: 25

Candidate Starts for Roosevelt_56:

(Start: 25 @38488 has 222 MA's),

Gene: Rosa24_55 Start: 38514, Stop: 38380, Start Num: 25

Candidate Starts for Rosa24_55:

(Start: 25 @38514 has 222 MA's),

Gene: Rowdy_60 Start: 38480, Stop: 38346, Start Num: 25

Candidate Starts for Rowdy_60:

(Start: 25 @38480 has 222 MA's), (45, 38369),

Gene: Ruin_57 Start: 38479, Stop: 38345, Start Num: 25

Candidate Starts for Ruin_57:

(Start: 25 @38479 has 222 MA's),

Gene: RyeScarlet_64 Start: 39648, Stop: 39469, Start Num: 22

Candidate Starts for RyeScarlet_64:

(11, 39792), (Start: 22 @39648 has 27 MA's), (27, 39609), (29, 39603), (39, 39531), (47, 39486),

Gene: Sabertooth_57 Start: 38488, Stop: 38354, Start Num: 25

Candidate Starts for Sabertooth_57:

(Start: 25 @38488 has 222 MA's),

Gene: Sachima_58 Start: 39474, Stop: 39295, Start Num: 22

Candidate Starts for Sachima_58:

(11, 39618), (Start: 22 @39474 has 27 MA's), (27, 39435), (39, 39357), (45, 39324), (47, 39312),

Gene: SaturnRing_60 Start: 38905, Stop: 38762, Start Num: 25
Candidate Starts for SaturnRing_60:
(Start: 25 @38905 has 222 MA's), (34, 38848), (42, 38806), (46, 38791),

Gene: Scamp_57 Start: 38488, Stop: 38354, Start Num: 25
Candidate Starts for Scamp_57:
(Start: 25 @38488 has 222 MA's),

Gene: Scherzo_63 Start: 39862, Stop: 39683, Start Num: 22
Candidate Starts for Scherzo_63:
(11, 40006), (Start: 22 @39862 has 27 MA's), (27, 39823), (29, 39817), (39, 39745), (47, 39700),

Gene: Scout_60 Start: 38059, Stop: 37916, Start Num: 25
Candidate Starts for Scout_60:
(Start: 25 @38059 has 222 MA's), (33, 38008), (34, 38002), (42, 37960),

Gene: SemperFi_62 Start: 39671, Stop: 39534, Start Num: 25
Candidate Starts for SemperFi_62:
(4, 39995), (15, 39785), (Start: 25 @39671 has 222 MA's), (33, 39617), (48, 39542),

Gene: SenorClean_54 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for SenorClean_54:
(Start: 25 @38486 has 222 MA's),

Gene: Severus_56 Start: 37629, Stop: 37486, Start Num: 24
Candidate Starts for Severus_56:
(Start: 24 @37629 has 7 MA's), (29, 37590), (30, 37587), (36, 37542), (42, 37521),

Gene: Shaka_56 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Shaka_56:
(Start: 25 @38483 has 222 MA's),

Gene: Shapes_60 Start: 38480, Stop: 38346, Start Num: 25
Candidate Starts for Shapes_60:
(Start: 25 @38480 has 222 MA's), (45, 38369),

Gene: SheaKeira_59 Start: 39050, Stop: 38883, Start Num: 22
Candidate Starts for SheaKeira_59:
(11, 39194), (Start: 22 @39050 has 27 MA's), (27, 39014), (47, 38900),

Gene: SheldonCooper_58 Start: 38890, Stop: 38756, Start Num: 25
Candidate Starts for SheldonCooper_58:
(Start: 25 @38890 has 222 MA's),

Gene: Skipitt_56 Start: 38480, Stop: 38346, Start Num: 25
Candidate Starts for Skipitt_56:
(Start: 25 @38480 has 222 MA's),

Gene: Sknot_61 Start: 39095, Stop: 38964, Start Num: 25
Candidate Starts for Sknot_61:
(4, 39419), (Start: 25 @39095 has 222 MA's), (48, 38972),

Gene: Smeagan_64 Start: 39955, Stop: 39824, Start Num: 25
Candidate Starts for Smeagan_64:
(Start: 25 @39955 has 222 MA's), (48, 39832),

Gene: SmellyB_62 Start: 38087, Stop: 37932, Start Num: 23
Candidate Starts for SmellyB_62:
(18, 38111), (Start: 23 @38087 has 39 MA's), (31, 38039),

Gene: SnapTap_61 Start: 39482, Stop: 39345, Start Num: 25
Candidate Starts for SnapTap_61:
(4, 39806), (7, 39698), (15, 39596), (Start: 25 @39482 has 222 MA's), (33, 39428), (48, 39353),

Gene: Sparxx_58 Start: 38481, Stop: 38347, Start Num: 25
Candidate Starts for Sparxx_58:
(Start: 25 @38481 has 222 MA's),

Gene: Spino_56 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for Spino_56:
(Start: 25 @38486 has 222 MA's),

Gene: Steamy_57 Start: 39000, Stop: 38845, Start Num: 23
Candidate Starts for Steamy_57:
(Start: 23 @39000 has 39 MA's), (28, 38967), (38, 38907), (41, 38886), (43, 38874), (47, 38859),

Gene: SuperAwesome_62 Start: 38092, Stop: 37937, Start Num: 23
Candidate Starts for SuperAwesome_62:
(18, 38116), (Start: 23 @38092 has 39 MA's), (31, 38044),

Gene: SuperCallie99_59 Start: 37974, Stop: 37819, Start Num: 23
Candidate Starts for SuperCallie99_59:
(18, 37998), (Start: 23 @37974 has 39 MA's), (31, 37926),

Gene: SweetiePie_61 Start: 39614, Stop: 39477, Start Num: 25
Candidate Starts for SweetiePie_61:
(4, 39938), (5, 39914), (15, 39728), (Start: 25 @39614 has 222 MA's), (33, 39560), (48, 39485),

Gene: TM4_73 Start: 45052, Stop: 45219, Start Num: 25
Candidate Starts for TM4_73:
(2, 44668), (10, 44878), (Start: 25 @45052 has 222 MA's), (40, 45139), (46, 45169), (47, 45178), (50, 45208),

Gene: TNguyen7_61 Start: 38871, Stop: 38728, Start Num: 25
Candidate Starts for TNguyen7_61:
(Start: 25 @38871 has 222 MA's), (34, 38814), (42, 38772), (46, 38757),

Gene: Taquarus_57 Start: 38489, Stop: 38355, Start Num: 25
Candidate Starts for Taquarus_57:
(Start: 25 @38489 has 222 MA's),

Gene: TarsusIV_58 Start: 39076, Stop: 38939, Start Num: 25
Candidate Starts for TarsusIV_58:
(Start: 25 @39076 has 222 MA's), (33, 39022), (36, 39001),

Gene: Temprado_64 Start: 38571, Stop: 38416, Start Num: 23
Candidate Starts for Temprado_64:
(18, 38595), (Start: 23 @38571 has 39 MA's), (31, 38523),

Gene: Terrific_62 Start: 39449, Stop: 39318, Start Num: 25
Candidate Starts for Terrific_62:
(4, 39773), (Start: 25 @39449 has 222 MA's), (48, 39326),

Gene: Texage_58 Start: 38865, Stop: 38728, Start Num: 25
Candidate Starts for Texage_58:
(Start: 25 @38865 has 222 MA's), (29, 38841), (42, 38772),

Gene: Thanksgivukkah_56 Start: 38484, Stop: 38350, Start Num: 25
Candidate Starts for Thanksgivukkah_56:
(Start: 25 @38484 has 222 MA's),

Gene: TinaFeyge_56 Start: 38481, Stop: 38347, Start Num: 25
Candidate Starts for TinaFeyge_56:
(Start: 25 @38481 has 222 MA's),

Gene: Tinybot_56 Start: 38513, Stop: 38379, Start Num: 25
Candidate Starts for Tinybot_56:
(Start: 25 @38513 has 222 MA's),

Gene: TiroTheta9_57 Start: 38480, Stop: 38346, Start Num: 25
Candidate Starts for TiroTheta9_57:
(Start: 25 @38480 has 222 MA's),

Gene: Toaka_63 Start: 39678, Stop: 39499, Start Num: 22
Candidate Starts for Toaka_63:
(11, 39822), (Start: 22 @39678 has 27 MA's), (27, 39639), (47, 39516),

Gene: Todacoro_59 Start: 38864, Stop: 38727, Start Num: 25
Candidate Starts for Todacoro_59:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: ToneTone_60 Start: 38131, Stop: 37976, Start Num: 23
Candidate Starts for ToneTone_60:
(18, 38155), (Start: 23 @38131 has 39 MA's), (31, 38083),

Gene: Topanga_55 Start: 38411, Stop: 38277, Start Num: 25
Candidate Starts for Topanga_55:
(Start: 25 @38411 has 222 MA's), (45, 38300),

Gene: Trike_55 Start: 37635, Stop: 37492, Start Num: 24
Candidate Starts for Trike_55:
(Start: 24 @37635 has 7 MA's), (29, 37596), (30, 37593), (36, 37548), (42, 37527),

Gene: Tristan_57 Start: 40128, Stop: 39994, Start Num: 25
Candidate Starts for Tristan_57:
(Start: 25 @40128 has 222 MA's), (33, 40077), (48, 40002),

Gene: Trixie_59 Start: 39389, Stop: 39255, Start Num: 25

Candidate Starts for Trixie_59:
(Start: 25 @39389 has 222 MA's), (33, 39338), (42, 39290),

Gene: Trooper_62 Start: 39803, Stop: 39666, Start Num: 25
Candidate Starts for Trooper_62:
(Start: 25 @39803 has 222 MA's), (33, 39749), (36, 39728),

Gene: TroyPia_58 Start: 38484, Stop: 38350, Start Num: 25
Candidate Starts for TroyPia_58:
(Start: 25 @38484 has 222 MA's),

Gene: Tubs_62 Start: 39451, Stop: 39272, Start Num: 22
Candidate Starts for Tubs_62:
(11, 39595), (Start: 22 @39451 has 27 MA's), (27, 39412), (35, 39349), (39, 39334), (43, 39304), (47, 39289),

Gene: Tucker_63 Start: 38300, Stop: 38145, Start Num: 23
Candidate Starts for Tucker_63:
(18, 38324), (Start: 23 @38300 has 39 MA's), (31, 38252),

Gene: Turbido_62 Start: 39689, Stop: 39558, Start Num: 25
Candidate Starts for Turbido_62:
(Start: 25 @39689 has 222 MA's), (48, 39566),

Gene: Twister_56 Start: 38328, Stop: 38194, Start Num: 25
Candidate Starts for Twister_56:
(Start: 25 @38328 has 222 MA's), (45, 38217),

Gene: TygerBlood_57 Start: 38486, Stop: 38352, Start Num: 25
Candidate Starts for TygerBlood_57:
(Start: 25 @38486 has 222 MA's),

Gene: Ugenie5_59 Start: 39861, Stop: 39682, Start Num: 22
Candidate Starts for Ugenie5_59:
(11, 40005), (Start: 22 @39861 has 27 MA's), (27, 39822), (29, 39816), (39, 39744), (47, 39699),

Gene: Ulysses_56 Start: 38163, Stop: 38029, Start Num: 25
Candidate Starts for Ulysses_56:
(Start: 25 @38163 has 222 MA's),

Gene: Updawg_62 Start: 39339, Stop: 39208, Start Num: 25
Candidate Starts for Updawg_62:
(4, 39663), (Start: 25 @39339 has 222 MA's), (48, 39216),

Gene: VA6_62 Start: 39669, Stop: 39535, Start Num: 25
Candidate Starts for VA6_62:
(Start: 25 @39669 has 222 MA's),

Gene: Vanisoa_62 Start: 40555, Stop: 40370, Start Num: 22
Candidate Starts for Vanisoa_62:
(11, 40699), (Start: 22 @40555 has 27 MA's), (27, 40516), (39, 40438), (47, 40393), (49, 40384),

Gene: Veracruz_58 Start: 38864, Stop: 38727, Start Num: 25

Candidate Starts for Veracruz_58:
(Start: 25 @38864 has 222 MA's), (29, 38840), (42, 38771),

Gene: VohminGhazi_62 Start: 38088, Stop: 37933, Start Num: 23
Candidate Starts for VohminGhazi_62:
(18, 38112), (Start: 23 @38088 has 39 MA's), (31, 38040),

Gene: WalterMcMickey_56 Start: 38328, Stop: 38194, Start Num: 25
Candidate Starts for WalterMcMickey_56:
(Start: 25 @38328 has 222 MA's), (45, 38217),

Gene: Wander_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Wander_57:
(Start: 25 @38483 has 222 MA's),

Gene: WeiHuaDA_61 Start: 40109, Stop: 39981, Start Num: 25
Candidate Starts for WeiHuaDA_61:
(Start: 25 @40109 has 222 MA's), (43, 40007), (48, 39989),

Gene: Whabigail7_62 Start: 39674, Stop: 39543, Start Num: 25
Candidate Starts for Whabigail7_62:
(Start: 25 @39674 has 222 MA's), (48, 39551),

Gene: WideWale_62 Start: 39339, Stop: 39208, Start Num: 25
Candidate Starts for WideWale_62:
(4, 39663), (Start: 25 @39339 has 222 MA's), (48, 39216),

Gene: Wiks_62 Start: 38202, Stop: 38047, Start Num: 23
Candidate Starts for Wiks_62:
(18, 38226), (Start: 23 @38202 has 39 MA's), (31, 38154),

Gene: Wilbur_57 Start: 38483, Stop: 38349, Start Num: 25
Candidate Starts for Wilbur_57:
(Start: 25 @38483 has 222 MA's),

Gene: Wizard007_57 Start: 38491, Stop: 38357, Start Num: 25
Candidate Starts for Wizard007_57:
(Start: 25 @38491 has 222 MA's),

Gene: WunderPhul_63 Start: 38200, Stop: 38045, Start Num: 23
Candidate Starts for WunderPhul_63:
(18, 38224), (Start: 23 @38200 has 39 MA's), (31, 38152),

Gene: XianYue_59 Start: 38841, Stop: 38704, Start Num: 25
Candidate Starts for XianYue_59:
(6, 39105), (11, 39009), (21, 38871), (Start: 22 @38865 has 27 MA's), (Start: 25 @38841 has 222 MA's), (33, 38787), (48, 38712),

Gene: Yecey3_63 Start: 39447, Stop: 39271, Start Num: 22
Candidate Starts for Yecey3_63:
(11, 39591), (Start: 22 @39447 has 27 MA's), (35, 39348), (39, 39333), (47, 39288),

Gene: YoSam321_57 Start: 38480, Stop: 38346, Start Num: 25

Candidate Starts for YoSam321_57:
(Start: 25 @38480 has 222 MA's),

Gene: Yokurt_62 Start: 38202, Stop: 38047, Start Num: 23
Candidate Starts for Yokurt_62:
(18, 38226), (Start: 23 @38202 has 39 MA's), (31, 38154),

Gene: Zaka_63 Start: 38202, Stop: 38047, Start Num: 23
Candidate Starts for Zaka_63:
(18, 38226), (Start: 23 @38202 has 39 MA's), (31, 38154),

Gene: Zimmer_58 Start: 40235, Stop: 40092, Start Num: 25
Candidate Starts for Zimmer_58:
(Start: 25 @40235 has 222 MA's), (29, 40208), (37, 40160), (44, 40124), (47, 40109),

Gene: Zulu_64 Start: 38580, Stop: 38425, Start Num: 23
Candidate Starts for Zulu_64:
(18, 38604), (Start: 23 @38580 has 39 MA's), (31, 38532),