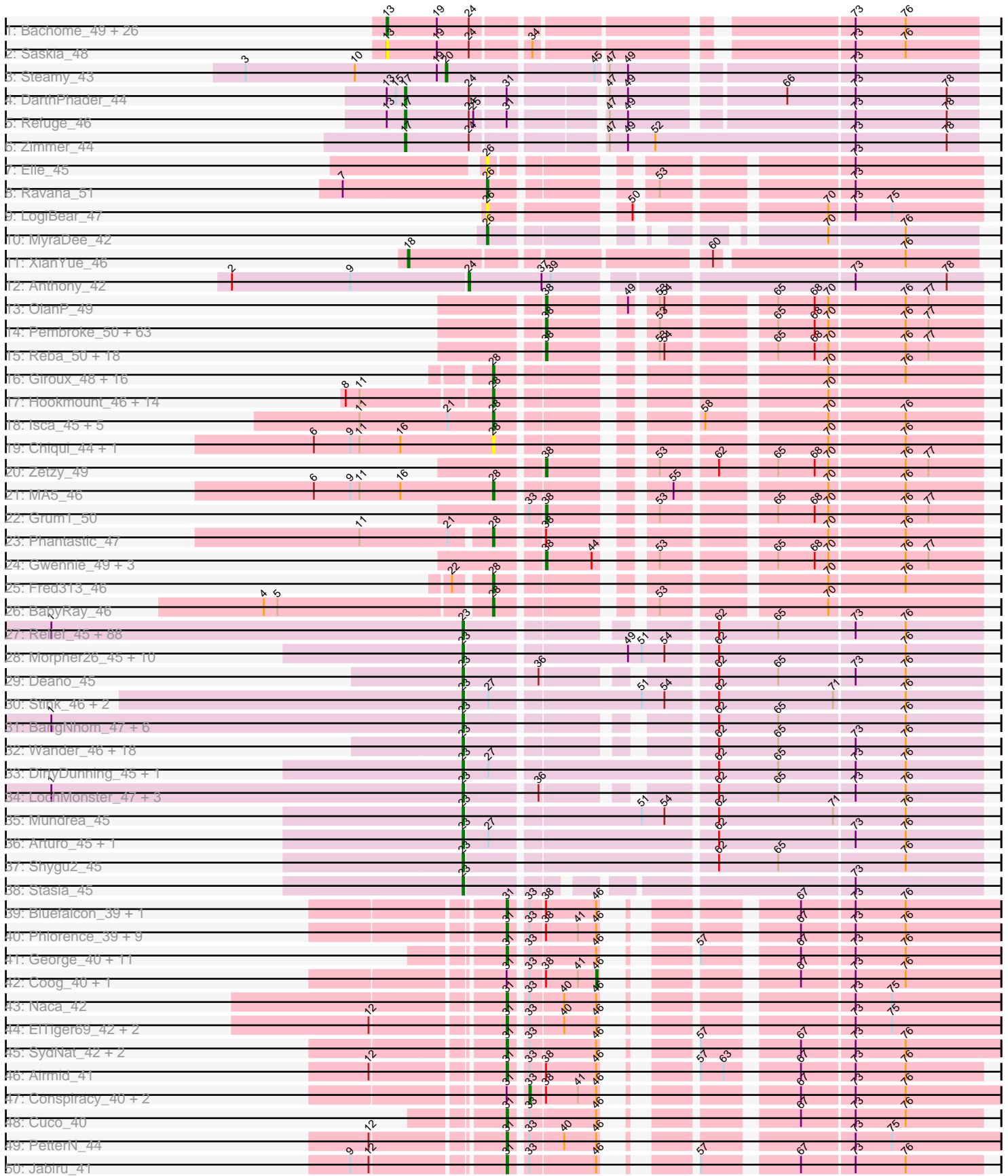


Pham 304622



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 304622 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304622 has 410 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Bachome_49, Sham4_47, Wolpertinger_46, Orange_47, Insomnia_48, Snape_47, Mabel_47, TinyTimmy_47, Munch_48, Et2Brutus_46, Fibonacci_47, Bud_47, Lucivia_48, Bowtie_48, Mulciber_47, MaCh_48, Petersenfast_46, Timothy_47, Gilberta_48, Aneem_48, Kimba_47, Flaverint_48, Hutc2_47, Ebony_47, Jabith_48, Salz_46, Joselito_48
- Track 2 : Saskia_48
- Track 3 : Steamy_43
- Track 4 : DarthPhader_44
- Track 5 : Refuge_46
- Track 6 : Zimmer_44
- Track 7 : Elle_45
- Track 8 : Ravana_51
- Track 9 : LogiBear_47
- Track 10 : MyraDee_42
- Track 11 : XianYue_46
- Track 12 : Anthony_42
- Track 13 : OlanP_49
- Track 14 : Pembroke_50, Aglet_51, MarQuardt_50, SoYo_50, DaHudson_50, MadMarie_50, StepMih_50, BreSam8_50, PotatoSplit_52, Methuselah_47, Marie_50, BuzzBuzz_48, Soshari_52, LugYA_53, Tiffany_50, Misomonster_51, Daishi_49, MuchMore_53, Farber_50, Anubis_53, Iowa_50, Bigflo_50, JHC117_50, Hercules11_50, Microwolf_50, Taurus_51, Fernando_50, Grif_50, Colbster_50, TinyPebbles_49, JenCasNa_51, Sabinator_49, LarryKay_50, Ollie_50, LBerry_51, P28Green_51, AgronaGT15_49, GtownJaz_50, Vix_50, Rummer_49, Sabia_50, Stagni_50, KADY_50, GingkoMaracino_50, HashRod_51, Louie6_49, Montavir_49, Mainiac_50, Cullens_50, Malinsilva_52, Phoxy_50, Wooldri_52, Spike509_50, Croquant_51, Lilith_51, AugsMagnumOpus_53, Watson_50, Snickers_50, Phoebe_51, Grub_50, Dieselweasel_51, Bx2_46, PGHhamlin_52, MoneyMay_50
- Track 15 : Reba_50, Calvinny_50, Marius_51, HaveUMetTed_51, Groupthink_51, ClownCar_50, PurpleHaze_50, Kalb97_51, JeppNRM_51, Pawn_50, Heliosoles_49, Phranny_51, Manu_50, PhishRPhriends_48, SoilDragon_50, Kalnoky_51, Jobu08_49, ACFishhook_49, Gemma_49
- Track 16 : Giroux_48, Heathen_46, Idleandcovert_47, SaturnRing_47, DropBear_46, Pistachio_48, Puppy_48, Scout_46, BlueBird_48, Zarafa_46, Kachowdy_46, Roimos_46, Bugatti_47, Marchesa_46, Clammy_47, TNguyen7_47, HelDan_46

- Track 17 : Hookmount_46, EtoileNova_47, Pocahontas_46, Popcicle_46, Noella_46, ResDef_46, Margo_46, QuinnKiro_45, Norbert_45, Panamaxus_44, Lambert1_46, Caviar_46, Veracruz_45, Todacoro_46, Texage_45
- Track 18 : Isca_45, JF4_46, Rockstar_46, JF2_46, MK4_46, B1_43
- Track 19 : Chiqui_44, BabyJohn_44
- Track 20 : Zetzy_49
- Track 21 : MA5_46
- Track 22 : Grum1_50
- Track 23 : Phantastic_47
- Track 24 : Gwennie_49, Beauxregard13_50, Penny1_51, EpicPhail_51
- Track 25 : Fred313_46
- Track 26 : BabyRay_46
- Track 27 : Relief_45, KekoraPapaka_46, Sultana_46, Melvin_48, HamSlice_45, JetBlade_46, RockieBear_45, Jaykayelowell_44, Phelipe_47, Blackmoor_46, Shaka_46, Clarenza_45, Ohfah_47, Annyong_46, Thanksgivukkah_45, Baby16_46, LappelDuVide_46, Tinybot_45, Abdiel_46, Broseidon_46, Koreni_45, Kamy_46, CentreCat_46, Nyxis_46, Lemur_46, Morrow_47, SteMason_45, Iracema64_47, Polymorphads_47, Iceman_46, Sparxx_47, Pumbaa_46, BubbleTrouble_45, Kingmustik0402_46, TinaFeyge_46, LeoAvram_46, Florean_46, Roosevelt_45, PeterPeter_46, Spino_45, Dhanush_46, Bombshell_46, Pipcraft_44, NorthStar_45, Ruin_46, Cintron_45, Alberto7_47, Connomayer_46, KFPoly_45, Scamp_46, Koan_44, Druantia_46, Eros_46, LittleGuy_46, Holli_45, Citius_46, Eapen_46, Palestino_45, Phontbonne_46, OKaNui_46, ICleared_46, TygerBlood_46, Ulysses_45, Chaph_46, TroyPia_47, Millski_45, Caelakin_46, LittleB_46, Medusa_46, Sabertooth_46, Wizard007_46, Bartimeaus_46, Skipitt_45, Lunsford_47, Peaches_46, Eurydice_47, Burger_44, Happiness_45, MeeZee_46, Albee_46, Maxo_47, Flux_46, Eris_45, Eagle_46, Commander_46, TiroTheta9_46, Lorenzo_46, YoSam321_46, Taquarus_46
- Track 28 : Morpher26_45, Cici_45, Xena_44, Perplexer_45, Achebe_44, Badger_44, Bumblebee11_44, AbbysRanger_45, Backyardigan_44, PetiteSangsue_45, Wile_45
- Track 29 : Deano_45
- Track 30 : Stink_46, AvatarAhPeg_45, Miramae_45
- Track 31 : BangNhom_47, SheldonCooper_48, Kremtemulon_46, LHTSCC_48, Obama12_47, ChampagnePapi_48, Cerulean_47
- Track 32 : Wander_46, Huxley_45, Cocoaberry_46, Gadost_46, Avle17_46, Bruiser_45, Houdini22_46, NotAPhaseMom_46, BellusTerra_47, Mazhar510_46, Camperdownii_44, Kyee_46, Funston_45, SenorClean_46, JoongJeon_45, Mayonnaise_45, Phacado_46, Nemo27_46, Maverick_46
- Track 33 : DirtyDunning_45, Phighter1804_46
- Track 34 : LochMonster_47, Rosa24_45, Romney_46, Wilbur_46
- Track 35 : Mundrea_45
- Track 36 : Arturo_45, Kratak_46
- Track 37 : Shygu2_45
- Track 38 : Stasia_45
- Track 39 : Bluefalcon_39, MarysWell_39
- Track 40 : Phlorence_39, Discoknowium_39, Lev2_40, Aragog_39, AgentM_39, Archetta_40, ForGetIt_40, Jovo_40, PickleBack_40, Twigg_41
- Track 41 : George_40, Florence4_40, Prinash11_41, Florence1_39, HuhtaEnerson15_41, Milcery_41, Micasa_42, LittleCherry_41, Tarynearal_39, Bonamassa_41, Dublin_39, Swirley_43
- Track 42 : Coog_40, Midas2_40
- Track 43 : Naca_42

- Track 44 : EITiger69_42, Scorpia_44, Chadwick_44
- Track 45 : SydNat_42, Ghoulboy_42, Zolita_41
- Track 46 : Airmid_41
- Track 47 : Conspiracy_40, Tiger_39, Theia_38
- Track 48 : Cuco_40
- Track 49 : PetterN_44
- Track 50 : Jabiru_41
- Track 51 : UnionJack_41
- Track 52 : Benedict_43
- Track 53 : HINdeR_43
- Track 54 : FlyCatcher_51, Toro_49
- Track 55 : Sheen_47
- Track 56 : Groundhog_43, Saintus_39, Astro_44, NearlyHeadless_44
- Track 57 : Roary_45, Smeadley_45, Dixon_44, Expelliarmus_44, Danforth_44, Caitlin_43
- Track 58 : Stephig9_45
- Track 59 : Phillis_46
- Track 60 : RER2_30, BobbyDazzler_37, PhailMary_36, Lillie_37, Shuman_37, Bryce_37, Natosaleda_37, Erik_37, Nancinator_37, Yogi_37, Jester_37, RexFury_37, Harlequin_37, Rhodalysa_37, Rasputin_37, Espica_37, Phrankenstein_37, Belenaria_37, UhSalsa_37, Gollum_37, Swann_37, CosmicSans_37, TWAMP_37, Alpacados_36, Takoda_37, Yoncess_37, AngryOrchard_35, Bonanza_37
- Track 61 : Bradshaw_37, Naiad_37, StCroix_37, Alatin_37
- Track 62 : Partridge_37
- Track 63 : AppleCloud_35, Krishelle_37, Dinger_37
- Track 64 : RGL3_32
- Track 65 : Hiro_37
- Track 66 : Tailonex_29

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

The start number called the most often in the published annotations is 23, it was called in 137 of the 373 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_45, Abdiel_46, Achebe_44, Albee_46, Alberto7_47, Annyong_46, Arturo_45, AvatarAhPeg_45, Avle17_46, Baby16_46, Backyardigan_44, Badger_44, BangNhom_47, Bartimeaus_46, BellusTerra_47, Blackmoor_46, Bombshell_46, Broseidon_46, Bruiser_45, BubbleTrouble_45, Bumblebee11_44, Burger_44, Caelakin_46, Camperdownii_44, CentreCat_46, Cerulean_47, ChampagnePapi_48, Chaph_46, Cici_45, Cintron_45, Citius_46, Clarenza_45, Cocoaberry_46, Commander_46, Connomayer_46, Deano_45, Dhanush_46, DirtyDunning_45, Druantia_46, Eagle_46, Eapen_46, Eris_45, Eros_46, Eurydice_47, Florean_46, Flux_46, Funston_45, Gadost_46, HamSlice_45, Happiness_45, Holli_45, Houdini22_46, Huxley_45, ICleared_46, Iceman_46, Iracema64_47, Jaykayelowell_44, JetBlade_46, JoongJeon_45, KFPoly_45, Kampy_46, KekoraPapaka_46, Kingmustik0402_46, Koan_44, Koreni_45, Kratark_46, Kremtemulon_46, Kyee_46, LHTSCC_48, LappelDuVide_46, Lemur_46, LeoAvram_46, LittleB_46, LittleGuy_46, LochMonster_47, Lorenzo_46, Lunsford_47, Maverick_46, Maxo_47, Mayonnaise_45, Mazhar510_46, Medusa_46, MeeZee_46,

Melvin_48, Millski_45, Miramae_45, Morpher26_45, Morrow_47, Mundrea_45, Nemo27_46, NorthStar_45, NotAPhaseMom_46, Nyxis_46, OKaNui_46, Obama12_47, Ohfah_47, Palestino_45, Peaches_46, Perplexer_45, PeterPeter_46, PetiteSangsue_45, Phacado_46, Phelipe_47, Phighter1804_46, Phontbonne_46, Pipcraft_44, Polymorphads_47, Pumbaa_46, Relief_45, RockieBear_45, Romney_46, Roosevelt_45, Rosa24_45, Ruin_46, Sabertooth_46, Scamp_46, SeniorClean_46, Shaka_46, SheldonCooper_48, Shygu2_45, Skipitt_45, Sparxx_47, Spino_45, Stasia_45, SteMason_45, Stink_46, Sultana_46, Taquarus_46, Thanksgivukkah_45, TinaFeyge_46, Tinybot_45, TiroTheta9_46, TroyPia_47, TygerBlood_46, Ulysses_45, Wander_46, Wilbur_46, Wile_45, Wizard007_46, Xena_44, YoSam321_46,

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

-

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

- ACFishhook_49, AgentM_39, Aglet_51, AgronaGT15_49, Airmid_41, Alatin_37, Alpacados_36, Aneem_48, AngryOrchard_35, Anthony_42, Anubis_53, AppleCloud_35, Aragog_39, Archetta_40, Astro_44, AugsMagnumOpus_53, B1_43, BabyJohn_44, BabyRay_46, Bachome_49, Beauxregard13_50, Belenaria_37, Benedict_43, Bigflo_50, BlueBird_48, Bluefalcon_39, BobbyDazzler_37, Bonamassa_41, Bonanza_37, Bowtie_48, Bradshaw_37, BreSam8_50, Bryce_37, Bud_47, Bugatti_47, BuzzBuzz_48, Bxz2_46, Caitlin_43, Calvinny_50, Caviar_46, Chadwick_44, Chiqui_44, Clammy_47, ClownCar_50, Colbster_50, Conspiracy_40, Coog_40, CosmicSans_37, Croquant_51, Cuco_40, Cullens_50, DaHudson_50, Daishi_49, Danforth_44, DARTHPhader_44, Dieselweasel_51, Dinger_37, Discoknowium_39, Dixon_44, DropBear_46, Dublin_39, Ebony_47, EITiger69_42, Elle_45, EpicPhail_51, Erik_37, Espica_37, Et2Brutus_46, EtoileNova_47, Expelliarmus_44, Farber_50, Fernando_50, Fibonacci_47, Flaverint_48, Florence1_39, Florence4_40, FlyCatcher_51, ForGetIt_40, Fred313_46, Gemma_49, George_40, Ghoulyboy_42, Gilberta_48, GingkoMaracino_50, Giroux_48, Gollum_37, Grif_50, Groundhog_43, Groupthink_51, Grub_50, Grum1_50, GtownJaz_50, Gwennie_49, HINdeR_43, Harlequin_37, HashRod_51, HaveUMetTed_51, Heathen_46, HelDan_46, Heliosoles_49, Hercules11_50, Hiro_37, Hookmount_46, HuhtaEnerson15_41, Hutc2_47, Idleandcovert_47, Insomnia_48, Isca_45, JF2_46, JF4_46, JHC117_50, Jabiru_41, Jabith_48, JenCasNa_51, JeppNRM_51, Jester_37, Jobu08_49, Joselito_48, Jovo_40, KADY_50, Kachowdy_46, Kalb97_51, Kalnoky_51, Kimba_47, Krishelle_37, LBerry_51, Lambert1_46, LarryKay_50, Lev2_40, Lilith_51, Lillie_37, LittleCherry_41, LogiBear_47, Louie6_49, Iowa_50, Lucivia_48, LugYA_53, MA5_46, MK4_46, MaCh_48, Mabel_47, MadMarie_50, Mainiac_50, Malinsilva_52, Manu_50, MarQuardt_50, Marchesa_46, Margo_46, Marie_50, Marius_51, MarysWell_39, Methuselah_47, Micasa_42, Microwolf_50, Midas2_40, Milcery_41, Misomonster_51, MoneyMay_50, Montavir_49, MuchMore_53, Mulciber_47, Munch_48, MyraDee_42, Naca_42, Naiad_37, Nancinator_37, Natosaleda_37, NearlyHeadless_44, Noella_46, Norbert_45, OlanP_49, Ollie_50, Orange_47, P28Green_51, PGHhamlin_52, Panamaxus_44, Partridge_37, Pawn_50, Pembroke_50, Penny1_51, Petersenfast_46, PetterN_44, PhailMary_36, Phantastic_47, Phillis_46, PhishRPhriends_48, Phlorence_39, Phoebe_51, Phoxy_50, Phrankenstein_37, Phranny_51, PickleBack_40, Pistachio_48, Pocahontas_46, Popcicle_46, PotatoSplit_52, Prinash11_41, Puppy_48, PurpleHaze_50, QuinnKiro_45, RER2_30, RGL3_32, Rasputin_37, Ravana_51, Reba_50, Refuge_46, ResDef_46, RexFury_37, Rhodalysa_37, Roary_45, Rockstar_46, Roimos_46, Rummer_49, Sabia_50, Sabinator_49, Saintus_39, Salz_46, Saskia_48, SaturnRing_47, Scorpia_44, Scout_46, Sham4_47,

Sheen_47, Shuman_37, Smeadley_45, Snape_47, Snickers_50, SoYo_50, SoilDragon_50, Soshari_52, Spike509_50, StCroix_37, Stagni_50, Steamy_43, StepMih_50, StepHig9_45, Swann_37, Swirley_43, SydNat_42, TNguyen7_47, TWAMP_37, Tailonex_29, Takoda_37, Tarynearal_39, Taurus_51, Texage_45, Theia_38, Tiffany_50, Tiger_39, Timothy_47, TinyPebbles_49, TinyTimmy_47, Todacoro_46, Toro_49, Twigg_41, UhSalsa_37, UnionJack_41, Veracruz_45, Vix_50, Watson_50, Wolpertinger_46, Wooldri_52, XianYue_46, Yogi_37, Yoncess_37, Zarafa_46, Zetzy_49, Zimmer_44, Zolita_41,

Summary by start number:

Start 13:

- Found in 30 of 410 (7.3%) of genes in pham
- Manual Annotations of this start: 24 of 373
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Aneem_48 (A11), Bachome_49 (A11), Bowtie_48 (A11), Bud_47 (A11), Ebony_47 (A11), Et2Brutus_46 (A11), Fibonacci_47 (A11), Flaverint_48 (A11), Gilberta_48 (A11), Hutc2_47 (A11), Insomnia_48 (A11), Jabith_48 (A11), Joselito_48 (A11), Kimba_47 (A11), Lucivia_48 (A11), MaCh_48 (A11), Mabel_47 (A11), Mulciber_47 (A11), Munch_48 (A11), Orange_47 (A11), Petersenfast_46 (A11), Salz_46 (A11), Saskia_48 (A11), Sham4_47 (A11), Snape_47 (A11), Timothy_47 (A11), TinyTimmy_47 (A11), Wolpertinger_46 (A11),

Start 17:

- Found in 3 of 410 (0.7%) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader_44 (A12), Refuge_46 (A12), Zimmer_44 (A12),

Start 18:

- Found in 1 of 410 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: XianYue_46 (A2),

Start 20:

- Found in 1 of 410 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Steamy_43 (A12),

Start 23:

- Found in 141 of 410 (34.4%) of genes in pham
- Manual Annotations of this start: 137 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger_45 (A4), Abdiel_46 (A4), Achebe_44 (A4), Albee_46 (A4), Alberto7_47 (A4), Annyong_46 (A4), Arturo_45 (A4), AvatarAhPeg_45 (A4), Avle17_46 (A4), Baby16_46 (A4), Backyardigan_44 (A4), Badger_44 (A4), BangNhom_47 (A4), Bartimeaus_46 (A4), BellusTerra_47 (A4), Blackmoor_46 (A4), Bombshell_46 (A4), Broseidon_46 (A4), Bruiser_45 (A4), BubbleTrouble_45 (A4), Bumblebee11_44 (A4), Burger_44 (A4), Caelakin_46 (A4), Camperdownii_44 (A4), CentreCat_46 (A4), Cerulean_47 (A4), ChampagnePapi_48

(A4), Chaph_46 (A4), Cici_45 (A4), Cintron_45 (A4), Citius_46 (A4), Clarenza_45 (A4), Cocoaberry_46 (A4), Commander_46 (A4), Connomayer_46 (A4), Deano_45 (A4), Dhanush_46 (A4), DirtyDunning_45 (A4), Druantia_46 (A4), Eagle_46 (A4), Eapen_46 (A4), Eris_45 (A4), Eros_46 (A4), Eurydice_47 (A4), Florean_46 (A4), Flux_46 (A4), Funston_45 (A4), Gadost_46 (A4), HamSlice_45 (A4), Happiness_45 (A4), Holli_45 (A4), Houdini22_46 (A4), Huxley_45 (A4), ICleared_46 (A4), Iceman_46 (A4), Iracema64_47 (A4), Jaykayelowell_44 (A4), JetBlade_46 (A4), JoongJeon_45 (A4), KFPoly_45 (A4), Kampy_46 (A4), KekoraPapaka_46 (A4), Kingmustik0402_46 (A4), Koan_44 (A4), Koreni_45 (A4), Kratark_46 (A4), Kremtemulon_46 (A4), Kyee_46 (A4), LHTSCC_48 (A4), LappelDuVide_46 (A4), Lemur_46 (A4), LeoAvram_46 (A4), LittleB_46 (A4), LittleGuy_46 (A4), LochMonster_47 (A4), Lorenzo_46 (A4), Lunsford_47 (A4), Maverick_46 (A4), Maxo_47 (A4), Mayonnaise_45 (A4), Mazhar510_46 (A4), Medusa_46 (A4), MeeZee_46 (A4), Melvin_48 (A4), Millski_45 (A4), Miramae_45 (A4), Morpher26_45 (A4), Morrow_47 (A4), Mundrea_45 (A4), Nemo27_46 (A4), NorthStar_45 (A4), NotAPhaseMom_46 (A4), Nyxis_46 (A4), OKaNui_46 (A4), Obama12_47 (A4), Ohfah_47 (A4), Palestino_45 (A4), Peaches_46 (A4), Perplexer_45 (A4), PeterPeter_46 (A4), PetiteSangsue_45 (A4), Phacado_46 (A4), Phelipe_47 (A4), Phighter1804_46 (A4), Phontbonne_46 (A4), Pipcraft_44 (A4), Polymorphads_47 (A4), Pumbaa_46 (A4), Relief_45 (A4), RockieBear_45 (A4), Romney_46 (A4), Roosevelt_45 (A4), Rosa24_45 (A4), Ruin_46 (A4), Sabertooth_46 (A4), Scamp_46 (A4), SeniorClean_46 (A4), Shaka_46 (A4), SheldonCooper_48 (A4), Shygu2_45 (A4), Skipitt_45 (A4), Sparxx_47 (A4), Spino_45 (A4), Stasia_45 (A4), SteMason_45 (A4), Stink_46 (A4), Sultana_46 (A4), Taquarus_46 (A4), Thanksgivukkah_45 (A4), TinaFeyge_46 (A4), Tinybot_45 (A4), TiroTheta9_46 (A4), TroyPia_47 (A4), TygerBlood_46 (A4), Ulysses_45 (A4), Wander_46 (A4), Wilbur_46 (A4), Wile_45 (A4), Wizard007_46 (A4), Xena_44 (A4), YoSam321_46 (A4),

Start 24:

- Found in 36 of 410 (8.8%) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Anthony_42 (A20), Partridge_37 (CA),

Start 26:

- Found in 4 of 410 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elle_45 (A15), LogiBear_47 (A15), MyraDee_42 (A18), Ravana_51 (A15),

Start 28:

- Found in 44 of 410 (10.7%) of genes in pham
- Manual Annotations of this start: 33 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B1_43 (A3), BabyJohn_44 (A3), BabyRay_46 (A3), BlueBird_48 (A3), Bugatti_47 (A3), Caviar_46 (A3), Chiqui_44 (A3), Clammy_47 (A3), DropBear_46 (A3), EtoileNova_47 (A3), Fred313_46 (A3), Giroux_48 (A3), Heathen_46 (A3), HelDan_46 (A3), Hookmount_46 (A3), Idleandcovert_47 (A3), Isca_45 (A3), JF2_46 (A3), JF4_46 (A3), Kachowdy_46 (A3), Lambert1_46 (A3), MA5_46 (A3), MK4_46 (A3), Marchesa_46 (A3), Margo_46 (A3), Noella_46 (A3), Norbert_45 (A3), Panamaxus_44 (A3), Phantastic_47 (A3), Pistachio_48 (A3), Pocahontas_46 (A3), Popcicle_46 (A3), Puppy_48 (A3),

QuinnKiro_45 (A3), ResDef_46 (A3), Rockstar_46 (A3), Roimos_46 (A3), SaturnRing_47 (A3), Scout_46 (A3), TNguyen7_47 (A3), Texage_45 (A3), Todacoro_46 (A3), Veracruz_45 (A3), Zarafa_46 (A3),

Start 29:

- Found in 1 of 410 (0.2%) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HINdeR_43 (A7),

Start 30:

- Found in 3 of 410 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sheen_47 (A7),

Start 31:

- Found in 57 of 410 (13.9%) of genes in pham
- Manual Annotations of this start: 45 of 373
- Called 86.0% of time when present
- Phage (with cluster) where this start called: AgentM_39 (A5), Airmid_41 (A5), Aragog_39 (A5), Archetta_40 (A5), Astro_44 (A8), Benedict_43 (A5), Bluefalcon_39 (A5), Bonamassa_41 (A5), Caitlin_43 (A8), Chadwick_44 (A5), Cuco_40 (A5), Danforth_44 (A8), Discoknowium_39 (A5), Dixon_44 (A8), Dublin_39 (A5), EITiger69_42 (A5), Expelliarmus_44 (A8), Florence1_39 (A5), Florence4_40 (A5), ForGetIt_40 (A5), George_40 (A5), Ghoulboy_42 (A5), Groundhog_43 (A8), HuhtaEnerson15_41 (A5), Jabiru_41 (A5), Jovo_40 (A5), Lev2_40 (A5), LittleCherry_41 (A5), MarysWell_39 (A5), Micasa_42 (A5), Milcery_41 (A5), Naca_42 (A5), NearlyHeadless_44 (A8), PetterN_44 (A5), Phillis_46 (A8), Phlorence_39 (A5), PickleBack_40 (A5), Prinash11_41 (A5), Roary_45 (A8), Saintus_39 (A8), Scorpia_44 (A5), Smeadley_45 (A8), Stephig9_45 (A8), Swirley_43 (A5), SydNat_42 (A5), Tarynearal_39 (A5), Twigg_41 (A5), UnionJack_41 (A5), Zolita_41 (A5),

Start 32:

- Found in 37 of 410 (9.0%) of genes in pham
- Manual Annotations of this start: 35 of 373
- Called 97.3% of time when present
- Phage (with cluster) where this start called: Alatin_37 (CA), Alpacados_36 (CA), AngryOrchard_35 (CA), AppleCloud_35 (CA), Belenaria_37 (CA), BobbyDazzler_37 (CA), Bonanza_37 (CA), Bradshaw_37 (CA), Bryce_37 (CA), CosmicSans_37 (CA), Dinger_37 (CA), Erik_37 (CA), Espica_37 (CA), Gollum_37 (CA), Harlequin_37 (CA), Hiro_37 (CA), Jester_37 (CA), Krishelle_37 (CA), Lillie_37 (CA), Naiad_37 (CA), Nancinator_37 (CA), Natosaleda_37 (CA), PhailMary_36 (CA), Phrankenstein_37 (CA), RER2_30 (CA), Rasputin_37 (CA), RexFury_37 (CA), Rhodalysa_37 (CA), Shuman_37 (CA), StCroix_37 (CA), Swann_37 (CA), TWAMP_37 (CA), Takoda_37 (CA), UhSalsa_37 (CA), Yogi_37 (CA), Yoncess_37 (CA),

Start 33:

- Found in 43 of 410 (10.5%) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 7.0% of time when present
- Phage (with cluster) where this start called: Conspiracy_40 (A5), Theia_38 (A5), Tiger_39 (A5),

Start 34:

- Found in 8 of 410 (2.0%) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: RGL3_32 (CA),

Start 35:

- Found in 1 of 410 (0.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tailonex_29 (singleton),

Start 38:

- Found in 109 of 410 (26.6%) of genes in pham
- Manual Annotations of this start: 83 of 373
- Called 82.6% of time when present
- Phage (with cluster) where this start called: ACFishhook_49 (A3), Aglet_51 (A3), AgronaGT15_49 (A3), Anubis_53 (A3), AugsMagnumOpus_53 (A3), Beauxregard13_50 (A3), Bigflo_50 (A3), BreSam8_50 (A3), BuzzBuzz_48 (A3), Bxz2_46 (A3), Calvinny_50 (A3), ClownCar_50 (A3), Colbster_50 (A3), Croquant_51 (A3), Cullens_50 (A3), DaHudson_50 (A3), Daishi_49 (A3), Dieselweasel_51 (A3), EpicPhail_51 (A3), Farber_50 (A3), Fernando_50 (A3), Gemma_49 (A3), GingkoMaracino_50 (A3), Grif_50 (A3), Groupthink_51 (A3), Grub_50 (A3), Grum1_50 (A3), GtownJaz_50 (A3), Gwennie_49 (A3), HashRod_51 (A3), HaveUMetTed_51 (A3), Heliosoles_49 (A3), Hercules11_50 (A3), JHC117_50 (A3), JenCasNa_51 (A3), JeppNRM_51 (A3), Jobu08_49 (A3), KADY_50 (A3), Kalb97_51 (A3), Kalnoky_51 (A3), LBerry_51 (A3), LarryKay_50 (A3), Lilith_51 (A3), Louie6_49 (A3), Iowa_50 (A3), LugYA_53 (A3), MadMarie_50 (A3), Mainiac_50 (A3), Malinsilva_52 (A3), Manu_50 (A3), MarQuardt_50 (A3), Marie_50 (A3), Marius_51 (A3), Methuselah_47 (A3), Microwolf_50 (A3), Misomonster_51 (A3), MoneyMay_50 (A3), Montavir_49 (A3), MuchMore_53 (A3), OlanP_49 (A3), Ollie_50 (A3), P28Green_51 (A3), PGHhamlin_52 (A3), Pawn_50 (A3), Pembroke_50 (A3), Penny1_51 (A3), PhishRPhriends_48 (A3), Phoebe_51 (A3), Phoxy_50 (A3), Phranny_51 (A3), PotatoSplit_52 (A3), PurpleHaze_50 (A3), Reba_50 (A3), Rummer_49 (A3), Sabia_50 (A3), Sabinator_49 (A3), Snickers_50 (A3), SoYo_50 (A3), SoilDragon_50 (A3), Soshari_52 (A3), Spike509_50 (A3), Stagni_50 (A3), StepMih_50 (A3), Taurus_51 (A3), Tiffany_50 (A3), TinyPebbles_49 (A3), Vix_50 (A3), Watson_50 (A3), Wooldri_52 (A3), Zetzy_49 (A3),

Start 42:

- Found in 3 of 410 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: FlyCatcher_51 (A7), Toro_49 (A7),

Start 46:

- Found in 57 of 410 (13.9%) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 3.5% of time when present
- Phage (with cluster) where this start called: Coog_40 (A5), Midas2_40 (A5),

Summary by clusters:

There are 13 clusters represented in this pham: A15, A20, singleton, A11, A12, CA, A18, A3, A2, A5, A4, A7, A8,

Info for manual annotations of cluster A11:

- Start number 13 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 17 was manually annotated 3 times for cluster A12.
- Start number 20 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A15:

- Start number 26 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A18:

- Start number 26 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 18 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 24 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 28 was manually annotated 33 times for cluster A3.
- Start number 38 was manually annotated 83 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 23 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 31 was manually annotated 34 times for cluster A5.
- Start number 33 was manually annotated 3 times for cluster A5.
- Start number 46 was manually annotated 2 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 29 was manually annotated 1 time for cluster A7.
- Start number 30 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 31 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster CA:

- Start number 24 was manually annotated 1 time for cluster CA.
- Start number 32 was manually annotated 35 times for cluster CA.

Gene Information:

Gene: ACFishhook_49 Start: 32280, Stop: 32032, Start Num: 38

Candidate Starts for ACFishhook_49:

(Start: 38 @32280 has 83 MA's), (53, 32226), (54, 32223), (65, 32163), (68, 32139), (70, 32130), (76, 32082), (77, 32067),

Gene: AbbysRanger_45 Start: 31867, Stop: 31544, Start Num: 23

Candidate Starts for AbbysRanger_45:

(Start: 23 @31867 has 137 MA's), (49, 31768), (51, 31759), (54, 31744), (62, 31714), (76, 31594),

Gene: Abdiel_46 Start: 31881, Stop: 31579, Start Num: 23

Candidate Starts for Abdiel_46:

(1, 32151), (Start: 23 @31881 has 137 MA's), (62, 31749), (65, 31710), (73, 31662), (76, 31629),

Gene: Achebe_44 Start: 31850, Stop: 31527, Start Num: 23

Candidate Starts for Achebe_44:

(Start: 23 @31850 has 137 MA's), (49, 31751), (51, 31742), (54, 31727), (62, 31697), (76, 31577),

Gene: AgentM_39 Start: 30764, Stop: 30501, Start Num: 31

Candidate Starts for AgentM_39:

(Start: 31 @30764 has 45 MA's), (Start: 33 @30755 has 3 MA's), (Start: 38 @30746 has 83 MA's), (41, 30725), (Start: 46 @30713 has 2 MA's), (67, 30629), (73, 30596), (76, 30563),

Gene: Aglet_51 Start: 32309, Stop: 32061, Start Num: 38

Candidate Starts for Aglet_51:

(Start: 38 @32309 has 83 MA's), (53, 32255), (65, 32192), (68, 32168), (70, 32159), (76, 32111), (77, 32096),

Gene: AgronaGT15_49 Start: 32160, Stop: 31912, Start Num: 38

Candidate Starts for AgronaGT15_49:

(Start: 38 @32160 has 83 MA's), (53, 32106), (65, 32043), (68, 32019), (70, 32010), (76, 31962), (77, 31947),

Gene: Airmid_41 Start: 30823, Stop: 30572, Start Num: 31

Candidate Starts for Airmid_41:

(12, 30901), (Start: 31 @30823 has 45 MA's), (Start: 33 @30814 has 3 MA's), (Start: 38 @30805 has 83 MA's), (Start: 46 @30772 has 2 MA's), (57, 30742), (63, 30727), (67, 30688), (73, 30655), (76, 30622),

Gene: Alatin_37 Start: 28461, Stop: 28189, Start Num: 32

Candidate Starts for Alatin_37:

(Start: 32 @28461 has 35 MA's), (75, 28245), (78, 28209),

Gene: Albee_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Albee_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Alberto7_47 Start: 32217, Stop: 31915, Start Num: 23

Candidate Starts for Alberto7_47:

(1, 32487), (Start: 23 @32217 has 137 MA's), (62, 32085), (65, 32046), (73, 31998), (76, 31965),

Gene: Alpacados_36 Start: 28366, Stop: 28094, Start Num: 32

Candidate Starts for Alpacados_36:

(Start: 32 @28366 has 35 MA's), (52, 28300), (75, 28150), (78, 28114),

Gene: Aneem_48 Start: 31705, Stop: 31358, Start Num: 13

Candidate Starts for Aneem_48:

(Start: 13 @31705 has 24 MA's), (19, 31672), (Start: 24 @31651 has 2 MA's), (73, 31438), (76, 31405),

Gene: AngryOrchard_35 Start: 28325, Stop: 28053, Start Num: 32

Candidate Starts for AngryOrchard_35:

(Start: 32 @28325 has 35 MA's), (52, 28259), (75, 28109), (78, 28073),

Gene: Annyong_46 Start: 31925, Stop: 31623, Start Num: 23

Candidate Starts for Annyong_46:

(1, 32195), (Start: 23 @31925 has 137 MA's), (62, 31793), (65, 31754), (73, 31706), (76, 31673),

Gene: Anthony_42 Start: 29795, Stop: 29478, Start Num: 24

Candidate Starts for Anthony_42:

(2, 29948), (9, 29870), (Start: 24 @29795 has 2 MA's), (37, 29747), (39, 29741), (73, 29561), (78, 29501),

Gene: Anubis_53 Start: 32195, Stop: 31947, Start Num: 38

Candidate Starts for Anubis_53:

(Start: 38 @32195 has 83 MA's), (53, 32141), (65, 32078), (68, 32054), (70, 32045), (76, 31997), (77, 31982),

Gene: AppleCloud_35 Start: 28336, Stop: 28064, Start Num: 32

Candidate Starts for AppleCloud_35:

(Start: 24 @28369 has 2 MA's), (Start: 32 @28336 has 35 MA's), (56, 28249), (75, 28120), (78, 28084),

Gene: Aragog_39 Start: 30794, Stop: 30531, Start Num: 31

Candidate Starts for Aragog_39:

(Start: 31 @30794 has 45 MA's), (Start: 33 @30785 has 3 MA's), (Start: 38 @30776 has 83 MA's), (41, 30755), (Start: 46 @30743 has 2 MA's), (67, 30659), (73, 30626), (76, 30593),

Gene: Archetta_40 Start: 31324, Stop: 31061, Start Num: 31

Candidate Starts for Archetta_40:

(Start: 31 @31324 has 45 MA's), (Start: 33 @31315 has 3 MA's), (Start: 38 @31306 has 83 MA's), (41, 31285), (Start: 46 @31273 has 2 MA's), (67, 31189), (73, 31156), (76, 31123),

Gene: Arturo_45 Start: 32157, Stop: 31834, Start Num: 23

Candidate Starts for Arturo_45:

(Start: 23 @32157 has 137 MA's), (27, 32142), (62, 32004), (73, 31917), (76, 31884),

Gene: Astro_44 Start: 31145, Stop: 30849, Start Num: 31

Candidate Starts for Astro_44:

(Start: 31 @31145 has 45 MA's), (34, 31136), (Start: 46 @31094 has 2 MA's), (76, 30908),

Gene: AugsMagnumOpus_53 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for AugsMagnumOpus_53:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: AvatarAhPeg_45 Start: 32379, Stop: 32056, Start Num: 23

Candidate Starts for AvatarAhPeg_45:

(Start: 23 @32379 has 137 MA's), (27, 32364), (51, 32271), (54, 32256), (62, 32226), (71, 32151), (76, 32106),

Gene: Avle17_46 Start: 31877, Stop: 31575, Start Num: 23
Candidate Starts for Avle17_46:
(Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: B1_43 Start: 31013, Stop: 30738, Start Num: 28
Candidate Starts for B1_43:
(11, 31100), (21, 31043), (Start: 28 @31013 has 33 MA's), (58, 30908), (70, 30836), (76, 30788),

Gene: Baby16_46 Start: 31891, Stop: 31589, Start Num: 23
Candidate Starts for Baby16_46:
(1, 32161), (Start: 23 @31891 has 137 MA's), (62, 31759), (65, 31720), (73, 31672), (76, 31639),

Gene: BabyJohn_44 Start: 31805, Stop: 31530, Start Num: 28
Candidate Starts for BabyJohn_44:
(6, 31922), (9, 31898), (11, 31892), (16, 31865), (Start: 28 @31805 has 33 MA's), (70, 31628), (76, 31580),

Gene: BabyRay_46 Start: 31749, Stop: 31474, Start Num: 28
Candidate Starts for BabyRay_46:
(4, 31890), (5, 31881), (Start: 28 @31749 has 33 MA's), (53, 31668), (70, 31572),

Gene: Bachome_49 Start: 31693, Stop: 31346, Start Num: 13
Candidate Starts for Bachome_49:
(Start: 13 @31693 has 24 MA's), (19, 31660), (Start: 24 @31639 has 2 MA's), (73, 31426), (76, 31393),

Gene: Backyardigan_44 Start: 31883, Stop: 31560, Start Num: 23
Candidate Starts for Backyardigan_44:
(Start: 23 @31883 has 137 MA's), (49, 31784), (51, 31775), (54, 31760), (62, 31730), (76, 31610),

Gene: Badger_44 Start: 31851, Stop: 31528, Start Num: 23
Candidate Starts for Badger_44:
(Start: 23 @31851 has 137 MA's), (49, 31752), (51, 31743), (54, 31728), (62, 31698), (76, 31578),

Gene: BangNhom_47 Start: 32302, Stop: 32000, Start Num: 23
Candidate Starts for BangNhom_47:
(1, 32572), (Start: 23 @32302 has 137 MA's), (62, 32170), (65, 32131), (76, 32050),

Gene: Bartimeaus_46 Start: 31882, Stop: 31580, Start Num: 23
Candidate Starts for Bartimeaus_46:
(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Beauxregard13_50 Start: 32312, Stop: 32064, Start Num: 38
Candidate Starts for Beauxregard13_50:
(Start: 38 @32312 has 83 MA's), (44, 32282), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: Belenaria_37 Start: 28395, Stop: 28123, Start Num: 32
Candidate Starts for Belenaria_37:
(Start: 32 @28395 has 35 MA's), (52, 28329), (75, 28179), (78, 28143),

Gene: BellusTerra_47 Start: 31881, Stop: 31579, Start Num: 23
Candidate Starts for BellusTerra_47:
(Start: 23 @31881 has 137 MA's), (62, 31749), (65, 31710), (73, 31662), (76, 31629),

Gene: Benedict_43 Start: 30995, Stop: 30732, Start Num: 31

Candidate Starts for Benedict_43:

(Start: 31 @30995 has 45 MA's), (Start: 33 @30986 has 3 MA's), (Start: 46 @30944 has 2 MA's), (73, 30827), (75, 30803),

Gene: Bigflo_50 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for Bigflo_50:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: Blackmoor_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Blackmoor_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: BlueBird_48 Start: 31838, Stop: 31563, Start Num: 28

Candidate Starts for BlueBird_48:

(Start: 28 @31838 has 33 MA's), (70, 31661), (76, 31613),

Gene: Bluefalcon_39 Start: 31282, Stop: 31019, Start Num: 31

Candidate Starts for Bluefalcon_39:

(Start: 31 @31282 has 45 MA's), (Start: 33 @31273 has 3 MA's), (Start: 38 @31264 has 83 MA's), (Start: 46 @31231 has 2 MA's), (67, 31147), (73, 31114), (76, 31081),

Gene: BobbyDazzler_37 Start: 28440, Stop: 28168, Start Num: 32

Candidate Starts for BobbyDazzler_37:

(Start: 32 @28440 has 35 MA's), (52, 28374), (75, 28224), (78, 28188),

Gene: Bombshell_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Bombshell_46:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Bonamassa_41 Start: 31313, Stop: 31050, Start Num: 31

Candidate Starts for Bonamassa_41:

(Start: 31 @31313 has 45 MA's), (Start: 33 @31304 has 3 MA's), (Start: 46 @31262 has 2 MA's), (57, 31232), (67, 31178), (73, 31145), (76, 31112),

Gene: Bonanza_37 Start: 28368, Stop: 28096, Start Num: 32

Candidate Starts for Bonanza_37:

(Start: 32 @28368 has 35 MA's), (52, 28302), (75, 28152), (78, 28116),

Gene: Bowtie_48 Start: 31712, Stop: 31365, Start Num: 13

Candidate Starts for Bowtie_48:

(Start: 13 @31712 has 24 MA's), (19, 31679), (Start: 24 @31658 has 2 MA's), (73, 31445), (76, 31412),

Gene: Bradshaw_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for Bradshaw_37:

(Start: 32 @28394 has 35 MA's), (75, 28178), (78, 28142),

Gene: BreSam8_50 Start: 32302, Stop: 32054, Start Num: 38

Candidate Starts for BreSam8_50:

(Start: 38 @32302 has 83 MA's), (53, 32248), (65, 32185), (68, 32161), (70, 32152), (76, 32104), (77, 32089),

Gene: Broseidon_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Broseidon_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Bruiser_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Bruiser_45:

(Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Bryce_37 Start: 28369, Stop: 28097, Start Num: 32

Candidate Starts for Bryce_37:

(Start: 32 @28369 has 35 MA's), (52, 28303), (75, 28153), (78, 28117),

Gene: BubbleTrouble_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for BubbleTrouble_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Bud_47 Start: 31267, Stop: 30920, Start Num: 13

Candidate Starts for Bud_47:

(Start: 13 @31267 has 24 MA's), (19, 31234), (Start: 24 @31213 has 2 MA's), (73, 31000), (76, 30967),

Gene: Bugatti_47 Start: 31838, Stop: 31563, Start Num: 28

Candidate Starts for Bugatti_47:

(Start: 28 @31838 has 33 MA's), (70, 31661), (76, 31613),

Gene: Bumblebee11_44 Start: 31853, Stop: 31530, Start Num: 23

Candidate Starts for Bumblebee11_44:

(Start: 23 @31853 has 137 MA's), (49, 31754), (51, 31745), (54, 31730), (62, 31700), (76, 31580),

Gene: Burger_44 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Burger_44:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: BuzzBuzz_48 Start: 32339, Stop: 32091, Start Num: 38

Candidate Starts for BuzzBuzz_48:

(Start: 38 @32339 has 83 MA's), (53, 32285), (65, 32222), (68, 32198), (70, 32189), (76, 32141), (77, 32126),

Gene: Bxz2_46 Start: 32346, Stop: 32098, Start Num: 38

Candidate Starts for Bxz2_46:

(Start: 38 @32346 has 83 MA's), (53, 32292), (65, 32229), (68, 32205), (70, 32196), (76, 32148), (77, 32133),

Gene: Caelakin_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Caelakin_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Caitlin_43 Start: 31138, Stop: 30842, Start Num: 31

Candidate Starts for Caitlin_43:

(14, 31204), (Start: 31 @31138 has 45 MA's), (Start: 46 @31087 has 2 MA's), (76, 30901),

Gene: Calvinny_50 Start: 32208, Stop: 31960, Start Num: 38

Candidate Starts for Calvinny_50:

(Start: 38 @32208 has 83 MA's), (53, 32154), (54, 32151), (65, 32091), (68, 32067), (70, 32058), (76, 32010), (77, 31995),

Gene: Camperdownii_44 Start: 31553, Stop: 31251, Start Num: 23

Candidate Starts for Camperdownii_44:

(Start: 23 @31553 has 137 MA's), (62, 31421), (65, 31382), (73, 31334), (76, 31301),

Gene: Caviar_46 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for Caviar_46:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: CentreCat_46 Start: 31883, Stop: 31581, Start Num: 23

Candidate Starts for CentreCat_46:

(1, 32153), (Start: 23 @31883 has 137 MA's), (62, 31751), (65, 31712), (73, 31664), (76, 31631),

Gene: Cerulean_47 Start: 32303, Stop: 32001, Start Num: 23

Candidate Starts for Cerulean_47:

(1, 32573), (Start: 23 @32303 has 137 MA's), (62, 32171), (65, 32132), (76, 32051),

Gene: Chadwick_44 Start: 30975, Stop: 30712, Start Num: 31

Candidate Starts for Chadwick_44:

(12, 31053), (Start: 31 @30975 has 45 MA's), (Start: 33 @30966 has 3 MA's), (40, 30945), (Start: 46 @30924 has 2 MA's), (73, 30807), (75, 30783),

Gene: ChampagnePapi_48 Start: 32302, Stop: 32000, Start Num: 23

Candidate Starts for ChampagnePapi_48:

(1, 32572), (Start: 23 @32302 has 137 MA's), (62, 32170), (65, 32131), (76, 32050),

Gene: Chaph_46 Start: 31891, Stop: 31589, Start Num: 23

Candidate Starts for Chaph_46:

(1, 32161), (Start: 23 @31891 has 137 MA's), (62, 31759), (65, 31720), (73, 31672), (76, 31639),

Gene: Chiqui_44 Start: 31814, Stop: 31539, Start Num: 28

Candidate Starts for Chiqui_44:

(6, 31931), (9, 31907), (11, 31901), (16, 31874), (Start: 28 @31814 has 33 MA's), (70, 31637), (76, 31589),

Gene: Cici_45 Start: 31868, Stop: 31545, Start Num: 23

Candidate Starts for Cici_45:

(Start: 23 @31868 has 137 MA's), (49, 31769), (51, 31760), (54, 31745), (62, 31715), (76, 31595),

Gene: Cintron_45 Start: 31860, Stop: 31558, Start Num: 23

Candidate Starts for Cintron_45:

(1, 32130), (Start: 23 @31860 has 137 MA's), (62, 31728), (65, 31689), (73, 31641), (76, 31608),

Gene: Citius_46 Start: 31901, Stop: 31599, Start Num: 23

Candidate Starts for Citius_46:

(1, 32171), (Start: 23 @31901 has 137 MA's), (62, 31769), (65, 31730), (73, 31682), (76, 31649),

Gene: Clammy_47 Start: 31838, Stop: 31563, Start Num: 28

Candidate Starts for Clammy_47:

(Start: 28 @31838 has 33 MA's), (70, 31661), (76, 31613),

Gene: Clarenza_45 Start: 31877, Stop: 31575, Start Num: 23
Candidate Starts for Clarenza_45:
(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: ClownCar_50 Start: 32201, Stop: 31953, Start Num: 38
Candidate Starts for ClownCar_50:
(Start: 38 @32201 has 83 MA's), (53, 32147), (54, 32144), (65, 32084), (68, 32060), (70, 32051), (76, 32003), (77, 31988),

Gene: Cocoaberry_46 Start: 31884, Stop: 31582, Start Num: 23
Candidate Starts for Cocoaberry_46:
(Start: 23 @31884 has 137 MA's), (62, 31752), (65, 31713), (73, 31665), (76, 31632),

Gene: Colbster_50 Start: 32312, Stop: 32064, Start Num: 38
Candidate Starts for Colbster_50:
(Start: 38 @32312 has 83 MA's), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: Commander_46 Start: 31879, Stop: 31577, Start Num: 23
Candidate Starts for Commander_46:
(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: Connomayer_46 Start: 31880, Stop: 31578, Start Num: 23
Candidate Starts for Connomayer_46:
(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Conspiracy_40 Start: 30997, Stop: 30743, Start Num: 33
Candidate Starts for Conspiracy_40:
(Start: 31 @31006 has 45 MA's), (Start: 33 @30997 has 3 MA's), (Start: 38 @30988 has 83 MA's), (41, 30967), (Start: 46 @30955 has 2 MA's), (67, 30871), (73, 30838), (76, 30805),

Gene: Coog_40 Start: 31053, Stop: 30841, Start Num: 46
Candidate Starts for Coog_40:
(Start: 31 @31104 has 45 MA's), (Start: 33 @31095 has 3 MA's), (Start: 38 @31086 has 83 MA's), (41, 31065), (Start: 46 @31053 has 2 MA's), (67, 30969), (73, 30936), (76, 30903),

Gene: CosmicSans_37 Start: 28394, Stop: 28122, Start Num: 32
Candidate Starts for CosmicSans_37:
(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: Croquant_51 Start: 32307, Stop: 32059, Start Num: 38
Candidate Starts for Croquant_51:
(Start: 38 @32307 has 83 MA's), (53, 32253), (65, 32190), (68, 32166), (70, 32157), (76, 32109), (77, 32094),

Gene: Cuco_40 Start: 31061, Stop: 30810, Start Num: 31
Candidate Starts for Cuco_40:
(Start: 31 @31061 has 45 MA's), (Start: 33 @31052 has 3 MA's), (Start: 46 @31010 has 2 MA's), (67, 30926), (73, 30893), (76, 30860),

Gene: Cullens_50 Start: 32308, Stop: 32060, Start Num: 38
Candidate Starts for Cullens_50:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: DaHudson_50 Start: 32301, Stop: 32053, Start Num: 38

Candidate Starts for DaHudson_50:

(Start: 38 @32301 has 83 MA's), (53, 32247), (65, 32184), (68, 32160), (70, 32151), (76, 32103), (77, 32088),

Gene: Daishi_49 Start: 31180, Stop: 30932, Start Num: 38

Candidate Starts for Daishi_49:

(Start: 38 @31180 has 83 MA's), (53, 31126), (65, 31063), (68, 31039), (70, 31030), (76, 30982), (77, 30967),

Gene: Danforth_44 Start: 31174, Stop: 30878, Start Num: 31

Candidate Starts for Danforth_44:

(14, 31240), (Start: 31 @31174 has 45 MA's), (Start: 46 @31123 has 2 MA's), (76, 30937),

Gene: DarthPhader_44 Start: 32954, Stop: 32610, Start Num: 17

Candidate Starts for DarthPhader_44:

(Start: 13 @32966 has 24 MA's), (15, 32960), (Start: 17 @32954 has 3 MA's), (Start: 24 @32912 has 2 MA's), (Start: 31 @32891 has 45 MA's), (47, 32837), (49, 32825), (66, 32732), (73, 32690), (78, 32630),

Gene: Deano_45 Start: 31888, Stop: 31586, Start Num: 23

Candidate Starts for Deano_45:

(Start: 23 @31888 has 137 MA's), (36, 31846), (62, 31756), (65, 31717), (73, 31669), (76, 31636),

Gene: Dhanush_46 Start: 31883, Stop: 31581, Start Num: 23

Candidate Starts for Dhanush_46:

(1, 32153), (Start: 23 @31883 has 137 MA's), (62, 31751), (65, 31712), (73, 31664), (76, 31631),

Gene: Dieselweasel_51 Start: 32311, Stop: 32063, Start Num: 38

Candidate Starts for Dieselweasel_51:

(Start: 38 @32311 has 83 MA's), (53, 32257), (65, 32194), (68, 32170), (70, 32161), (76, 32113), (77, 32098),

Gene: Dinger_37 Start: 28378, Stop: 28106, Start Num: 32

Candidate Starts for Dinger_37:

(Start: 24 @28411 has 2 MA's), (Start: 32 @28378 has 35 MA's), (56, 28291), (75, 28162), (78, 28126),

Gene: DirtyDunning_45 Start: 31898, Stop: 31575, Start Num: 23

Candidate Starts for DirtyDunning_45:

(Start: 23 @31898 has 137 MA's), (27, 31883), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Discoknowium_39 Start: 30803, Stop: 30540, Start Num: 31

Candidate Starts for Discoknowium_39:

(Start: 31 @30803 has 45 MA's), (Start: 33 @30794 has 3 MA's), (Start: 38 @30785 has 83 MA's), (41, 30764), (Start: 46 @30752 has 2 MA's), (67, 30668), (73, 30635), (76, 30602),

Gene: Dixon_44 Start: 31047, Stop: 30760, Start Num: 31

Candidate Starts for Dixon_44:

(14, 31113), (Start: 31 @31047 has 45 MA's), (Start: 46 @30996 has 2 MA's), (76, 30810),

Gene: DropBear_46 Start: 31726, Stop: 31451, Start Num: 28

Candidate Starts for DropBear_46:

(Start: 28 @31726 has 33 MA's), (70, 31549), (76, 31501),

Gene: Druantia_46 Start: 31883, Stop: 31581, Start Num: 23

Candidate Starts for Druantia_46:

(1, 32153), (Start: 23 @31883 has 137 MA's), (62, 31751), (65, 31712), (73, 31664), (76, 31631),

Gene: Dublin_39 Start: 30825, Stop: 30562, Start Num: 31

Candidate Starts for Dublin_39:

(Start: 31 @30825 has 45 MA's), (Start: 33 @30816 has 3 MA's), (Start: 46 @30774 has 2 MA's), (57, 30744), (67, 30690), (73, 30657), (76, 30624),

Gene: Eagle_46 Start: 31905, Stop: 31603, Start Num: 23

Candidate Starts for Eagle_46:

(1, 32175), (Start: 23 @31905 has 137 MA's), (62, 31773), (65, 31734), (73, 31686), (76, 31653),

Gene: Eapen_46 Start: 31875, Stop: 31573, Start Num: 23

Candidate Starts for Eapen_46:

(1, 32145), (Start: 23 @31875 has 137 MA's), (62, 31743), (65, 31704), (73, 31656), (76, 31623),

Gene: Ebony_47 Start: 31284, Stop: 30937, Start Num: 13

Candidate Starts for Ebony_47:

(Start: 13 @31284 has 24 MA's), (19, 31251), (Start: 24 @31230 has 2 MA's), (73, 31017), (76, 30984),

Gene: EITiger69_42 Start: 30992, Stop: 30729, Start Num: 31

Candidate Starts for EITiger69_42:

(12, 31070), (Start: 31 @30992 has 45 MA's), (Start: 33 @30983 has 3 MA's), (40, 30962), (Start: 46 @30941 has 2 MA's), (73, 30824), (75, 30800),

Gene: Elle_45 Start: 29059, Stop: 28784, Start Num: 26

Candidate Starts for Elle_45:

(Start: 26 @29059 has 2 MA's), (73, 28867),

Gene: EpicPhail_51 Start: 32312, Stop: 32064, Start Num: 38

Candidate Starts for EpicPhail_51:

(Start: 38 @32312 has 83 MA's), (44, 32282), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: Erik_37 Start: 28392, Stop: 28120, Start Num: 32

Candidate Starts for Erik_37:

(Start: 32 @28392 has 35 MA's), (52, 28326), (75, 28176), (78, 28140),

Gene: Eris_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Eris_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Eros_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Eros_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Espica_37 Start: 28395, Stop: 28123, Start Num: 32

Candidate Starts for Espica_37:

(Start: 32 @28395 has 35 MA's), (52, 28329), (75, 28179), (78, 28143),

Gene: Et2Brutus_46 Start: 31244, Stop: 30897, Start Num: 13

Candidate Starts for Et2Brutus_46:

(Start: 13 @31244 has 24 MA's), (19, 31211), (Start: 24 @31190 has 2 MA's), (73, 30977), (76, 30944),

Gene: EtoileNova_47 Start: 32085, Stop: 31810, Start Num: 28

Candidate Starts for EtoileNova_47:

(8, 32175), (11, 32166), (Start: 28 @32085 has 33 MA's), (70, 31908),

Gene: Eurydice_47 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Eurydice_47:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Expelliarmus_44 Start: 31203, Stop: 30907, Start Num: 31

Candidate Starts for Expelliarmus_44:

(14, 31269), (Start: 31 @31203 has 45 MA's), (Start: 46 @31152 has 2 MA's), (76, 30966),

Gene: Farber_50 Start: 32301, Stop: 32053, Start Num: 38

Candidate Starts for Farber_50:

(Start: 38 @32301 has 83 MA's), (53, 32247), (65, 32184), (68, 32160), (70, 32151), (76, 32103), (77, 32088),

Gene: Fernando_50 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for Fernando_50:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: Fibonacci_47 Start: 31259, Stop: 30912, Start Num: 13

Candidate Starts for Fibonacci_47:

(Start: 13 @31259 has 24 MA's), (19, 31226), (Start: 24 @31205 has 2 MA's), (73, 30992), (76, 30959),

Gene: Flaverint_48 Start: 31706, Stop: 31359, Start Num: 13

Candidate Starts for Flaverint_48:

(Start: 13 @31706 has 24 MA's), (19, 31673), (Start: 24 @31652 has 2 MA's), (73, 31439), (76, 31406),

Gene: Florean_46 Start: 31879, Stop: 31577, Start Num: 23

Candidate Starts for Florean_46:

(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: Florence1_39 Start: 30678, Stop: 30415, Start Num: 31

Candidate Starts for Florence1_39:

(Start: 31 @30678 has 45 MA's), (Start: 33 @30669 has 3 MA's), (Start: 46 @30627 has 2 MA's), (57, 30597), (67, 30543), (73, 30510), (76, 30477),

Gene: Florence4_40 Start: 30678, Stop: 30415, Start Num: 31

Candidate Starts for Florence4_40:

(Start: 31 @30678 has 45 MA's), (Start: 33 @30669 has 3 MA's), (Start: 46 @30627 has 2 MA's), (57, 30597), (67, 30543), (73, 30510), (76, 30477),

Gene: Flux_46 Start: 31879, Stop: 31577, Start Num: 23

Candidate Starts for Flux_46:

(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: FlyCatcher_51 Start: 34178, Stop: 33957, Start Num: 42

Candidate Starts for FlyCatcher_51:

(Start: 30 @34220 has 1 MA's), (42, 34178), (Start: 46 @34169 has 2 MA's), (59, 34121), (64, 34109), (71, 34052), (78, 33980),

Gene: ForGetIt_40 Start: 31031, Stop: 30768, Start Num: 31

Candidate Starts for ForGetIt_40:

(Start: 31 @31031 has 45 MA's), (Start: 33 @31022 has 3 MA's), (Start: 38 @31013 has 83 MA's), (41, 30992), (Start: 46 @30980 has 2 MA's), (67, 30896), (73, 30863), (76, 30830),

Gene: Fred313_46 Start: 31411, Stop: 31136, Start Num: 28

Candidate Starts for Fred313_46:

(22, 31432), (Start: 28 @31411 has 33 MA's), (70, 31234), (76, 31186),

Gene: Funston_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Funston_45:

(Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Gadost_46 Start: 31884, Stop: 31582, Start Num: 23

Candidate Starts for Gadost_46:

(Start: 23 @31884 has 137 MA's), (62, 31752), (65, 31713), (73, 31665), (76, 31632),

Gene: Gemma_49 Start: 32204, Stop: 31956, Start Num: 38

Candidate Starts for Gemma_49:

(Start: 38 @32204 has 83 MA's), (53, 32150), (54, 32147), (65, 32087), (68, 32063), (70, 32054), (76, 32006), (77, 31991),

Gene: George_40 Start: 31255, Stop: 30992, Start Num: 31

Candidate Starts for George_40:

(Start: 31 @31255 has 45 MA's), (Start: 33 @31246 has 3 MA's), (Start: 46 @31204 has 2 MA's), (57, 31174), (67, 31120), (73, 31087), (76, 31054),

Gene: Ghouboy_42 Start: 31768, Stop: 31505, Start Num: 31

Candidate Starts for Ghouboy_42:

(Start: 31 @31768 has 45 MA's), (Start: 33 @31759 has 3 MA's), (Start: 46 @31717 has 2 MA's), (57, 31687), (67, 31633), (73, 31600), (76, 31567),

Gene: Gilberta_48 Start: 31696, Stop: 31349, Start Num: 13

Candidate Starts for Gilberta_48:

(Start: 13 @31696 has 24 MA's), (19, 31663), (Start: 24 @31642 has 2 MA's), (73, 31429), (76, 31396),

Gene: GingkoMaracino_50 Start: 32194, Stop: 31946, Start Num: 38

Candidate Starts for GingkoMaracino_50:

(Start: 38 @32194 has 83 MA's), (53, 32140), (65, 32077), (68, 32053), (70, 32044), (76, 31996), (77, 31981),

Gene: Giroux_48 Start: 31837, Stop: 31562, Start Num: 28

Candidate Starts for Giroux_48:

(Start: 28 @31837 has 33 MA's), (70, 31660), (76, 31612),

Gene: Gollum_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for Gollum_37:

(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: Grif_50 Start: 32383, Stop: 32135, Start Num: 38

Candidate Starts for Grif_50:

(Start: 38 @32383 has 83 MA's), (53, 32329), (65, 32266), (68, 32242), (70, 32233), (76, 32185), (77, 32170),

Gene: Groundhog_43 Start: 31110, Stop: 30814, Start Num: 31

Candidate Starts for Groundhog_43:

(Start: 31 @31110 has 45 MA's), (34, 31101), (Start: 46 @31059 has 2 MA's), (76, 30873),

Gene: Groupthink_51 Start: 32208, Stop: 31960, Start Num: 38

Candidate Starts for Groupthink_51:

(Start: 38 @32208 has 83 MA's), (53, 32154), (54, 32151), (65, 32091), (68, 32067), (70, 32058), (76, 32010), (77, 31995),

Gene: Grub_50 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for Grub_50:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Grum1_50 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for Grum1_50:

(Start: 33 @32317 has 3 MA's), (Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: GtownJaz_50 Start: 32310, Stop: 32062, Start Num: 38

Candidate Starts for GtownJaz_50:

(Start: 38 @32310 has 83 MA's), (53, 32256), (65, 32193), (68, 32169), (70, 32160), (76, 32112), (77, 32097),

Gene: Gwennie_49 Start: 32312, Stop: 32064, Start Num: 38

Candidate Starts for Gwennie_49:

(Start: 38 @32312 has 83 MA's), (44, 32282), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: HINdeR_43 Start: 33388, Stop: 33113, Start Num: 29

Candidate Starts for HINdeR_43:

(Start: 29 @33388 has 1 MA's), (Start: 31 @33382 has 45 MA's), (Start: 46 @33331 has 2 MA's), (48, 33325), (53, 33307), (78, 33136),

Gene: HamSlice_45 Start: 31878, Stop: 31576, Start Num: 23

Candidate Starts for HamSlice_45:

(1, 32148), (Start: 23 @31878 has 137 MA's), (62, 31746), (65, 31707), (73, 31659), (76, 31626),

Gene: Happiness_45 Start: 31885, Stop: 31583, Start Num: 23

Candidate Starts for Happiness_45:

(1, 32155), (Start: 23 @31885 has 137 MA's), (62, 31753), (65, 31714), (73, 31666), (76, 31633),

Gene: Harlequin_37 Start: 28399, Stop: 28127, Start Num: 32

Candidate Starts for Harlequin_37:

(Start: 32 @28399 has 35 MA's), (52, 28333), (75, 28183), (78, 28147),

Gene: HashRod_51 Start: 32339, Stop: 32091, Start Num: 38
Candidate Starts for HashRod_51:
(Start: 38 @32339 has 83 MA's), (53, 32285), (65, 32222), (68, 32198), (70, 32189), (76, 32141), (77, 32126),

Gene: HaveUMetTed_51 Start: 32190, Stop: 31942, Start Num: 38
Candidate Starts for HaveUMetTed_51:
(Start: 38 @32190 has 83 MA's), (53, 32136), (54, 32133), (65, 32073), (68, 32049), (70, 32040), (76, 31992), (77, 31977),

Gene: Heathen_46 Start: 31467, Stop: 31192, Start Num: 28
Candidate Starts for Heathen_46:
(Start: 28 @31467 has 33 MA's), (70, 31290), (76, 31242),

Gene: HelDan_46 Start: 31719, Stop: 31444, Start Num: 28
Candidate Starts for HelDan_46:
(Start: 28 @31719 has 33 MA's), (70, 31542), (76, 31494),

Gene: Heliosoles_49 Start: 32211, Stop: 31963, Start Num: 38
Candidate Starts for Heliosoles_49:
(Start: 38 @32211 has 83 MA's), (53, 32157), (54, 32154), (65, 32094), (68, 32070), (70, 32061), (76, 32013), (77, 31998),

Gene: Hercules11_50 Start: 32317, Stop: 32069, Start Num: 38
Candidate Starts for Hercules11_50:
(Start: 38 @32317 has 83 MA's), (53, 32263), (65, 32200), (68, 32176), (70, 32167), (76, 32119), (77, 32104),

Gene: Hiro_37 Start: 28654, Stop: 28382, Start Num: 32
Candidate Starts for Hiro_37:
(Start: 32 @28654 has 35 MA's), (52, 28588), (69, 28483), (75, 28438), (78, 28402),

Gene: Holli_45 Start: 31670, Stop: 31368, Start Num: 23
Candidate Starts for Holli_45:
(1, 31940), (Start: 23 @31670 has 137 MA's), (62, 31538), (65, 31499), (73, 31451), (76, 31418),

Gene: Hookmount_46 Start: 32082, Stop: 31807, Start Num: 28
Candidate Starts for Hookmount_46:
(8, 32172), (11, 32163), (Start: 28 @32082 has 33 MA's), (70, 31905),

Gene: Houdini22_46 Start: 31884, Stop: 31582, Start Num: 23
Candidate Starts for Houdini22_46:
(Start: 23 @31884 has 137 MA's), (62, 31752), (65, 31713), (73, 31665), (76, 31632),

Gene: HuhtaEnerson15_41 Start: 31246, Stop: 30983, Start Num: 31
Candidate Starts for HuhtaEnerson15_41:
(Start: 31 @31246 has 45 MA's), (Start: 33 @31237 has 3 MA's), (Start: 46 @31195 has 2 MA's), (57, 31165), (67, 31111), (73, 31078), (76, 31045),

Gene: Hutc2_47 Start: 31259, Stop: 30912, Start Num: 13
Candidate Starts for Hutc2_47:
(Start: 13 @31259 has 24 MA's), (19, 31226), (Start: 24 @31205 has 2 MA's), (73, 30992), (76, 30959),

Gene: Huxley_45 Start: 31941, Stop: 31639, Start Num: 23
Candidate Starts for Huxley_45:
(Start: 23 @31941 has 137 MA's), (62, 31809), (65, 31770), (73, 31722), (76, 31689),

Gene: ICleared_46 Start: 31909, Stop: 31607, Start Num: 23
Candidate Starts for ICleared_46:
(1, 32179), (Start: 23 @31909 has 137 MA's), (62, 31777), (65, 31738), (73, 31690), (76, 31657),

Gene: Iceman_46 Start: 32166, Stop: 31864, Start Num: 23
Candidate Starts for Iceman_46:
(1, 32436), (Start: 23 @32166 has 137 MA's), (62, 32034), (65, 31995), (73, 31947), (76, 31914),

Gene: Idleandcovert_47 Start: 31838, Stop: 31563, Start Num: 28
Candidate Starts for Idleandcovert_47:
(Start: 28 @31838 has 33 MA's), (70, 31661), (76, 31613),

Gene: Insomnia_48 Start: 31764, Stop: 31417, Start Num: 13
Candidate Starts for Insomnia_48:
(Start: 13 @31764 has 24 MA's), (19, 31731), (Start: 24 @31710 has 2 MA's), (73, 31497), (76, 31464),

Gene: Iracema64_47 Start: 32144, Stop: 31842, Start Num: 23
Candidate Starts for Iracema64_47:
(1, 32414), (Start: 23 @32144 has 137 MA's), (62, 32012), (65, 31973), (73, 31925), (76, 31892),

Gene: Isca_45 Start: 31262, Stop: 30987, Start Num: 28
Candidate Starts for Isca_45:
(11, 31349), (21, 31292), (Start: 28 @31262 has 33 MA's), (58, 31157), (70, 31085), (76, 31037),

Gene: JF2_46 Start: 31013, Stop: 30738, Start Num: 28
Candidate Starts for JF2_46:
(11, 31100), (21, 31043), (Start: 28 @31013 has 33 MA's), (58, 30908), (70, 30836), (76, 30788),

Gene: JF4_46 Start: 31013, Stop: 30738, Start Num: 28
Candidate Starts for JF4_46:
(11, 31100), (21, 31043), (Start: 28 @31013 has 33 MA's), (58, 30908), (70, 30836), (76, 30788),

Gene: JHC117_50 Start: 32307, Stop: 32059, Start Num: 38
Candidate Starts for JHC117_50:
(Start: 38 @32307 has 83 MA's), (53, 32253), (65, 32190), (68, 32166), (70, 32157), (76, 32109), (77, 32094),

Gene: Jabiru_41 Start: 30865, Stop: 30614, Start Num: 31
Candidate Starts for Jabiru_41:
(9, 30955), (12, 30943), (Start: 31 @30865 has 45 MA's), (Start: 33 @30856 has 3 MA's), (Start: 46 @30814 has 2 MA's), (57, 30784), (67, 30730), (73, 30697), (76, 30664),

Gene: Jabith_48 Start: 31765, Stop: 31418, Start Num: 13
Candidate Starts for Jabith_48:
(Start: 13 @31765 has 24 MA's), (19, 31732), (Start: 24 @31711 has 2 MA's), (73, 31498), (76, 31465),

Gene: Jaykayelowell_44 Start: 31873, Stop: 31571, Start Num: 23
Candidate Starts for Jaykayelowell_44:
(1, 32143), (Start: 23 @31873 has 137 MA's), (62, 31741), (65, 31702), (73, 31654), (76, 31621),

Gene: JenCasNa_51 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for JenCasNa_51:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: JeppNRM_51 Start: 32209, Stop: 31961, Start Num: 38

Candidate Starts for JeppNRM_51:

(Start: 38 @32209 has 83 MA's), (53, 32155), (54, 32152), (65, 32092), (68, 32068), (70, 32059), (76, 32011), (77, 31996),

Gene: Jester_37 Start: 28330, Stop: 28058, Start Num: 32

Candidate Starts for Jester_37:

(Start: 32 @28330 has 35 MA's), (52, 28264), (75, 28114), (78, 28078),

Gene: JetBlade_46 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for JetBlade_46:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: Jobu08_49 Start: 32140, Stop: 31892, Start Num: 38

Candidate Starts for Jobu08_49:

(Start: 38 @32140 has 83 MA's), (53, 32086), (54, 32083), (65, 32023), (68, 31999), (70, 31990), (76, 31942), (77, 31927),

Gene: JoongJeon_45 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for JoongJeon_45:

(Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Joselito_48 Start: 31705, Stop: 31358, Start Num: 13

Candidate Starts for Joselito_48:

(Start: 13 @31705 has 24 MA's), (19, 31672), (Start: 24 @31651 has 2 MA's), (73, 31438), (76, 31405),

Gene: Jovo_40 Start: 31287, Stop: 31024, Start Num: 31

Candidate Starts for Jovo_40:

(Start: 31 @31287 has 45 MA's), (Start: 33 @31278 has 3 MA's), (Start: 38 @31269 has 83 MA's), (41, 31248), (Start: 46 @31236 has 2 MA's), (67, 31152), (73, 31119), (76, 31086),

Gene: KADY_50 Start: 32339, Stop: 32091, Start Num: 38

Candidate Starts for KADY_50:

(Start: 38 @32339 has 83 MA's), (53, 32285), (65, 32222), (68, 32198), (70, 32189), (76, 32141), (77, 32126),

Gene: KFPoly_45 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for KFPoly_45:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: Kachowdy_46 Start: 31719, Stop: 31444, Start Num: 28

Candidate Starts for Kachowdy_46:

(Start: 28 @31719 has 33 MA's), (70, 31542), (76, 31494),

Gene: Kalb97_51 Start: 32207, Stop: 31959, Start Num: 38

Candidate Starts for Kalb97_51:

(Start: 38 @32207 has 83 MA's), (53, 32153), (54, 32150), (65, 32090), (68, 32066), (70, 32057), (76, 32009), (77, 31994),

Gene: Kalnoky_51 Start: 32205, Stop: 31957, Start Num: 38

Candidate Starts for Kalnoky_51:

(Start: 38 @32205 has 83 MA's), (53, 32151), (54, 32148), (65, 32088), (68, 32064), (70, 32055), (76, 32007), (77, 31992),

Gene: Kamy_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Kamy_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: KekoraPapaka_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for KekoraPapaka_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Kimba_47 Start: 31285, Stop: 30938, Start Num: 13

Candidate Starts for Kimba_47:

(Start: 13 @31285 has 24 MA's), (19, 31252), (Start: 24 @31231 has 2 MA's), (73, 31018), (76, 30985),

Gene: Kingmustik0402_46 Start: 31869, Stop: 31567, Start Num: 23

Candidate Starts for Kingmustik0402_46:

(1, 32139), (Start: 23 @31869 has 137 MA's), (62, 31737), (65, 31698), (73, 31650), (76, 31617),

Gene: Koan_44 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Koan_44:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Koreni_45 Start: 31561, Stop: 31259, Start Num: 23

Candidate Starts for Koreni_45:

(1, 31831), (Start: 23 @31561 has 137 MA's), (62, 31429), (65, 31390), (73, 31342), (76, 31309),

Gene: Kratak_46 Start: 32040, Stop: 31717, Start Num: 23

Candidate Starts for Kratak_46:

(Start: 23 @32040 has 137 MA's), (27, 32025), (62, 31887), (73, 31800), (76, 31767),

Gene: Kremtemulon_46 Start: 31831, Stop: 31529, Start Num: 23

Candidate Starts for Kremtemulon_46:

(1, 32101), (Start: 23 @31831 has 137 MA's), (62, 31699), (65, 31660), (76, 31579),

Gene: Krishelle_37 Start: 28678, Stop: 28406, Start Num: 32

Candidate Starts for Krishelle_37:

(Start: 24 @28711 has 2 MA's), (Start: 32 @28678 has 35 MA's), (56, 28591), (75, 28462), (78, 28426),

Gene: Kyee_46 Start: 31878, Stop: 31576, Start Num: 23

Candidate Starts for Kyee_46:

(Start: 23 @31878 has 137 MA's), (62, 31746), (65, 31707), (73, 31659), (76, 31626),

Gene: LBerry_51 Start: 32312, Stop: 32064, Start Num: 38

Candidate Starts for LBerry_51:

(Start: 38 @32312 has 83 MA's), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: LHTSCC_48 Start: 32302, Stop: 32000, Start Num: 23
Candidate Starts for LHTSCC_48:
(1, 32572), (Start: 23 @32302 has 137 MA's), (62, 32170), (65, 32131), (76, 32050),

Gene: Lambert1_46 Start: 32081, Stop: 31806, Start Num: 28
Candidate Starts for Lambert1_46:
(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: LappelDuVide_46 Start: 31879, Stop: 31577, Start Num: 23
Candidate Starts for LappelDuVide_46:
(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: LarryKay_50 Start: 32341, Stop: 32093, Start Num: 38
Candidate Starts for LarryKay_50:
(Start: 38 @32341 has 83 MA's), (53, 32287), (65, 32224), (68, 32200), (70, 32191), (76, 32143), (77, 32128),

Gene: Lemur_46 Start: 31877, Stop: 31575, Start Num: 23
Candidate Starts for Lemur_46:
(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: LeoAvram_46 Start: 31880, Stop: 31578, Start Num: 23
Candidate Starts for LeoAvram_46:
(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Lev2_40 Start: 30919, Stop: 30656, Start Num: 31
Candidate Starts for Lev2_40:
(Start: 31 @30919 has 45 MA's), (Start: 33 @30910 has 3 MA's), (Start: 38 @30901 has 83 MA's), (41, 30880), (Start: 46 @30868 has 2 MA's), (67, 30784), (73, 30751), (76, 30718),

Gene: Lilith_51 Start: 32301, Stop: 32053, Start Num: 38
Candidate Starts for Lilith_51:
(Start: 38 @32301 has 83 MA's), (53, 32247), (65, 32184), (68, 32160), (70, 32151), (76, 32103), (77, 32088),

Gene: Lillie_37 Start: 28394, Stop: 28122, Start Num: 32
Candidate Starts for Lillie_37:
(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: LittleB_46 Start: 31881, Stop: 31579, Start Num: 23
Candidate Starts for LittleB_46:
(1, 32151), (Start: 23 @31881 has 137 MA's), (62, 31749), (65, 31710), (73, 31662), (76, 31629),

Gene: LittleCherry_41 Start: 31256, Stop: 30993, Start Num: 31
Candidate Starts for LittleCherry_41:
(Start: 31 @31256 has 45 MA's), (Start: 33 @31247 has 3 MA's), (Start: 46 @31205 has 2 MA's), (57, 31175), (67, 31121), (73, 31088), (76, 31055),

Gene: LittleGuy_46 Start: 31776, Stop: 31474, Start Num: 23
Candidate Starts for LittleGuy_46:
(1, 32046), (Start: 23 @31776 has 137 MA's), (62, 31644), (65, 31605), (73, 31557), (76, 31524),

Gene: LochMonster_47 Start: 32116, Stop: 31814, Start Num: 23

Candidate Starts for LochMonster_47:

(1, 32386), (Start: 23 @32116 has 137 MA's), (36, 32074), (62, 31984), (65, 31945), (73, 31897), (76, 31864),

Gene: LogiBear_47 Start: 30262, Stop: 29981, Start Num: 26

Candidate Starts for LogiBear_47:

(Start: 26 @30262 has 2 MA's), (50, 30184), (70, 30079), (73, 30064), (75, 30040),

Gene: Lorenzo_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Lorenzo_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Louie6_49 Start: 32340, Stop: 32092, Start Num: 38

Candidate Starts for Louie6_49:

(Start: 38 @32340 has 83 MA's), (53, 32286), (65, 32223), (68, 32199), (70, 32190), (76, 32142), (77, 32127),

Gene: Lowa_50 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for Lowa_50:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Lucivia_48 Start: 31754, Stop: 31407, Start Num: 13

Candidate Starts for Lucivia_48:

(Start: 13 @31754 has 24 MA's), (19, 31721), (Start: 24 @31700 has 2 MA's), (73, 31487), (76, 31454),

Gene: LugYA_53 Start: 32309, Stop: 32061, Start Num: 38

Candidate Starts for LugYA_53:

(Start: 38 @32309 has 83 MA's), (53, 32255), (65, 32192), (68, 32168), (70, 32159), (76, 32111), (77, 32096),

Gene: Lunsford_47 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for Lunsford_47:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: MA5_46 Start: 31164, Stop: 30889, Start Num: 28

Candidate Starts for MA5_46:

(6, 31281), (9, 31257), (11, 31251), (16, 31224), (Start: 28 @31164 has 33 MA's), (55, 31074), (70, 30987), (76, 30939),

Gene: MK4_46 Start: 31247, Stop: 30972, Start Num: 28

Candidate Starts for MK4_46:

(11, 31334), (21, 31277), (Start: 28 @31247 has 33 MA's), (58, 31142), (70, 31070), (76, 31022),

Gene: MaCh_48 Start: 31692, Stop: 31345, Start Num: 13

Candidate Starts for MaCh_48:

(Start: 13 @31692 has 24 MA's), (19, 31659), (Start: 24 @31638 has 2 MA's), (73, 31425), (76, 31392),

Gene: Mabel_47 Start: 31294, Stop: 30947, Start Num: 13

Candidate Starts for Mabel_47:

(Start: 13 @31294 has 24 MA's), (19, 31261), (Start: 24 @31240 has 2 MA's), (73, 31027), (76, 30994),

Gene: MadMarie_50 Start: 32310, Stop: 32062, Start Num: 38

Candidate Starts for MadMarie_50:

(Start: 38 @32310 has 83 MA's), (53, 32256), (65, 32193), (68, 32169), (70, 32160), (76, 32112), (77, 32097),

Gene: Mainiac_50 Start: 32302, Stop: 32054, Start Num: 38

Candidate Starts for Mainiac_50:

(Start: 38 @32302 has 83 MA's), (53, 32248), (65, 32185), (68, 32161), (70, 32152), (76, 32104), (77, 32089),

Gene: Malinsilva_52 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for Malinsilva_52:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Manu_50 Start: 32208, Stop: 31960, Start Num: 38

Candidate Starts for Manu_50:

(Start: 38 @32208 has 83 MA's), (53, 32154), (54, 32151), (65, 32091), (68, 32067), (70, 32058), (76, 32010), (77, 31995),

Gene: MarQuardt_50 Start: 32310, Stop: 32062, Start Num: 38

Candidate Starts for MarQuardt_50:

(Start: 38 @32310 has 83 MA's), (53, 32256), (65, 32193), (68, 32169), (70, 32160), (76, 32112), (77, 32097),

Gene: Marchesa_46 Start: 31717, Stop: 31442, Start Num: 28

Candidate Starts for Marchesa_46:

(Start: 28 @31717 has 33 MA's), (70, 31540), (76, 31492),

Gene: Margo_46 Start: 32107, Stop: 31832, Start Num: 28

Candidate Starts for Margo_46:

(8, 32197), (11, 32188), (Start: 28 @32107 has 33 MA's), (70, 31930),

Gene: Marie_50 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for Marie_50:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: Marius_51 Start: 32205, Stop: 31957, Start Num: 38

Candidate Starts for Marius_51:

(Start: 38 @32205 has 83 MA's), (53, 32151), (54, 32148), (65, 32088), (68, 32064), (70, 32055), (76, 32007), (77, 31992),

Gene: MarysWell_39 Start: 31119, Stop: 30856, Start Num: 31

Candidate Starts for MarysWell_39:

(Start: 31 @31119 has 45 MA's), (Start: 33 @31110 has 3 MA's), (Start: 38 @31101 has 83 MA's), (Start: 46 @31068 has 2 MA's), (67, 30984), (73, 30951), (76, 30918),

Gene: Maverick_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Maverick_46:

(Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Maxo_47 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Maxo_47:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Mayonnaise_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Mayonnaise_45:

(Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Mazhar510_46 Start: 31881, Stop: 31579, Start Num: 23

Candidate Starts for Mazhar510_46:

(Start: 23 @31881 has 137 MA's), (62, 31749), (65, 31710), (73, 31662), (76, 31629),

Gene: Medusa_46 Start: 31879, Stop: 31577, Start Num: 23

Candidate Starts for Medusa_46:

(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: MeeZee_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for MeeZee_46:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Melvin_48 Start: 31875, Stop: 31573, Start Num: 23

Candidate Starts for Melvin_48:

(1, 32145), (Start: 23 @31875 has 137 MA's), (62, 31743), (65, 31704), (73, 31656), (76, 31623),

Gene: Methuselah_47 Start: 32335, Stop: 32087, Start Num: 38

Candidate Starts for Methuselah_47:

(Start: 38 @32335 has 83 MA's), (53, 32281), (65, 32218), (68, 32194), (70, 32185), (76, 32137), (77, 32122),

Gene: Micasa_42 Start: 31386, Stop: 31123, Start Num: 31

Candidate Starts for Micasa_42:

(Start: 31 @31386 has 45 MA's), (Start: 33 @31377 has 3 MA's), (Start: 46 @31335 has 2 MA's), (57, 31305), (67, 31251), (73, 31218), (76, 31185),

Gene: Microwolf_50 Start: 32309, Stop: 32061, Start Num: 38

Candidate Starts for Microwolf_50:

(Start: 38 @32309 has 83 MA's), (53, 32255), (65, 32192), (68, 32168), (70, 32159), (76, 32111), (77, 32096),

Gene: Midas2_40 Start: 31053, Stop: 30841, Start Num: 46

Candidate Starts for Midas2_40:

(Start: 31 @31104 has 45 MA's), (Start: 33 @31095 has 3 MA's), (Start: 38 @31086 has 83 MA's), (41, 31065), (Start: 46 @31053 has 2 MA's), (67, 30969), (73, 30936), (76, 30903),

Gene: Milcery_41 Start: 31223, Stop: 30960, Start Num: 31

Candidate Starts for Milcery_41:

(Start: 31 @31223 has 45 MA's), (Start: 33 @31214 has 3 MA's), (Start: 46 @31172 has 2 MA's), (57, 31142), (67, 31088), (73, 31055), (76, 31022),

Gene: Millski_45 Start: 31881, Stop: 31579, Start Num: 23

Candidate Starts for Millski_45:

(1, 32151), (Start: 23 @31881 has 137 MA's), (62, 31749), (65, 31710), (73, 31662), (76, 31629),

Gene: Miramae_45 Start: 32041, Stop: 31718, Start Num: 23

Candidate Starts for Miramae_45:

(Start: 23 @32041 has 137 MA's), (27, 32026), (51, 31933), (54, 31918), (62, 31888), (71, 31813), (76, 31768),

Gene: Misomonster_51 Start: 32338, Stop: 32090, Start Num: 38

Candidate Starts for Misomonster_51:

(Start: 38 @32338 has 83 MA's), (53, 32284), (65, 32221), (68, 32197), (70, 32188), (76, 32140), (77, 32125),

Gene: MoneyMay_50 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for MoneyMay_50:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: Montavir_49 Start: 32309, Stop: 32061, Start Num: 38

Candidate Starts for Montavir_49:

(Start: 38 @32309 has 83 MA's), (53, 32255), (65, 32192), (68, 32168), (70, 32159), (76, 32111), (77, 32096),

Gene: Morpher26_45 Start: 31874, Stop: 31551, Start Num: 23

Candidate Starts for Morpher26_45:

(Start: 23 @31874 has 137 MA's), (49, 31775), (51, 31766), (54, 31751), (62, 31721), (76, 31601),

Gene: Morrow_47 Start: 31886, Stop: 31584, Start Num: 23

Candidate Starts for Morrow_47:

(1, 32156), (Start: 23 @31886 has 137 MA's), (62, 31754), (65, 31715), (73, 31667), (76, 31634),

Gene: MuchMore_53 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for MuchMore_53:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Mulciber_47 Start: 31256, Stop: 30909, Start Num: 13

Candidate Starts for Mulciber_47:

(Start: 13 @31256 has 24 MA's), (19, 31223), (Start: 24 @31202 has 2 MA's), (73, 30989), (76, 30956),

Gene: Munch_48 Start: 31705, Stop: 31358, Start Num: 13

Candidate Starts for Munch_48:

(Start: 13 @31705 has 24 MA's), (19, 31672), (Start: 24 @31651 has 2 MA's), (73, 31438), (76, 31405),

Gene: Mundrea_45 Start: 31861, Stop: 31538, Start Num: 23

Candidate Starts for Mundrea_45:

(Start: 23 @31861 has 137 MA's), (51, 31753), (54, 31738), (62, 31708), (71, 31633), (76, 31588),

Gene: MyraDee_42 Start: 29297, Stop: 29043, Start Num: 26

Candidate Starts for MyraDee_42:

(Start: 26 @29297 has 2 MA's), (70, 29138), (76, 29090),

Gene: Naca_42 Start: 31534, Stop: 31271, Start Num: 31

Candidate Starts for Naca_42:

(Start: 31 @31534 has 45 MA's), (Start: 33 @31525 has 3 MA's), (40, 31504), (Start: 46 @31483 has 2 MA's), (73, 31366), (75, 31342),

Gene: Naiad_37 Start: 28407, Stop: 28135, Start Num: 32

Candidate Starts for Naiad_37:

(Start: 32 @28407 has 35 MA's), (75, 28191), (78, 28155),

Gene: Nancinator_37 Start: 28395, Stop: 28123, Start Num: 32

Candidate Starts for Nancinator_37:

(Start: 32 @28395 has 35 MA's), (52, 28329), (75, 28179), (78, 28143),

Gene: Natosaleda_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for Natosaleda_37:

(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: NearlyHeadless_44 Start: 30949, Stop: 30662, Start Num: 31

Candidate Starts for NearlyHeadless_44:

(Start: 31 @30949 has 45 MA's), (34, 30940), (Start: 46 @30898 has 2 MA's), (76, 30712),

Gene: Nemo27_46 Start: 31879, Stop: 31577, Start Num: 23

Candidate Starts for Nemo27_46:

(Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: Noella_46 Start: 32082, Stop: 31807, Start Num: 28

Candidate Starts for Noella_46:

(8, 32172), (11, 32163), (Start: 28 @32082 has 33 MA's), (70, 31905),

Gene: Norbert_45 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for Norbert_45:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: NorthStar_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for NorthStar_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: NotAPhaseMom_46 Start: 31884, Stop: 31582, Start Num: 23

Candidate Starts for NotAPhaseMom_46:

(Start: 23 @31884 has 137 MA's), (62, 31752), (65, 31713), (73, 31665), (76, 31632),

Gene: Nyxis_46 Start: 31770, Stop: 31468, Start Num: 23

Candidate Starts for Nyxis_46:

(1, 32040), (Start: 23 @31770 has 137 MA's), (62, 31638), (65, 31599), (73, 31551), (76, 31518),

Gene: OKaNui_46 Start: 31930, Stop: 31628, Start Num: 23

Candidate Starts for OKaNui_46:

(1, 32200), (Start: 23 @31930 has 137 MA's), (62, 31798), (65, 31759), (73, 31711), (76, 31678),

Gene: Obama12_47 Start: 32304, Stop: 32002, Start Num: 23

Candidate Starts for Obama12_47:

(1, 32574), (Start: 23 @32304 has 137 MA's), (62, 32172), (65, 32133), (76, 32052),

Gene: Ohfah_47 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Ohfah_47:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: OlanP_49 Start: 32378, Stop: 32130, Start Num: 38

Candidate Starts for OlanP_49:

(Start: 38 @32378 has 83 MA's), (49, 32336), (53, 32324), (54, 32321), (65, 32261), (68, 32237), (70, 32228), (76, 32180), (77, 32165),

Gene: Ollie_50 Start: 32179, Stop: 31931, Start Num: 38

Candidate Starts for Ollie_50:

(Start: 38 @32179 has 83 MA's), (53, 32125), (65, 32062), (68, 32038), (70, 32029), (76, 31981), (77, 31966),

Gene: Orange_47 Start: 31254, Stop: 30907, Start Num: 13

Candidate Starts for Orange_47:

(Start: 13 @31254 has 24 MA's), (19, 31221), (Start: 24 @31200 has 2 MA's), (73, 30987), (76, 30954),

Gene: P28Green_51 Start: 32311, Stop: 32063, Start Num: 38

Candidate Starts for P28Green_51:

(Start: 38 @32311 has 83 MA's), (53, 32257), (65, 32194), (68, 32170), (70, 32161), (76, 32113), (77, 32098),

Gene: PGHhamlin_52 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for PGHhamlin_52:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Palestino_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Palestino_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Panamaxus_44 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for Panamaxus_44:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: Partridge_37 Start: 28510, Stop: 28205, Start Num: 24

Candidate Starts for Partridge_37:

(Start: 24 @28510 has 2 MA's), (Start: 32 @28477 has 35 MA's), (56, 28390), (75, 28261), (78, 28225),

Gene: Pawn_50 Start: 32212, Stop: 31964, Start Num: 38

Candidate Starts for Pawn_50:

(Start: 38 @32212 has 83 MA's), (53, 32158), (54, 32155), (65, 32095), (68, 32071), (70, 32062), (76, 32014), (77, 31999),

Gene: Peaches_46 Start: 31879, Stop: 31577, Start Num: 23

Candidate Starts for Peaches_46:

(1, 32149), (Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: Pembroke_50 Start: 32309, Stop: 32061, Start Num: 38

Candidate Starts for Pembroke_50:

(Start: 38 @32309 has 83 MA's), (53, 32255), (65, 32192), (68, 32168), (70, 32159), (76, 32111), (77, 32096),

Gene: Penny1_51 Start: 32312, Stop: 32064, Start Num: 38

Candidate Starts for Penny1_51:

(Start: 38 @32312 has 83 MA's), (44, 32282), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: Perplexer_45 Start: 31850, Stop: 31527, Start Num: 23
Candidate Starts for Perplexer_45:
(Start: 23 @31850 has 137 MA's), (49, 31751), (51, 31742), (54, 31727), (62, 31697), (76, 31577),

Gene: PeterPeter_46 Start: 31877, Stop: 31575, Start Num: 23
Candidate Starts for PeterPeter_46:
(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Petersenfast_46 Start: 31261, Stop: 30914, Start Num: 13
Candidate Starts for Petersenfast_46:
(Start: 13 @31261 has 24 MA's), (19, 31228), (Start: 24 @31207 has 2 MA's), (73, 30994), (76, 30961),

Gene: PetiteSangsue_45 Start: 31853, Stop: 31530, Start Num: 23
Candidate Starts for PetiteSangsue_45:
(Start: 23 @31853 has 137 MA's), (49, 31754), (51, 31745), (54, 31730), (62, 31700), (76, 31580),

Gene: PetterN_44 Start: 30975, Stop: 30712, Start Num: 31
Candidate Starts for PetterN_44:
(12, 31053), (Start: 31 @30975 has 45 MA's), (Start: 33 @30966 has 3 MA's), (40, 30945), (Start: 46 @30924 has 2 MA's), (73, 30807), (75, 30783),

Gene: Phacado_46 Start: 31879, Stop: 31577, Start Num: 23
Candidate Starts for Phacado_46:
(Start: 23 @31879 has 137 MA's), (62, 31747), (65, 31708), (73, 31660), (76, 31627),

Gene: PhailMary_36 Start: 28716, Stop: 28444, Start Num: 32
Candidate Starts for PhailMary_36:
(Start: 32 @28716 has 35 MA's), (52, 28650), (75, 28500), (78, 28464),

Gene: Phantastic_47 Start: 31457, Stop: 31182, Start Num: 28
Candidate Starts for Phantastic_47:
(11, 31538), (21, 31481), (Start: 28 @31457 has 33 MA's), (Start: 38 @31430 has 83 MA's), (70, 31280), (76, 31232),

Gene: Phelipe_47 Start: 31880, Stop: 31578, Start Num: 23
Candidate Starts for Phelipe_47:
(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Phighter1804_46 Start: 31943, Stop: 31620, Start Num: 23
Candidate Starts for Phighter1804_46:
(Start: 23 @31943 has 137 MA's), (27, 31928), (62, 31790), (65, 31751), (73, 31703), (76, 31670),

Gene: Phillis_46 Start: 31492, Stop: 31232, Start Num: 31
Candidate Starts for Phillis_46:
(Start: 31 @31492 has 45 MA's), (34, 31483), (72, 31330), (76, 31291),

Gene: PhishRPhriends_48 Start: 31386, Stop: 31138, Start Num: 38
Candidate Starts for PhishRPhriends_48:
(Start: 38 @31386 has 83 MA's), (53, 31332), (54, 31329), (65, 31269), (68, 31245), (70, 31236), (76, 31188), (77, 31173),

Gene: Phlorence_39 Start: 30794, Stop: 30531, Start Num: 31
Candidate Starts for Phlorence_39:

(Start: 31 @30794 has 45 MA's), (Start: 33 @30785 has 3 MA's), (Start: 38 @30776 has 83 MA's), (41, 30755), (Start: 46 @30743 has 2 MA's), (67, 30659), (73, 30626), (76, 30593),

Gene: Phoebe_51 Start: 32301, Stop: 32053, Start Num: 38

Candidate Starts for Phoebe_51:

(Start: 38 @32301 has 83 MA's), (53, 32247), (65, 32184), (68, 32160), (70, 32151), (76, 32103), (77, 32088),

Gene: Phontbonne_46 Start: 31771, Stop: 31469, Start Num: 23

Candidate Starts for Phontbonne_46:

(1, 32041), (Start: 23 @31771 has 137 MA's), (62, 31639), (65, 31600), (73, 31552), (76, 31519),

Gene: Phoxy_50 Start: 32336, Stop: 32088, Start Num: 38

Candidate Starts for Phoxy_50:

(Start: 38 @32336 has 83 MA's), (53, 32282), (65, 32219), (68, 32195), (70, 32186), (76, 32138), (77, 32123),

Gene: Phrankenstein_37 Start: 28340, Stop: 28068, Start Num: 32

Candidate Starts for Phrankenstein_37:

(Start: 32 @28340 has 35 MA's), (52, 28274), (75, 28124), (78, 28088),

Gene: Phranny_51 Start: 32194, Stop: 31946, Start Num: 38

Candidate Starts for Phranny_51:

(Start: 38 @32194 has 83 MA's), (53, 32140), (54, 32137), (65, 32077), (68, 32053), (70, 32044), (76, 31996), (77, 31981),

Gene: PickleBack_40 Start: 30920, Stop: 30657, Start Num: 31

Candidate Starts for PickleBack_40:

(Start: 31 @30920 has 45 MA's), (Start: 33 @30911 has 3 MA's), (Start: 38 @30902 has 83 MA's), (41, 30881), (Start: 46 @30869 has 2 MA's), (67, 30785), (73, 30752), (76, 30719),

Gene: Pipcraft_44 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Pipcraft_44:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Pistachio_48 Start: 31385, Stop: 31110, Start Num: 28

Candidate Starts for Pistachio_48:

(Start: 28 @31385 has 33 MA's), (70, 31208), (76, 31160),

Gene: Pocahontas_46 Start: 32078, Stop: 31803, Start Num: 28

Candidate Starts for Pocahontas_46:

(8, 32168), (11, 32159), (Start: 28 @32078 has 33 MA's), (70, 31901),

Gene: Polymorphads_47 Start: 31873, Stop: 31571, Start Num: 23

Candidate Starts for Polymorphads_47:

(1, 32143), (Start: 23 @31873 has 137 MA's), (62, 31741), (65, 31702), (73, 31654), (76, 31621),

Gene: Popcicle_46 Start: 32078, Stop: 31803, Start Num: 28

Candidate Starts for Popcicle_46:

(8, 32168), (11, 32159), (Start: 28 @32078 has 33 MA's), (70, 31901),

Gene: PotatoSplit_52 Start: 32312, Stop: 32064, Start Num: 38

Candidate Starts for PotatoSplit_52:

(Start: 38 @32312 has 83 MA's), (53, 32258), (65, 32195), (68, 32171), (70, 32162), (76, 32114), (77, 32099),

Gene: Prin Ashe11_41 Start: 31086, Stop: 30823, Start Num: 31

Candidate Starts for Prin Ashe11_41:

(Start: 31 @31086 has 45 MA's), (Start: 33 @31077 has 3 MA's), (Start: 46 @31035 has 2 MA's), (57, 31005), (67, 30951), (73, 30918), (76, 30885),

Gene: Pumbaa_46 Start: 31825, Stop: 31523, Start Num: 23

Candidate Starts for Pumbaa_46:

(1, 32095), (Start: 23 @31825 has 137 MA's), (62, 31693), (65, 31654), (73, 31606), (76, 31573),

Gene: Puppy_48 Start: 31458, Stop: 31183, Start Num: 28

Candidate Starts for Puppy_48:

(Start: 28 @31458 has 33 MA's), (70, 31281), (76, 31233),

Gene: PurpleHaze_50 Start: 32207, Stop: 31959, Start Num: 38

Candidate Starts for PurpleHaze_50:

(Start: 38 @32207 has 83 MA's), (53, 32153), (54, 32150), (65, 32090), (68, 32066), (70, 32057), (76, 32009), (77, 31994),

Gene: QuinnKiro_45 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for QuinnKiro_45:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: RER2_30 Start: 25266, Stop: 24994, Start Num: 32

Candidate Starts for RER2_30:

(Start: 32 @25266 has 35 MA's), (52, 25200), (75, 25050), (78, 25014),

Gene: RGL3_32 Start: 26225, Stop: 25980, Start Num: 34

Candidate Starts for RGL3_32:

(34, 26225), (Start: 46 @26183 has 2 MA's), (75, 26036), (78, 26000), (79, 25991),

Gene: Rasputin_37 Start: 28364, Stop: 28092, Start Num: 32

Candidate Starts for Rasputin_37:

(Start: 32 @28364 has 35 MA's), (52, 28298), (75, 28148), (78, 28112),

Gene: Ravana_51 Start: 31221, Stop: 30943, Start Num: 26

Candidate Starts for Ravana_51:

(7, 31314), (Start: 26 @31221 has 2 MA's), (53, 31137), (73, 31026),

Gene: Reba_50 Start: 31867, Stop: 31619, Start Num: 38

Candidate Starts for Reba_50:

(Start: 38 @31867 has 83 MA's), (53, 31813), (54, 31810), (65, 31750), (68, 31726), (70, 31717), (76, 31669), (77, 31654),

Gene: Refuge_46 Start: 33330, Stop: 32986, Start Num: 17

Candidate Starts for Refuge_46:

(Start: 13 @33342 has 24 MA's), (Start: 17 @33330 has 3 MA's), (Start: 24 @33288 has 2 MA's), (25, 33285), (Start: 31 @33267 has 45 MA's), (47, 33213), (49, 33201), (73, 33066), (78, 33006),

Gene: Relief_45 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Relief_45:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: ResDef_46 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for ResDef_46:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: RexFury_37 Start: 28425, Stop: 28153, Start Num: 32

Candidate Starts for RexFury_37:

(Start: 32 @28425 has 35 MA's), (52, 28359), (75, 28209), (78, 28173),

Gene: Rhodalysa_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for Rhodalysa_37:

(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: Roary_45 Start: 31159, Stop: 30863, Start Num: 31

Candidate Starts for Roary_45:

(14, 31225), (Start: 31 @31159 has 45 MA's), (Start: 46 @31108 has 2 MA's), (76, 30922),

Gene: RockieBear_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for RockieBear_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Rockstar_46 Start: 31256, Stop: 30981, Start Num: 28

Candidate Starts for Rockstar_46:

(11, 31343), (21, 31286), (Start: 28 @31256 has 33 MA's), (58, 31151), (70, 31079), (76, 31031),

Gene: Roimos_46 Start: 31635, Stop: 31360, Start Num: 28

Candidate Starts for Roimos_46:

(Start: 28 @31635 has 33 MA's), (70, 31458), (76, 31410),

Gene: Romney_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Romney_46:

(1, 32147), (Start: 23 @31877 has 137 MA's), (36, 31835), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Roosevelt_45 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Roosevelt_45:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Rosa24_45 Start: 31911, Stop: 31609, Start Num: 23

Candidate Starts for Rosa24_45:

(1, 32181), (Start: 23 @31911 has 137 MA's), (36, 31869), (62, 31779), (65, 31740), (73, 31692), (76, 31659),

Gene: Ruin_46 Start: 31873, Stop: 31571, Start Num: 23

Candidate Starts for Ruin_46:

(1, 32143), (Start: 23 @31873 has 137 MA's), (62, 31741), (65, 31702), (73, 31654), (76, 31621),

Gene: Rummer_49 Start: 32339, Stop: 32091, Start Num: 38

Candidate Starts for Rummer_49:

(Start: 38 @32339 has 83 MA's), (53, 32285), (65, 32222), (68, 32198), (70, 32189), (76, 32141), (77, 32126),

Gene: Sabertooth_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Sabertooth_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Sabia_50 Start: 32302, Stop: 32054, Start Num: 38

Candidate Starts for Sabia_50:

(Start: 38 @32302 has 83 MA's), (53, 32248), (65, 32185), (68, 32161), (70, 32152), (76, 32104), (77, 32089),

Gene: Sabinator_49 Start: 32307, Stop: 32059, Start Num: 38

Candidate Starts for Sabinator_49:

(Start: 38 @32307 has 83 MA's), (53, 32253), (65, 32190), (68, 32166), (70, 32157), (76, 32109), (77, 32094),

Gene: Saintus_39 Start: 27880, Stop: 27593, Start Num: 31

Candidate Starts for Saintus_39:

(Start: 31 @27880 has 45 MA's), (34, 27871), (Start: 46 @27829 has 2 MA's), (76, 27643),

Gene: Salz_46 Start: 31232, Stop: 30885, Start Num: 13

Candidate Starts for Salz_46:

(Start: 13 @31232 has 24 MA's), (19, 31199), (Start: 24 @31178 has 2 MA's), (73, 30965), (76, 30932),

Gene: Saskia_48 Start: 31226, Stop: 30879, Start Num: 13

Candidate Starts for Saskia_48:

(Start: 13 @31226 has 24 MA's), (19, 31193), (Start: 24 @31172 has 2 MA's), (34, 31139), (73, 30959), (76, 30926),

Gene: SaturnRing_47 Start: 31838, Stop: 31563, Start Num: 28

Candidate Starts for SaturnRing_47:

(Start: 28 @31838 has 33 MA's), (70, 31661), (76, 31613),

Gene: Scamp_46 Start: 31882, Stop: 31580, Start Num: 23

Candidate Starts for Scamp_46:

(1, 32152), (Start: 23 @31882 has 137 MA's), (62, 31750), (65, 31711), (73, 31663), (76, 31630),

Gene: Scorpia_44 Start: 31052, Stop: 30789, Start Num: 31

Candidate Starts for Scorpia_44:

(12, 31130), (Start: 31 @31052 has 45 MA's), (Start: 33 @31043 has 3 MA's), (40, 31022), (Start: 46 @31001 has 2 MA's), (73, 30884), (75, 30860),

Gene: Scout_46 Start: 30966, Stop: 30691, Start Num: 28

Candidate Starts for Scout_46:

(Start: 28 @30966 has 33 MA's), (70, 30789), (76, 30741),

Gene: SenorClean_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for SenorClean_46:

(Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Shaka_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Shaka_46:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Sham4_47 Start: 31260, Stop: 30913, Start Num: 13

Candidate Starts for Sham4_47:

(Start: 13 @31260 has 24 MA's), (19, 31227), (Start: 24 @31206 has 2 MA's), (73, 30993), (76, 30960),

Gene: Sheen_47 Start: 34109, Stop: 33846, Start Num: 30

Candidate Starts for Sheen_47:

(Start: 30 @34109 has 1 MA's), (42, 34067), (Start: 46 @34058 has 2 MA's), (59, 34010), (64, 33998), (71, 33941), (78, 33869),

Gene: SheldonCooper_48 Start: 32303, Stop: 32001, Start Num: 23

Candidate Starts for SheldonCooper_48:

(1, 32573), (Start: 23 @32303 has 137 MA's), (62, 32171), (65, 32132), (76, 32051),

Gene: Shuman_37 Start: 28407, Stop: 28135, Start Num: 32

Candidate Starts for Shuman_37:

(Start: 32 @28407 has 35 MA's), (52, 28341), (75, 28191), (78, 28155),

Gene: Shygu2_45 Start: 31853, Stop: 31530, Start Num: 23

Candidate Starts for Shygu2_45:

(Start: 23 @31853 has 137 MA's), (62, 31700), (65, 31661), (76, 31580),

Gene: Skipitt_45 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for Skipitt_45:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: Smeadley_45 Start: 31325, Stop: 31029, Start Num: 31

Candidate Starts for Smeadley_45:

(14, 31391), (Start: 31 @31325 has 45 MA's), (Start: 46 @31274 has 2 MA's), (76, 31088),

Gene: Snape_47 Start: 31258, Stop: 30911, Start Num: 13

Candidate Starts for Snape_47:

(Start: 13 @31258 has 24 MA's), (19, 31225), (Start: 24 @31204 has 2 MA's), (73, 30991), (76, 30958),

Gene: Snickers_50 Start: 32282, Stop: 32034, Start Num: 38

Candidate Starts for Snickers_50:

(Start: 38 @32282 has 83 MA's), (53, 32228), (65, 32165), (68, 32141), (70, 32132), (76, 32084), (77, 32069),

Gene: SoYo_50 Start: 32220, Stop: 31972, Start Num: 38

Candidate Starts for SoYo_50:

(Start: 38 @32220 has 83 MA's), (53, 32166), (65, 32103), (68, 32079), (70, 32070), (76, 32022), (77, 32007),

Gene: SoilDragon_50 Start: 31756, Stop: 31508, Start Num: 38

Candidate Starts for SoilDragon_50:

(Start: 38 @31756 has 83 MA's), (53, 31702), (54, 31699), (65, 31639), (68, 31615), (70, 31606), (76, 31558), (77, 31543),

Gene: Soshari_52 Start: 32335, Stop: 32087, Start Num: 38

Candidate Starts for Soshari_52:

(Start: 38 @32335 has 83 MA's), (53, 32281), (65, 32218), (68, 32194), (70, 32185), (76, 32137), (77, 32122),

Gene: Sparxx_47 Start: 31875, Stop: 31573, Start Num: 23

Candidate Starts for Sparxx_47:

(1, 32145), (Start: 23 @31875 has 137 MA's), (62, 31743), (65, 31704), (73, 31656), (76, 31623),

Gene: Spike509_50 Start: 32336, Stop: 32088, Start Num: 38

Candidate Starts for Spike509_50:

(Start: 38 @32336 has 83 MA's), (53, 32282), (65, 32219), (68, 32195), (70, 32186), (76, 32138), (77, 32123),

Gene: Spino_45 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Spino_45:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: StCroix_37 Start: 28407, Stop: 28135, Start Num: 32

Candidate Starts for StCroix_37:

(Start: 32 @28407 has 35 MA's), (75, 28191), (78, 28155),

Gene: Stagni_50 Start: 32311, Stop: 32063, Start Num: 38

Candidate Starts for Stagni_50:

(Start: 38 @32311 has 83 MA's), (53, 32257), (65, 32194), (68, 32170), (70, 32161), (76, 32113), (77, 32098),

Gene: Stasia_45 Start: 31752, Stop: 31450, Start Num: 23

Candidate Starts for Stasia_45:

(Start: 23 @31752 has 137 MA's), (73, 31533),

Gene: SteMason_45 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for SteMason_45:

(1, 32147), (Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Steamy_43 Start: 31608, Stop: 31282, Start Num: 20

Candidate Starts for Steamy_43:

(3, 31740), (10, 31668), (19, 31614), (Start: 20 @31608 has 1 MA's), (45, 31515), (47, 31509), (49, 31497), (73, 31362),

Gene: StepMih_50 Start: 32302, Stop: 32054, Start Num: 38

Candidate Starts for StepMih_50:

(Start: 38 @32302 has 83 MA's), (53, 32248), (65, 32185), (68, 32161), (70, 32152), (76, 32104), (77, 32089),

Gene: Stephig9_45 Start: 31163, Stop: 30888, Start Num: 31

Candidate Starts for Stephig9_45:

(14, 31229), (Start: 31 @31163 has 45 MA's), (34, 31154), (43, 31118), (72, 30986), (74, 30965),

Gene: Stink_46 Start: 32321, Stop: 31998, Start Num: 23

Candidate Starts for Stink_46:

(Start: 23 @32321 has 137 MA's), (27, 32306), (51, 32213), (54, 32198), (62, 32168), (71, 32093), (76, 32048),

Gene: Sultana_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for Sultana_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: Swann_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for Swann_37:

(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: Swirley_43 Start: 31587, Stop: 31324, Start Num: 31

Candidate Starts for Swirley_43:

(Start: 31 @31587 has 45 MA's), (Start: 33 @31578 has 3 MA's), (Start: 46 @31536 has 2 MA's), (57, 31506), (67, 31452), (73, 31419), (76, 31386),

Gene: SydNat_42 Start: 31777, Stop: 31514, Start Num: 31

Candidate Starts for SydNat_42:

(Start: 31 @31777 has 45 MA's), (Start: 33 @31768 has 3 MA's), (Start: 46 @31726 has 2 MA's), (57, 31696), (67, 31642), (73, 31609), (76, 31576),

Gene: TNguyen7_47 Start: 31805, Stop: 31530, Start Num: 28

Candidate Starts for TNguyen7_47:

(Start: 28 @31805 has 33 MA's), (70, 31628), (76, 31580),

Gene: TWAMP_37 Start: 28394, Stop: 28122, Start Num: 32

Candidate Starts for TWAMP_37:

(Start: 32 @28394 has 35 MA's), (52, 28328), (75, 28178), (78, 28142),

Gene: Tailonex_29 Start: 27177, Stop: 26944, Start Num: 35

Candidate Starts for Tailonex_29:

(35, 27177), (61, 27099),

Gene: Takoda_37 Start: 28367, Stop: 28095, Start Num: 32

Candidate Starts for Takoda_37:

(Start: 32 @28367 has 35 MA's), (52, 28301), (75, 28151), (78, 28115),

Gene: Taquarus_46 Start: 31883, Stop: 31581, Start Num: 23

Candidate Starts for Taquarus_46:

(1, 32153), (Start: 23 @31883 has 137 MA's), (62, 31751), (65, 31712), (73, 31664), (76, 31631),

Gene: Tarynearal_39 Start: 31029, Stop: 30766, Start Num: 31

Candidate Starts for Tarynearal_39:

(Start: 31 @31029 has 45 MA's), (Start: 33 @31020 has 3 MA's), (Start: 46 @30978 has 2 MA's), (57, 30948), (67, 30894), (73, 30861), (76, 30828),

Gene: Taurus_51 Start: 32308, Stop: 32060, Start Num: 38

Candidate Starts for Taurus_51:

(Start: 38 @32308 has 83 MA's), (53, 32254), (65, 32191), (68, 32167), (70, 32158), (76, 32110), (77, 32095),

Gene: Texage_45 Start: 32082, Stop: 31807, Start Num: 28

Candidate Starts for Texage_45:

(8, 32172), (11, 32163), (Start: 28 @32082 has 33 MA's), (70, 31905),

Gene: Thanksgivukkah_45 Start: 31878, Stop: 31576, Start Num: 23

Candidate Starts for Thanksgivukkah_45:

(1, 32148), (Start: 23 @31878 has 137 MA's), (62, 31746), (65, 31707), (73, 31659), (76, 31626),

Gene: Theia_38 Start: 31043, Stop: 30789, Start Num: 33

Candidate Starts for Theia_38:

(Start: 31 @31052 has 45 MA's), (Start: 33 @31043 has 3 MA's), (Start: 38 @31034 has 83 MA's), (41, 31013), (Start: 46 @31001 has 2 MA's), (67, 30917), (73, 30884), (76, 30851),

Gene: Tiffany_50 Start: 32194, Stop: 31946, Start Num: 38

Candidate Starts for Tiffany_50:

(Start: 38 @32194 has 83 MA's), (53, 32140), (65, 32077), (68, 32053), (70, 32044), (76, 31996), (77, 31981),

Gene: Tiger_39 Start: 30576, Stop: 30322, Start Num: 33

Candidate Starts for Tiger_39:

(Start: 31 @30585 has 45 MA's), (Start: 33 @30576 has 3 MA's), (Start: 38 @30567 has 83 MA's), (41, 30546), (Start: 46 @30534 has 2 MA's), (67, 30450), (73, 30417), (76, 30384),

Gene: Timothy_47 Start: 31235, Stop: 30888, Start Num: 13

Candidate Starts for Timothy_47:

(Start: 13 @31235 has 24 MA's), (19, 31202), (Start: 24 @31181 has 2 MA's), (73, 30968), (76, 30935),

Gene: TinaFeyge_46 Start: 31875, Stop: 31573, Start Num: 23

Candidate Starts for TinaFeyge_46:

(1, 32145), (Start: 23 @31875 has 137 MA's), (62, 31743), (65, 31704), (73, 31656), (76, 31623),

Gene: TinyPebbles_49 Start: 32341, Stop: 32093, Start Num: 38

Candidate Starts for TinyPebbles_49:

(Start: 38 @32341 has 83 MA's), (53, 32287), (65, 32224), (68, 32200), (70, 32191), (76, 32143), (77, 32128),

Gene: TinyTimmy_47 Start: 31278, Stop: 30931, Start Num: 13

Candidate Starts for TinyTimmy_47:

(Start: 13 @31278 has 24 MA's), (19, 31245), (Start: 24 @31224 has 2 MA's), (73, 31011), (76, 30978),

Gene: Tinybot_45 Start: 31907, Stop: 31605, Start Num: 23

Candidate Starts for Tinybot_45:

(1, 32177), (Start: 23 @31907 has 137 MA's), (62, 31775), (65, 31736), (73, 31688), (76, 31655),

Gene: TiroTheta9_46 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for TiroTheta9_46:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: Todacoro_46 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for Todacoro_46:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: Toro_49 Start: 34178, Stop: 33957, Start Num: 42

Candidate Starts for Toro_49:

(Start: 30 @34220 has 1 MA's), (42, 34178), (Start: 46 @34169 has 2 MA's), (59, 34121), (64, 34109), (71, 34052), (78, 33980),

Gene: TroyPia_47 Start: 31878, Stop: 31576, Start Num: 23

Candidate Starts for TroyPia_47:

(1, 32148), (Start: 23 @31878 has 137 MA's), (62, 31746), (65, 31707), (73, 31659), (76, 31626),

Gene: Twigg_41 Start: 31226, Stop: 30963, Start Num: 31

Candidate Starts for Twigg_41:

(Start: 31 @31226 has 45 MA's), (Start: 33 @31217 has 3 MA's), (Start: 38 @31208 has 83 MA's), (41, 31187), (Start: 46 @31175 has 2 MA's), (67, 31091), (73, 31058), (76, 31025),

Gene: TygerBlood_46 Start: 31880, Stop: 31578, Start Num: 23

Candidate Starts for TygerBlood_46:

(1, 32150), (Start: 23 @31880 has 137 MA's), (62, 31748), (65, 31709), (73, 31661), (76, 31628),

Gene: UhSalsa_37 Start: 28395, Stop: 28123, Start Num: 32

Candidate Starts for UhSalsa_37:

(Start: 32 @28395 has 35 MA's), (52, 28329), (75, 28179), (78, 28143),

Gene: Ulysses_45 Start: 31557, Stop: 31255, Start Num: 23

Candidate Starts for Ulysses_45:

(1, 31827), (Start: 23 @31557 has 137 MA's), (62, 31425), (65, 31386), (73, 31338), (76, 31305),

Gene: UnionJack_41 Start: 30553, Stop: 30302, Start Num: 31

Candidate Starts for UnionJack_41:

(9, 30643), (12, 30631), (Start: 31 @30553 has 45 MA's), (Start: 33 @30544 has 3 MA's), (Start: 46 @30502 has 2 MA's), (57, 30472), (67, 30418), (73, 30385), (76, 30352),

Gene: Veracruz_45 Start: 32081, Stop: 31806, Start Num: 28

Candidate Starts for Veracruz_45:

(8, 32171), (11, 32162), (Start: 28 @32081 has 33 MA's), (70, 31904),

Gene: Vix_50 Start: 32391, Stop: 32143, Start Num: 38

Candidate Starts for Vix_50:

(Start: 38 @32391 has 83 MA's), (53, 32337), (65, 32274), (68, 32250), (70, 32241), (76, 32193), (77, 32178),

Gene: Wander_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Wander_46:

(Start: 23 @31877 has 137 MA's), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Watson_50 Start: 32300, Stop: 32052, Start Num: 38

Candidate Starts for Watson_50:

(Start: 38 @32300 has 83 MA's), (53, 32246), (65, 32183), (68, 32159), (70, 32150), (76, 32102), (77, 32087),

Gene: Wilbur_46 Start: 31877, Stop: 31575, Start Num: 23

Candidate Starts for Wilbur_46:

(1, 32147), (Start: 23 @31877 has 137 MA's), (36, 31835), (62, 31745), (65, 31706), (73, 31658), (76, 31625),

Gene: Wile_45 Start: 31884, Stop: 31561, Start Num: 23

Candidate Starts for Wile_45:

(Start: 23 @31884 has 137 MA's), (49, 31785), (51, 31776), (54, 31761), (62, 31731), (76, 31611),

Gene: Wizard007_46 Start: 31885, Stop: 31583, Start Num: 23

Candidate Starts for Wizard007_46:

(1, 32155), (Start: 23 @31885 has 137 MA's), (62, 31753), (65, 31714), (73, 31666), (76, 31633),

Gene: Wolpertinger_46 Start: 31261, Stop: 30914, Start Num: 13

Candidate Starts for Wolpertinger_46:

(Start: 13 @31261 has 24 MA's), (19, 31228), (Start: 24 @31207 has 2 MA's), (73, 30994), (76, 30961),

Gene: Wooldri_52 Start: 32220, Stop: 31972, Start Num: 38

Candidate Starts for Wooldri_52:

(Start: 38 @32220 has 83 MA's), (53, 32166), (65, 32103), (68, 32079), (70, 32070), (76, 32022), (77, 32007),

Gene: Xena_44 Start: 31850, Stop: 31527, Start Num: 23

Candidate Starts for Xena_44:

(Start: 23 @31850 has 137 MA's), (49, 31751), (51, 31742), (54, 31727), (62, 31697), (76, 31577),

Gene: XianYue_46 Start: 31886, Stop: 31548, Start Num: 18

Candidate Starts for XianYue_46:

(Start: 18 @31886 has 1 MA's), (60, 31712), (76, 31595),

Gene: YoSam321_46 Start: 31874, Stop: 31572, Start Num: 23

Candidate Starts for YoSam321_46:

(1, 32144), (Start: 23 @31874 has 137 MA's), (62, 31742), (65, 31703), (73, 31655), (76, 31622),

Gene: Yogi_37 Start: 28368, Stop: 28096, Start Num: 32

Candidate Starts for Yogi_37:

(Start: 32 @28368 has 35 MA's), (52, 28302), (75, 28152), (78, 28116),

Gene: Yoncess_37 Start: 28369, Stop: 28097, Start Num: 32

Candidate Starts for Yoncess_37:

(Start: 32 @28369 has 35 MA's), (52, 28303), (75, 28153), (78, 28117),

Gene: Zarafa_46 Start: 31728, Stop: 31453, Start Num: 28

Candidate Starts for Zarafa_46:

(Start: 28 @31728 has 33 MA's), (70, 31551), (76, 31503),

Gene: Zetzy_49 Start: 31871, Stop: 31623, Start Num: 38

Candidate Starts for Zetzy_49:

(Start: 38 @31871 has 83 MA's), (53, 31817), (62, 31784), (65, 31754), (68, 31730), (70, 31721), (76, 31673), (77, 31658),

Gene: Zimmer_44 Start: 32823, Stop: 32467, Start Num: 17

Candidate Starts for Zimmer_44:

(Start: 17 @32823 has 3 MA's), (Start: 24 @32781 has 2 MA's), (47, 32706), (49, 32694), (52, 32676), (73, 32547), (78, 32487),

Gene: Zolita_41 Start: 31781, Stop: 31518, Start Num: 31

Candidate Starts for Zolita_41:

(Start: 31 @31781 has 45 MA's), (Start: 33 @31772 has 3 MA's), (Start: 46 @31730 has 2 MA's), (57, 31700), (67, 31646), (73, 31613), (76, 31580),