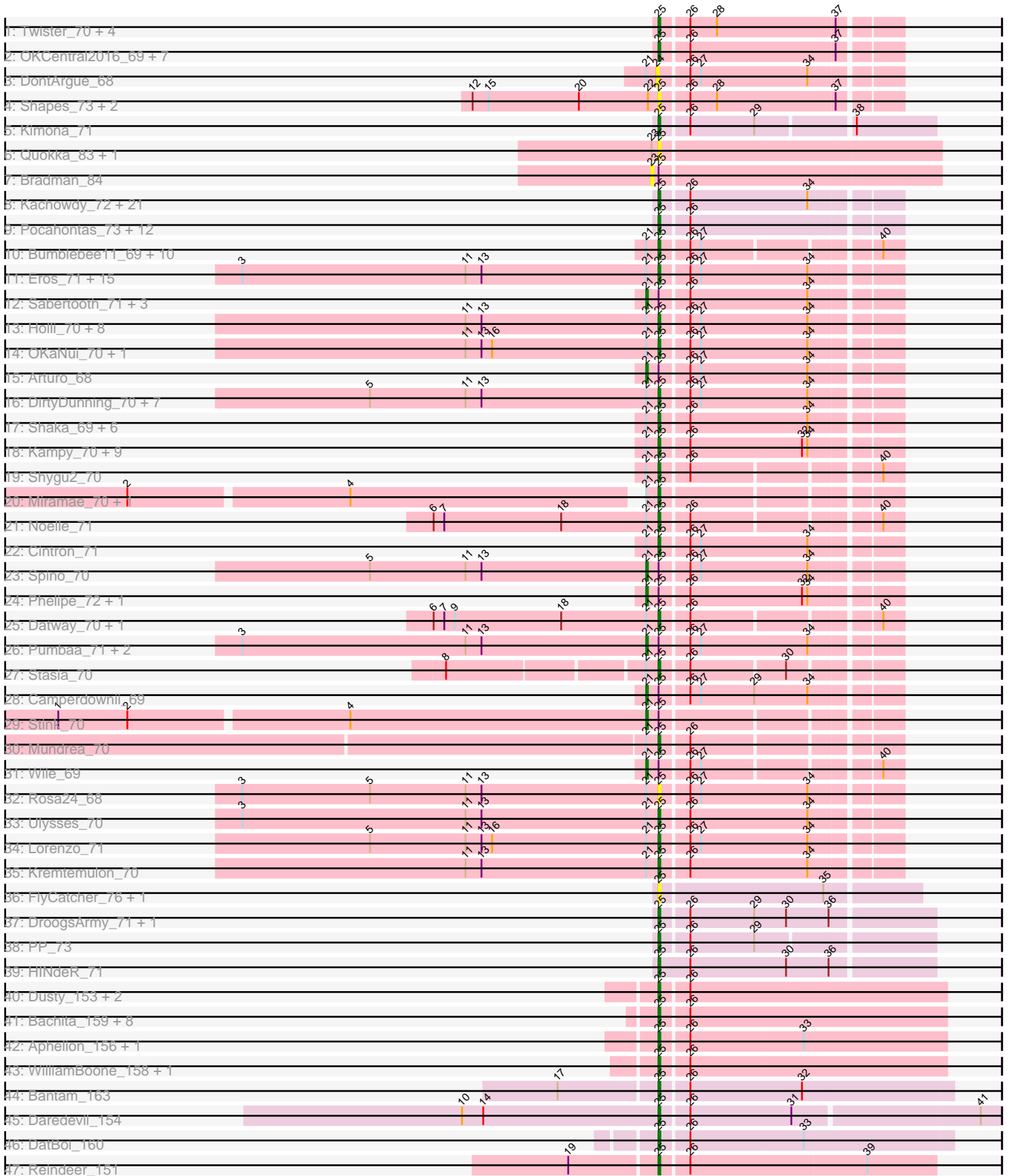


Pham 196324



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 196324 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196324 has 172 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Twister_70, Rebeuca_72, Edison31_68, WalterMcMickey_70, Kristoff_70
- Track 2 : OKCentral2016_69, Severus_69, Chupacabra_69, Poompha_68, Drake94_69, KittenMittens_68, Goose_72, PeaceMeal1_69
- Track 3 : DontArgue_68
- Track 4 : Shapes_73, DustyMartin_73, Rowdy_73
- Track 5 : Kimona_71
- Track 6 : Quokka_83, MajorMajor_78
- Track 7 : Bradman_84
- Track 8 : Kachowdy_72, JF2_72, Giroux_73, Pistachio_75, BabyRay_75, Idleandcovert_75, BlueBird_77, HelDan_74, JF4_72, Marchesa_73, Isca_72, Phantastic_76, B1_66, Bugatti_74, Puppy_75, Fred313_72, TNguyen7_75, DropBear_72, MA5_74, SaturnRing_74, Heathen_74, Scout_73
- Track 9 : Pocahontas_73, QuinnKiro_73, Veracruz_71, Panamaxus_72, Noella_75, ResDef_72, Texage_72, Norbert_70, Lambert1_74, Hookmount_74, Popcicle_74, Margo_74, Todacoro_74
- Track 10 : Bumblebee11_69, AbbysRanger_70, Perplexer_70, Cici_70, Achebe_69, Morpher26_70, Wizard007_70, PetiteSangsue_70, Backyardigan_68, Katalie136_70, Badger_69
- Track 11 : Eros_71, NorthStar_69, Skipitt_70, Iceman_70, Jaykayelowell_68, Connomayer_71, Taquarus_70, TygerBlood_71, Albee_71, Koreni_70, Pipcraft_68, Scamp_71, LittleB_71, Flux_71, Lunsford_71, Chaph_71
- Track 12 : Sabertooth_71, BangNhom_69, LHTSCC_73, ChampagnePapi_73
- Track 13 : Holli_70, TiroTheta9_70, Kingmustik0402_71, Deano_68, Roosevelt_69, Florean_71, Alberto7_72, Citius_71, Baby16_71
- Track 14 : OKaNui_70, Phontbonne_71
- Track 15 : Arturo_68
- Track 16 : DirtyDunning_70, LochMonster_72, Mazhar510_71, PeterPeter_71, Kyee_71, Nemo27_70, Tinybot_70, Phighter1804_71
- Track 17 : Shaka_69, Obama12_72, Happiness_70, Cindaradix_67, SheldonCooper_71, JetBlade_71, Cerulean_72
- Track 18 : Kampy_70, Eagle_70, CentreCat_71, Ohfah_72, TroyPia_72, LeoAvram_70, Polymorphads_71, Maxo_73, Eurydice_72, Nebs_72
- Track 19 : Shygu2_70
- Track 20 : Miramae_70, AvatarAhPeg_70
- Track 21 : Noelle_71
- Track 22 : Cintron_71
- Track 23 : Spino_70

- Track 24 : Phelipe_72, BellusTerra_72
- Track 25 : Datway_70, Xena_69
- Track 26 : Pumbaa_71, YoSam321_71, Relief_70
- Track 27 : Stasia_70
- Track 28 : Camperdownii_69
- Track 29 : Stink_70
- Track 30 : Mundrea_70
- Track 31 : Wile_69
- Track 32 : Rosa24_68
- Track 33 : Ulysses_70
- Track 34 : Lorenzo_71
- Track 35 : Kremtemulon_70
- Track 36 : FlyCatcher_76, Toro_74
- Track 37 : DroogsArmy_71, Timshel_72
- Track 38 : PP_73
- Track 39 : HINdeR_71
- Track 40 : Dusty_153, Engineer_158, Geeche_156
- Track 41 : Bachita_159, Toniann_156, Norvs_154, Smoothie_157, PhinkBoden_154, Lozinak_156, ClubL_157, Abscondus_155, Cucurbita_155
- Track 42 : Aphelion_156, Miskis_156
- Track 43 : WilliamBoone_158, Culver_156
- Track 44 : Bantam_163
- Track 45 : Daredevil_154
- Track 46 : DatBoi_160
- Track 47 : Reindeer_151

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

The start number called the most often in the published annotations is 25, it was called in 138 of the 152 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_70, Abscondus_155, Achebe_69, Albee_71, Alberto7_72, Aphelion_156, AvatarAhPeg_70, B1_66, Baby16_71, BabyRay_75, Bachita_159, Backyardigan_68, Badger_69, Bantam_163, BlueBird_77, Bugatti_74, Bumblebee11_69, CentreCat_71, Cerulean_72, Chaph_71, Chupacabra_69, Cici_70, Cindaradix_67, Cintron_71, Citius_71, ClubL_157, Connomayer_71, Cucurbita_155, Culver_156, Daredevil_154, DatBoi_160, Datway_70, Deano_68, DirtyDunning_70, Drake94_69, DroogsArmy_71, DropBear_72, DustyMartin_73, Dusty_153, Eagle_70, Edison31_68, Engineer_158, Eros_71, Eurydice_72, Floean_71, Flux_71, FlyCatcher_76, Fred313_72, Geeche_156, Giroux_73, Goose_72, HINdeR_71, Happiness_70, Heathen_74, HelDan_74, Holli_70, Hookmount_74, Iceman_70, Idleandcovert_75, Isca_72, JF2_72, JF4_72, Jaykayelowell_68, JetBlade_71, Kachowdy_72, Kampy_70, Katalie136_70, Kimona_71, Kingmustik0402_71, KittenMittens_68, Koreni_70, Kremtemulon_70, Kristoff_70, Kyee_71, Lambert1_74, LeoAvram_70, LittleB_71, LochMonster_72, Lorenzo_71, Lozinak_156, Lunsford_71, MA5_74, MajorMajor_78, Marchesa_73, Margo_74, Maxo_73, Mazhar510_71, Miramae_70, Miskis_156, Morpher26_70, Mundrea_70, Nebs_72, Nemo27_70, Noella_75, Noelle_71, Norbert_70, NorthStar_69, Norvs_154, OKCentral2016_69, OKaNui_70, Obama12_72, Ohfah_72, PP_73, Panamaxus_72, PeaceMeal1_69,

Perplexer_70, PeterPeter_71, PetiteSangsue_70, Phantastic_76, Phighter1804_71, PhinkBoden_154, Phontbonne_71, Pipcraft_68, Pistachio_75, Pocahontas_73, Polymorphads_71, Poompha_68, Popcicle_74, Puppy_75, QuinnKiro_73, Quokka_83, Rebeuca_72, Reindeer_151, ResDef_72, Roosevelt_69, Rosa24_68, Rowdy_73, SaturnRing_74, Scamp_71, Scout_73, Severus_69, Shaka_69, Shapes_73, SheldonCooper_71, Shygu2_70, Skipitt_70, Smoothie_157, Stasia_70, TNguyen7_75, Taquarus_70, Texage_72, Timshel_72, Tinybot_70, TiroTheta9_70, Todacoro_74, Toniann_156, Toro_74, TroyPia_72, Twister_70, TygerBlood_71, Ulysses_70, Veracruz_71, WalterMcMickey_70, WilliamBoone_158, Wizard007_70, Xena_69,

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

- Arturo_68, BangNhom_69, BellusTerra_72, Bradman_84, Camperdownii_69, ChampagnePapi_73, LHTSCC_73, Phelipe_72, Pumbaa_71, Relief_70, Sabertooth_71, Spino_70, Stink_70, Wile_69, YoSam321_71,

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

- DontArgue_68,

Summary by start number:

Start 21:

- Found in 91 of 172 (52.9%) of genes in pham
- Manual Annotations of this start: 14 of 152
- Called 15.4% of time when present
- Phage (with cluster) where this start called: Arturo_68 (A4), BangNhom_69 (A4), BellusTerra_72 (A4), Camperdownii_69 (A4), ChampagnePapi_73 (A4), LHTSCC_73 (A4), Phelipe_72 (A4), Pumbaa_71 (A4), Relief_70 (A4), Sabertooth_71 (A4), Spino_70 (A4), Stink_70 (A4), Wile_69 (A4), YoSam321_71 (A4),

Start 23:

- Found in 3 of 172 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Bradman_84 (A2),

Start 24:

- Found in 1 of 172 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DontArgue_68 (A10),

Start 25:

- Found in 171 of 172 (99.4%) of genes in pham
- Manual Annotations of this start: 138 of 152
- Called 91.2% of time when present
- Phage (with cluster) where this start called: AbbysRanger_70 (A4), Abscondus_155 (CQ1), Achebe_69 (A4), Albee_71 (A4), Alberto7_72 (A4), Aphelion_156 (CQ1), AvatarAhPeg_70 (A4), B1_66 (A3), Baby16_71 (A4), BabyRay_75 (A3), Bachita_159 (CQ1), Backyardigan_68 (A4), Badger_69 (A4), Bantam_163 (DL), BlueBird_77 (A3), Bugatti_74 (A3), Bumblebee11_69 (A4), CentreCat_71 (A4), Cerulean_72 (A4), Chaph_71 (A4), Chupacabra_69 (A10), Cici_70 (A4), Cindaradix_67 (A4), Cintron_71 (A4), Citius_71 (A4), ClubL_157 (CQ1), Connomayer_71 (A4), Cucurbita_155 (CQ1),

Culver_156 (CQ1), Daredevil_154 (DL), DatBoi_160 (DL), Datway_70 (A4), Deano_68 (A4), DirtyDunning_70 (A4), Drake94_69 (A10), DroogsArmy_71 (A7), DropBear_72 (A3), DustyMartin_73 (A10), Dusty_153 (CQ1), Eagle_70 (A4), Edison31_68 (A10), Engineer_158 (CQ1), Eros_71 (A4), Eurydice_72 (A4), Florean_71 (A4), Flux_71 (A4), FlyCatcher_76 (A7), Fred313_72 (A3), Geeche_156 (CQ1), Giroux_73 (A3), Goose_72 (A10), HINdeR_71 (A7), Happiness_70 (A4), Heathen_74 (A3), HelDan_74 (A3), Holli_70 (A4), Hookmount_74 (A3), Iceman_70 (A4), Idleandcovert_75 (A3), Isca_72 (A3), JF2_72 (A3), JF4_72 (A3), Jaykayelowell_68 (A4), JetBlade_71 (A4), Kachowdy_72 (A3), Kamy_70 (A4), Katalie136_70 (A4), Kimona_71 (A19), Kingmustik0402_71 (A4), KittenMittens_68 (A10), Koreni_70 (A4), Kremtemulon_70 (A4), Kristoff_70 (A10), Kyee_71 (A4), Lambert1_74 (A3), LeoAvram_70 (A4), LittleB_71 (A4), LochMonster_72 (A4), Lorenzo_71 (A4), Lozinak_156 (CQ1), Lunsford_71 (A4), MA5_74 (A3), MajorMajor_78 (A2), Marchesa_73 (A3), Margo_74 (A3), Maxo_73 (A4), Mazhar510_71 (A4), Miramae_70 (A4), Miskis_156 (CQ1), Morpher26_70 (A4), Mundrea_70 (A4), Nebs_72 (A4), Nemo27_70 (A4), Noella_75 (A3), Noelle_71 (A4), Norbert_70 (A3), NorthStar_69 (A4), Norvs_154 (CQ1), OKCentral2016_69 (A10), OKaNui_70 (A4), Obama12_72 (A4), Ohfah_72 (A4), PP_73 (A7), Panamaxus_72 (A3), PeaceMeal1_69 (A10), Perplexer_70 (A4), PeterPeter_71 (A4), PetiteSangsue_70 (A4), Phantastic_76 (A3), Phighter1804_71 (A4), PhinkBoden_154 (CQ1), Phontbonne_71 (A4), Pipcraft_68 (A4), Pistachio_75 (A3), Pocahontas_73 (A3), Polymorphads_71 (A4), Poompha_68 (A10), Popcicle_74 (A3), Puppy_75 (A3), QuinnKiro_73 (A3), Quokka_83 (A2), Rebeuca_72 (A10), Reindeer_151 (M1), ResDef_72 (A3), Roosevelt_69 (A4), Rosa24_68 (A4), Rowdy_73 (A10), SaturnRing_74 (A3), Scamp_71 (A4), Scout_73 (A3), Severus_69 (A10), Shaka_69 (A4), Shapes_73 (A10), SheldonCooper_71 (A4), Shygu2_70 (A4), Skipitt_70 (A4), Smoothie_157 (CQ1), Stasia_70 (A4), TNguyen7_75 (A3), Taquarus_70 (A4), Texage_72 (A3), Timshel_72 (A7), Tinybot_70 (A4), TiroTheta9_70 (A4), Todacoro_74 (A3), Toniann_156 (CQ1), Toro_74 (A7), TroyPia_72 (A4), Twister_70 (A10), TygerBlood_71 (A4), Ulysses_70 (A4), Veracruz_71 (A3), WalterMcMickey_70 (A10), WilliamBoone_158 (CQ1), Wizard007_70 (A4), Xena_69 (A4),

Summary by clusters:

There are 9 clusters represented in this pham: DL, A10, A19, A3, A2, M1, A4, A7, CQ1,

Info for manual annotations of cluster A10:

- Start number 25 was manually annotated 13 times for cluster A10.

Info for manual annotations of cluster A19:

- Start number 25 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:

- Start number 25 was manually annotated 29 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 21 was manually annotated 14 times for cluster A4.
- Start number 25 was manually annotated 75 times for cluster A4.

Info for manual annotations of cluster A7:

- Start number 25 was manually annotated 4 times for cluster A7.

Info for manual annotations of cluster CQ1:

- Start number 25 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster DL:

- Start number 25 was manually annotated 3 times for cluster DL.

Info for manual annotations of cluster M1:

- Start number 25 was manually annotated 1 time for cluster M1.

Gene Information:

Gene: AbbysRanger_70 Start: 44685, Stop: 44563, Start Num: 25

Candidate Starts for AbbysRanger_70:

(Start: 21 @44691 has 14 MA's), (Start: 25 @44685 has 138 MA's), (26, 44670), (27, 44664), (40, 44574),

Gene: Abscondus_155 Start: 82793, Stop: 82635, Start Num: 25

Candidate Starts for Abscondus_155:

(Start: 25 @82793 has 138 MA's), (26, 82778),

Gene: Achebe_69 Start: 44668, Stop: 44546, Start Num: 25

Candidate Starts for Achebe_69:

(Start: 21 @44674 has 14 MA's), (Start: 25 @44668 has 138 MA's), (26, 44653), (27, 44647), (40, 44557),

Gene: Albee_71 Start: 44510, Stop: 44382, Start Num: 25

Candidate Starts for Albee_71:

(3, 44744), (11, 44618), (13, 44609), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (27, 44489), (34, 44429),

Gene: Alberto7_72 Start: 44847, Stop: 44719, Start Num: 25

Candidate Starts for Alberto7_72:

(11, 44955), (13, 44946), (Start: 21 @44853 has 14 MA's), (Start: 25 @44847 has 138 MA's), (26, 44832), (27, 44826), (34, 44766),

Gene: Aphelion_156 Start: 83954, Stop: 83796, Start Num: 25

Candidate Starts for Aphelion_156:

(Start: 25 @83954 has 138 MA's), (26, 83939), (33, 83876),

Gene: Arturo_68 Start: 44641, Stop: 44507, Start Num: 21

Candidate Starts for Arturo_68:

(Start: 21 @44641 has 14 MA's), (Start: 25 @44635 has 138 MA's), (26, 44620), (27, 44614), (34, 44554),

Gene: AvatarAhPeg_70 Start: 44568, Stop: 44446, Start Num: 25

Candidate Starts for AvatarAhPeg_70:

(2, 44850), (4, 44730), (Start: 21 @44574 has 14 MA's), (Start: 25 @44568 has 138 MA's),

Gene: B1_66 Start: 43265, Stop: 43137, Start Num: 25

Candidate Starts for B1_66:

(Start: 25 @43265 has 138 MA's), (26, 43250), (34, 43184),

Gene: Baby16_71 Start: 44521, Stop: 44393, Start Num: 25

Candidate Starts for Baby16_71:

(11, 44629), (13, 44620), (Start: 21 @44527 has 14 MA's), (Start: 25 @44521 has 138 MA's), (26, 44506), (27, 44500), (34, 44440),

Gene: BabyRay_75 Start: 45018, Stop: 44890, Start Num: 25

Candidate Starts for BabyRay_75:

(Start: 25 @45018 has 138 MA's), (26, 45003), (34, 44937),

Gene: Bachita_159 Start: 83833, Stop: 83675, Start Num: 25

Candidate Starts for Bachita_159:

(Start: 25 @83833 has 138 MA's), (26, 83818),

Gene: Backyardigan_68 Start: 44701, Stop: 44579, Start Num: 25

Candidate Starts for Backyardigan_68:

(Start: 21 @44707 has 14 MA's), (Start: 25 @44701 has 138 MA's), (26, 44686), (27, 44680), (40, 44590),

Gene: Badger_69 Start: 44669, Stop: 44547, Start Num: 25

Candidate Starts for Badger_69:

(Start: 21 @44675 has 14 MA's), (Start: 25 @44669 has 138 MA's), (26, 44654), (27, 44648), (40, 44558),

Gene: BangNhom_69 Start: 44950, Stop: 44816, Start Num: 21

Candidate Starts for BangNhom_69:

(Start: 21 @44950 has 14 MA's), (Start: 25 @44944 has 138 MA's), (26, 44929), (34, 44863),

Gene: Bantam_163 Start: 88026, Stop: 87865, Start Num: 25

Candidate Starts for Bantam_163:

(17, 88080), (Start: 25 @88026 has 138 MA's), (26, 88011), (32, 87948),

Gene: BellusTerra_72 Start: 44554, Stop: 44420, Start Num: 21

Candidate Starts for BellusTerra_72:

(Start: 21 @44554 has 14 MA's), (Start: 25 @44548 has 138 MA's), (26, 44533), (32, 44470), (34, 44467),

Gene: BlueBird_77 Start: 45089, Stop: 44961, Start Num: 25

Candidate Starts for BlueBird_77:

(Start: 25 @45089 has 138 MA's), (26, 45074), (34, 45008),

Gene: Bradman_84 Start: 46414, Stop: 46256, Start Num: 23

Candidate Starts for Bradman_84:

(23, 46414), (Start: 25 @46411 has 138 MA's),

Gene: Bugatti_74 Start: 45089, Stop: 44961, Start Num: 25

Candidate Starts for Bugatti_74:

(Start: 25 @45089 has 138 MA's), (26, 45074), (34, 45008),

Gene: Bumblebee11_69 Start: 44671, Stop: 44549, Start Num: 25

Candidate Starts for Bumblebee11_69:

(Start: 21 @44677 has 14 MA's), (Start: 25 @44671 has 138 MA's), (26, 44656), (27, 44650), (40, 44560),

Gene: Camperdownii_69 Start: 44185, Stop: 44051, Start Num: 21

Candidate Starts for Camperdownii_69:

(Start: 21 @44185 has 14 MA's), (Start: 25 @44179 has 138 MA's), (26, 44164), (27, 44158), (29, 44128), (34, 44098),

Gene: CentreCat_71 Start: 44547, Stop: 44419, Start Num: 25

Candidate Starts for CentreCat_71:

(Start: 21 @44553 has 14 MA's), (Start: 25 @44547 has 138 MA's), (26, 44532), (32, 44469), (34, 44466),

Gene: Cerulean_72 Start: 44945, Stop: 44817, Start Num: 25

Candidate Starts for Cerulean_72:

(Start: 21 @44951 has 14 MA's), (Start: 25 @44945 has 138 MA's), (26, 44930), (34, 44864),

Gene: ChampagnePapi_73 Start: 44950, Stop: 44816, Start Num: 21

Candidate Starts for ChampagnePapi_73:

(Start: 21 @44950 has 14 MA's), (Start: 25 @44944 has 138 MA's), (26, 44929), (34, 44863),

Gene: Chaph_71 Start: 44521, Stop: 44393, Start Num: 25

Candidate Starts for Chaph_71:

(3, 44755), (11, 44629), (13, 44620), (Start: 21 @44527 has 14 MA's), (Start: 25 @44521 has 138 MA's), (26, 44506), (27, 44500), (34, 44440),

Gene: Chupacabra_69 Start: 44351, Stop: 44223, Start Num: 25

Candidate Starts for Chupacabra_69:

(Start: 25 @44351 has 138 MA's), (26, 44336), (37, 44255),

Gene: Cici_70 Start: 44686, Stop: 44564, Start Num: 25

Candidate Starts for Cici_70:

(Start: 21 @44692 has 14 MA's), (Start: 25 @44686 has 138 MA's), (26, 44671), (27, 44665), (40, 44575),

Gene: Cindaradix_67 Start: 44408, Stop: 44280, Start Num: 25

Candidate Starts for Cindaradix_67:

(Start: 21 @44414 has 14 MA's), (Start: 25 @44408 has 138 MA's), (26, 44393), (34, 44327),

Gene: Cintron_71 Start: 44658, Stop: 44530, Start Num: 25

Candidate Starts for Cintron_71:

(Start: 21 @44664 has 14 MA's), (Start: 25 @44658 has 138 MA's), (26, 44643), (27, 44637), (34, 44577),

Gene: Citius_71 Start: 44531, Stop: 44403, Start Num: 25

Candidate Starts for Citius_71:

(11, 44639), (13, 44630), (Start: 21 @44537 has 14 MA's), (Start: 25 @44531 has 138 MA's), (26, 44516), (27, 44510), (34, 44450),

Gene: ClubL_157 Start: 83085, Stop: 82927, Start Num: 25

Candidate Starts for ClubL_157:

(Start: 25 @83085 has 138 MA's), (26, 83070),

Gene: Connomayer_71 Start: 44510, Stop: 44382, Start Num: 25
Candidate Starts for Connomayer_71:
(3, 44744), (11, 44618), (13, 44609), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (27, 44489), (34, 44429),

Gene: Cucurbita_155 Start: 84146, Stop: 83988, Start Num: 25
Candidate Starts for Cucurbita_155:
(Start: 25 @84146 has 138 MA's), (26, 84131),

Gene: Culver_156 Start: 82350, Stop: 82192, Start Num: 25
Candidate Starts for Culver_156:
(Start: 25 @82350 has 138 MA's), (26, 82335),

Gene: Daredevil_154 Start: 84151, Stop: 83966, Start Num: 25
Candidate Starts for Daredevil_154:
(10, 84262), (14, 84250), (Start: 25 @84151 has 138 MA's), (26, 84136), (31, 84079), (41, 83977),

Gene: DatBoi_160 Start: 87295, Stop: 87134, Start Num: 25
Candidate Starts for DatBoi_160:
(Start: 25 @87295 has 138 MA's), (26, 87280), (33, 87217),

Gene: Datway_70 Start: 44680, Stop: 44558, Start Num: 25
Candidate Starts for Datway_70:
(6, 44806), (7, 44800), (9, 44794), (18, 44734), (Start: 21 @44686 has 14 MA's), (Start: 25 @44680 has 138 MA's), (26, 44665), (40, 44569),

Gene: Deano_68 Start: 44518, Stop: 44390, Start Num: 25
Candidate Starts for Deano_68:
(11, 44626), (13, 44617), (Start: 21 @44524 has 14 MA's), (Start: 25 @44518 has 138 MA's), (26, 44503), (27, 44497), (34, 44437),

Gene: DirtyDunning_70 Start: 44522, Stop: 44394, Start Num: 25
Candidate Starts for DirtyDunning_70:
(5, 44684), (11, 44630), (13, 44621), (Start: 21 @44528 has 14 MA's), (Start: 25 @44522 has 138 MA's), (26, 44507), (27, 44501), (34, 44441),

Gene: DontArgue_68 Start: 43342, Stop: 43214, Start Num: 24
Candidate Starts for DontArgue_68:
(Start: 21 @43348 has 14 MA's), (24, 43342), (26, 43327), (27, 43321), (34, 43261),

Gene: Drake94_69 Start: 43482, Stop: 43354, Start Num: 25
Candidate Starts for Drake94_69:
(Start: 25 @43482 has 138 MA's), (26, 43467), (37, 43386),

Gene: DroogsArmy_71 Start: 47818, Stop: 47669, Start Num: 25
Candidate Starts for DroogsArmy_71:
(Start: 25 @47818 has 138 MA's), (26, 47803), (29, 47767), (30, 47749), (36, 47725),

Gene: DropBear_72 Start: 45013, Stop: 44885, Start Num: 25
Candidate Starts for DropBear_72:
(Start: 25 @45013 has 138 MA's), (26, 44998), (34, 44932),

Gene: DustyMartin_73 Start: 44495, Stop: 44367, Start Num: 25

Candidate Starts for DustyMartin_73:

(12, 44600), (15, 44591), (20, 44540), (22, 44501), (Start: 25 @44495 has 138 MA's), (26, 44480), (28, 44465), (37, 44399),

Gene: Dusty_153 Start: 82822, Stop: 82664, Start Num: 25

Candidate Starts for Dusty_153:

(Start: 25 @82822 has 138 MA's), (26, 82807),

Gene: Eagle_70 Start: 44569, Stop: 44441, Start Num: 25

Candidate Starts for Eagle_70:

(Start: 21 @44575 has 14 MA's), (Start: 25 @44569 has 138 MA's), (26, 44554), (32, 44491), (34, 44488),

Gene: Edison31_68 Start: 44218, Stop: 44090, Start Num: 25

Candidate Starts for Edison31_68:

(Start: 25 @44218 has 138 MA's), (26, 44203), (28, 44188), (37, 44122),

Gene: Engineer_158 Start: 83672, Stop: 83514, Start Num: 25

Candidate Starts for Engineer_158:

(Start: 25 @83672 has 138 MA's), (26, 83657),

Gene: Eros_71 Start: 44512, Stop: 44384, Start Num: 25

Candidate Starts for Eros_71:

(3, 44746), (11, 44620), (13, 44611), (Start: 21 @44518 has 14 MA's), (Start: 25 @44512 has 138 MA's), (26, 44497), (27, 44491), (34, 44431),

Gene: Eurydice_72 Start: 44544, Stop: 44416, Start Num: 25

Candidate Starts for Eurydice_72:

(Start: 21 @44550 has 14 MA's), (Start: 25 @44544 has 138 MA's), (26, 44529), (32, 44466), (34, 44463),

Gene: Florean_71 Start: 44509, Stop: 44381, Start Num: 25

Candidate Starts for Florean_71:

(11, 44617), (13, 44608), (Start: 21 @44515 has 14 MA's), (Start: 25 @44509 has 138 MA's), (26, 44494), (27, 44488), (34, 44428),

Gene: Flux_71 Start: 44508, Stop: 44380, Start Num: 25

Candidate Starts for Flux_71:

(3, 44742), (11, 44616), (13, 44607), (Start: 21 @44514 has 14 MA's), (Start: 25 @44508 has 138 MA's), (26, 44493), (27, 44487), (34, 44427),

Gene: FlyCatcher_76 Start: 48604, Stop: 48464, Start Num: 25

Candidate Starts for FlyCatcher_76:

(Start: 25 @48604 has 138 MA's), (35, 48514),

Gene: Fred313_72 Start: 44707, Stop: 44579, Start Num: 25

Candidate Starts for Fred313_72:

(Start: 25 @44707 has 138 MA's), (26, 44692), (34, 44626),

Gene: Geeche_156 Start: 83046, Stop: 82888, Start Num: 25

Candidate Starts for Geeche_156:

(Start: 25 @83046 has 138 MA's), (26, 83031),

Gene: Giroux_73 Start: 45088, Stop: 44960, Start Num: 25
Candidate Starts for Giroux_73:
(Start: 25 @45088 has 138 MA's), (26, 45073), (34, 45007),

Gene: Goose_72 Start: 44162, Stop: 44034, Start Num: 25
Candidate Starts for Goose_72:
(Start: 25 @44162 has 138 MA's), (26, 44147), (37, 44066),

Gene: HINdeR_71 Start: 47193, Stop: 47041, Start Num: 25
Candidate Starts for HINdeR_71:
(Start: 25 @47193 has 138 MA's), (26, 47175), (30, 47121), (36, 47097),

Gene: Happiness_70 Start: 44527, Stop: 44399, Start Num: 25
Candidate Starts for Happiness_70:
(Start: 21 @44533 has 14 MA's), (Start: 25 @44527 has 138 MA's), (26, 44512), (34, 44446),

Gene: Heathen_74 Start: 44802, Stop: 44674, Start Num: 25
Candidate Starts for Heathen_74:
(Start: 25 @44802 has 138 MA's), (26, 44787), (34, 44721),

Gene: HelDan_74 Start: 45018, Stop: 44890, Start Num: 25
Candidate Starts for HelDan_74:
(Start: 25 @45018 has 138 MA's), (26, 45003), (34, 44937),

Gene: Holli_70 Start: 44300, Stop: 44172, Start Num: 25
Candidate Starts for Holli_70:
(11, 44408), (13, 44399), (Start: 21 @44306 has 14 MA's), (Start: 25 @44300 has 138 MA's), (26, 44285), (27, 44279), (34, 44219),

Gene: Hookmount_74 Start: 45042, Stop: 44914, Start Num: 25
Candidate Starts for Hookmount_74:
(Start: 25 @45042 has 138 MA's), (26, 45027),

Gene: Iceman_70 Start: 44800, Stop: 44672, Start Num: 25
Candidate Starts for Iceman_70:
(3, 45034), (11, 44908), (13, 44899), (Start: 21 @44806 has 14 MA's), (Start: 25 @44800 has 138 MA's), (26, 44785), (27, 44779), (34, 44719),

Gene: Idleandcovert_75 Start: 45089, Stop: 44961, Start Num: 25
Candidate Starts for Idleandcovert_75:
(Start: 25 @45089 has 138 MA's), (26, 45074), (34, 45008),

Gene: Isca_72 Start: 44569, Stop: 44441, Start Num: 25
Candidate Starts for Isca_72:
(Start: 25 @44569 has 138 MA's), (26, 44554), (34, 44488),

Gene: JF2_72 Start: 43265, Stop: 43137, Start Num: 25
Candidate Starts for JF2_72:
(Start: 25 @43265 has 138 MA's), (26, 43250), (34, 43184),

Gene: JF4_72 Start: 43265, Stop: 43137, Start Num: 25
Candidate Starts for JF4_72:
(Start: 25 @43265 has 138 MA's), (26, 43250), (34, 43184),

Gene: Jaykayelowell_68 Start: 44503, Stop: 44375, Start Num: 25
Candidate Starts for Jaykayelowell_68:
(3, 44737), (11, 44611), (13, 44602), (Start: 21 @44509 has 14 MA's), (Start: 25 @44503 has 138 MA's), (26, 44488), (27, 44482), (34, 44422),

Gene: JetBlade_71 Start: 44535, Stop: 44407, Start Num: 25
Candidate Starts for JetBlade_71:
(Start: 21 @44541 has 14 MA's), (Start: 25 @44535 has 138 MA's), (26, 44520), (34, 44454),

Gene: Kachowdy_72 Start: 45054, Stop: 44926, Start Num: 25
Candidate Starts for Kachowdy_72:
(Start: 25 @45054 has 138 MA's), (26, 45039), (34, 44973),

Gene: Kamy_70 Start: 44510, Stop: 44382, Start Num: 25
Candidate Starts for Kamy_70:
(Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (32, 44432), (34, 44429),

Gene: Katalie136_70 Start: 44671, Stop: 44549, Start Num: 25
Candidate Starts for Katalie136_70:
(Start: 21 @44677 has 14 MA's), (Start: 25 @44671 has 138 MA's), (26, 44656), (27, 44650), (40, 44560),

Gene: Kimona_71 Start: 43589, Stop: 43443, Start Num: 25
Candidate Starts for Kimona_71:
(Start: 25 @43589 has 138 MA's), (26, 43574), (29, 43538), (38, 43487),

Gene: Kingmustik0402_71 Start: 44499, Stop: 44371, Start Num: 25
Candidate Starts for Kingmustik0402_71:
(11, 44607), (13, 44598), (Start: 21 @44505 has 14 MA's), (Start: 25 @44499 has 138 MA's), (26, 44484), (27, 44478), (34, 44418),

Gene: KittenMittens_68 Start: 43490, Stop: 43362, Start Num: 25
Candidate Starts for KittenMittens_68:
(Start: 25 @43490 has 138 MA's), (26, 43475), (37, 43394),

Gene: Koreni_70 Start: 44191, Stop: 44063, Start Num: 25
Candidate Starts for Koreni_70:
(3, 44425), (11, 44299), (13, 44290), (Start: 21 @44197 has 14 MA's), (Start: 25 @44191 has 138 MA's), (26, 44176), (27, 44170), (34, 44110),

Gene: Kremtemulon_70 Start: 44643, Stop: 44515, Start Num: 25
Candidate Starts for Kremtemulon_70:
(11, 44751), (13, 44742), (Start: 21 @44649 has 14 MA's), (Start: 25 @44643 has 138 MA's), (26, 44628), (34, 44562),

Gene: Kristoff_70 Start: 44796, Stop: 44668, Start Num: 25
Candidate Starts for Kristoff_70:
(Start: 25 @44796 has 138 MA's), (26, 44781), (28, 44766), (37, 44700),

Gene: Kyee_71 Start: 44505, Stop: 44377, Start Num: 25
Candidate Starts for Kyee_71:

(5, 44667), (11, 44613), (13, 44604), (Start: 21 @44511 has 14 MA's), (Start: 25 @44505 has 138 MA's), (26, 44490), (27, 44484), (34, 44424),

Gene: LHTSCC_73 Start: 44950, Stop: 44816, Start Num: 21

Candidate Starts for LHTSCC_73:

(Start: 21 @44950 has 14 MA's), (Start: 25 @44944 has 138 MA's), (26, 44929), (34, 44863),

Gene: Lambert1_74 Start: 45043, Stop: 44915, Start Num: 25

Candidate Starts for Lambert1_74:

(Start: 25 @45043 has 138 MA's), (26, 45028),

Gene: LeoAvram_70 Start: 44538, Stop: 44410, Start Num: 25

Candidate Starts for LeoAvram_70:

(Start: 21 @44544 has 14 MA's), (Start: 25 @44538 has 138 MA's), (26, 44523), (32, 44460), (34, 44457),

Gene: LittleB_71 Start: 44511, Stop: 44383, Start Num: 25

Candidate Starts for LittleB_71:

(3, 44745), (11, 44619), (13, 44610), (Start: 21 @44517 has 14 MA's), (Start: 25 @44511 has 138 MA's), (26, 44496), (27, 44490), (34, 44430),

Gene: LochMonster_72 Start: 44746, Stop: 44618, Start Num: 25

Candidate Starts for LochMonster_72:

(5, 44908), (11, 44854), (13, 44845), (Start: 21 @44752 has 14 MA's), (Start: 25 @44746 has 138 MA's), (26, 44731), (27, 44725), (34, 44665),

Gene: Lorenzo_71 Start: 44508, Stop: 44380, Start Num: 25

Candidate Starts for Lorenzo_71:

(5, 44670), (11, 44616), (13, 44607), (16, 44601), (Start: 21 @44514 has 14 MA's), (Start: 25 @44508 has 138 MA's), (26, 44493), (27, 44487), (34, 44427),

Gene: Lozinak_156 Start: 83674, Stop: 83516, Start Num: 25

Candidate Starts for Lozinak_156:

(Start: 25 @83674 has 138 MA's), (26, 83659),

Gene: Lunsford_71 Start: 44503, Stop: 44375, Start Num: 25

Candidate Starts for Lunsford_71:

(3, 44737), (11, 44611), (13, 44602), (Start: 21 @44509 has 14 MA's), (Start: 25 @44503 has 138 MA's), (26, 44488), (27, 44482), (34, 44422),

Gene: MA5_74 Start: 44473, Stop: 44345, Start Num: 25

Candidate Starts for MA5_74:

(Start: 25 @44473 has 138 MA's), (26, 44458), (34, 44392),

Gene: MajorMajor_78 Start: 44703, Stop: 44548, Start Num: 25

Candidate Starts for MajorMajor_78:

(23, 44706), (Start: 25 @44703 has 138 MA's),

Gene: Marchesa_73 Start: 45006, Stop: 44878, Start Num: 25

Candidate Starts for Marchesa_73:

(Start: 25 @45006 has 138 MA's), (26, 44991), (34, 44925),

Gene: Margo_74 Start: 45068, Stop: 44940, Start Num: 25

Candidate Starts for Margo_74:
(Start: 25 @45068 has 138 MA's), (26, 45053),

Gene: Maxo_73 Start: 44510, Stop: 44382, Start Num: 25
Candidate Starts for Maxo_73:
(Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (32, 44432), (34, 44429),

Gene: Mazhar510_71 Start: 44508, Stop: 44380, Start Num: 25
Candidate Starts for Mazhar510_71:
(5, 44670), (11, 44616), (13, 44607), (Start: 21 @44514 has 14 MA's), (Start: 25 @44508 has 138 MA's), (26, 44493), (27, 44487), (34, 44427),

Gene: Miramae_70 Start: 44230, Stop: 44108, Start Num: 25
Candidate Starts for Miramae_70:
(2, 44512), (4, 44392), (Start: 21 @44236 has 14 MA's), (Start: 25 @44230 has 138 MA's),

Gene: Miskis_156 Start: 82703, Stop: 82545, Start Num: 25
Candidate Starts for Miskis_156:
(Start: 25 @82703 has 138 MA's), (26, 82688), (33, 82625),

Gene: Morpher26_70 Start: 44692, Stop: 44570, Start Num: 25
Candidate Starts for Morpher26_70:
(Start: 21 @44698 has 14 MA's), (Start: 25 @44692 has 138 MA's), (26, 44677), (27, 44671), (40, 44581),

Gene: Mundrea_70 Start: 44689, Stop: 44567, Start Num: 25
Candidate Starts for Mundrea_70:
(Start: 21 @44695 has 14 MA's), (Start: 25 @44689 has 138 MA's), (26, 44674),

Gene: Nebs_72 Start: 44547, Stop: 44419, Start Num: 25
Candidate Starts for Nebs_72:
(Start: 21 @44553 has 14 MA's), (Start: 25 @44547 has 138 MA's), (26, 44532), (32, 44469), (34, 44466),

Gene: Nemo27_70 Start: 44506, Stop: 44378, Start Num: 25
Candidate Starts for Nemo27_70:
(5, 44668), (11, 44614), (13, 44605), (Start: 21 @44512 has 14 MA's), (Start: 25 @44506 has 138 MA's), (26, 44491), (27, 44485), (34, 44425),

Gene: Noella_75 Start: 45044, Stop: 44916, Start Num: 25
Candidate Starts for Noella_75:
(Start: 25 @45044 has 138 MA's), (26, 45029),

Gene: Noelle_71 Start: 45009, Stop: 44887, Start Num: 25
Candidate Starts for Noelle_71:
(6, 45135), (7, 45129), (18, 45063), (Start: 21 @45015 has 14 MA's), (Start: 25 @45009 has 138 MA's), (26, 44994), (40, 44898),

Gene: Norbert_70 Start: 45041, Stop: 44913, Start Num: 25
Candidate Starts for Norbert_70:
(Start: 25 @45041 has 138 MA's), (26, 45026),

Gene: NorthStar_69 Start: 44510, Stop: 44382, Start Num: 25
Candidate Starts for NorthStar_69:
(3, 44744), (11, 44618), (13, 44609), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (27, 44489), (34, 44429),

Gene: Norvs_154 Start: 82865, Stop: 82707, Start Num: 25
Candidate Starts for Norvs_154:
(Start: 25 @82865 has 138 MA's), (26, 82850),

Gene: OKCentral2016_69 Start: 43589, Stop: 43461, Start Num: 25
Candidate Starts for OKCentral2016_69:
(Start: 25 @43589 has 138 MA's), (26, 43574), (37, 43493),

Gene: OKaNui_70 Start: 44560, Stop: 44432, Start Num: 25
Candidate Starts for OKaNui_70:
(11, 44668), (13, 44659), (16, 44653), (Start: 21 @44566 has 14 MA's), (Start: 25 @44560 has 138 MA's), (26, 44545), (27, 44539), (34, 44479),

Gene: Obama12_72 Start: 44928, Stop: 44800, Start Num: 25
Candidate Starts for Obama12_72:
(Start: 21 @44934 has 14 MA's), (Start: 25 @44928 has 138 MA's), (26, 44913), (34, 44847),

Gene: Ohfah_72 Start: 44547, Stop: 44419, Start Num: 25
Candidate Starts for Ohfah_72:
(Start: 21 @44553 has 14 MA's), (Start: 25 @44547 has 138 MA's), (26, 44532), (32, 44469), (34, 44466),

Gene: PP_73 Start: 49011, Stop: 48865, Start Num: 25
Candidate Starts for PP_73:
(Start: 25 @49011 has 138 MA's), (26, 48996), (29, 48960),

Gene: Panamaxus_72 Start: 45043, Stop: 44915, Start Num: 25
Candidate Starts for Panamaxus_72:
(Start: 25 @45043 has 138 MA's), (26, 45028),

Gene: PeaceMeal1_69 Start: 43491, Stop: 43363, Start Num: 25
Candidate Starts for PeaceMeal1_69:
(Start: 25 @43491 has 138 MA's), (26, 43476), (37, 43395),

Gene: Perplexer_70 Start: 44668, Stop: 44546, Start Num: 25
Candidate Starts for Perplexer_70:
(Start: 21 @44674 has 14 MA's), (Start: 25 @44668 has 138 MA's), (26, 44653), (27, 44647), (40, 44557),

Gene: PeterPeter_71 Start: 44504, Stop: 44376, Start Num: 25
Candidate Starts for PeterPeter_71:
(5, 44666), (11, 44612), (13, 44603), (Start: 21 @44510 has 14 MA's), (Start: 25 @44504 has 138 MA's), (26, 44489), (27, 44483), (34, 44423),

Gene: PetiteSangsue_70 Start: 44671, Stop: 44549, Start Num: 25
Candidate Starts for PetiteSangsue_70:
(Start: 21 @44677 has 14 MA's), (Start: 25 @44671 has 138 MA's), (26, 44656), (27, 44650), (40, 44560),

Gene: Phantastic_76 Start: 44730, Stop: 44602, Start Num: 25

Candidate Starts for Phantastic_76:

(Start: 25 @44730 has 138 MA's), (26, 44715), (34, 44649),

Gene: Phelipe_72 Start: 44553, Stop: 44419, Start Num: 21

Candidate Starts for Phelipe_72:

(Start: 21 @44553 has 14 MA's), (Start: 25 @44547 has 138 MA's), (26, 44532), (32, 44469), (34, 44466),

Gene: Phighter1804_71 Start: 44571, Stop: 44443, Start Num: 25

Candidate Starts for Phighter1804_71:

(5, 44733), (11, 44679), (13, 44670), (Start: 21 @44577 has 14 MA's), (Start: 25 @44571 has 138 MA's), (26, 44556), (27, 44550), (34, 44490),

Gene: PhinkBoden_154 Start: 83263, Stop: 83105, Start Num: 25

Candidate Starts for PhinkBoden_154:

(Start: 25 @83263 has 138 MA's), (26, 83248),

Gene: Phontbonne_71 Start: 44405, Stop: 44277, Start Num: 25

Candidate Starts for Phontbonne_71:

(11, 44513), (13, 44504), (16, 44498), (Start: 21 @44411 has 14 MA's), (Start: 25 @44405 has 138 MA's), (26, 44390), (27, 44384), (34, 44324),

Gene: Pipcraft_68 Start: 44511, Stop: 44383, Start Num: 25

Candidate Starts for Pipcraft_68:

(3, 44745), (11, 44619), (13, 44610), (Start: 21 @44517 has 14 MA's), (Start: 25 @44511 has 138 MA's), (26, 44496), (27, 44490), (34, 44430),

Gene: Pistachio_75 Start: 44636, Stop: 44508, Start Num: 25

Candidate Starts for Pistachio_75:

(Start: 25 @44636 has 138 MA's), (26, 44621), (34, 44555),

Gene: Pocahontas_73 Start: 45039, Stop: 44911, Start Num: 25

Candidate Starts for Pocahontas_73:

(Start: 25 @45039 has 138 MA's), (26, 45024),

Gene: Polymorphads_71 Start: 44528, Stop: 44400, Start Num: 25

Candidate Starts for Polymorphads_71:

(Start: 21 @44534 has 14 MA's), (Start: 25 @44528 has 138 MA's), (26, 44513), (32, 44450), (34, 44447),

Gene: Poompha_68 Start: 43489, Stop: 43361, Start Num: 25

Candidate Starts for Poompha_68:

(Start: 25 @43489 has 138 MA's), (26, 43474), (37, 43393),

Gene: Popcicle_74 Start: 45039, Stop: 44911, Start Num: 25

Candidate Starts for Popcicle_74:

(Start: 25 @45039 has 138 MA's), (26, 45024),

Gene: Pumbaa_71 Start: 44461, Stop: 44327, Start Num: 21

Candidate Starts for Pumbaa_71:

(3, 44689), (11, 44563), (13, 44554), (Start: 21 @44461 has 14 MA's), (Start: 25 @44455 has 138 MA's), (26, 44440), (27, 44434), (34, 44374),

Gene: Puppy_75 Start: 44706, Stop: 44578, Start Num: 25
Candidate Starts for Puppy_75:
(Start: 25 @44706 has 138 MA's), (26, 44691), (34, 44625),

Gene: QuinnKiro_73 Start: 45042, Stop: 44914, Start Num: 25
Candidate Starts for QuinnKiro_73:
(Start: 25 @45042 has 138 MA's), (26, 45027),

Gene: Quokka_83 Start: 46412, Stop: 46257, Start Num: 25
Candidate Starts for Quokka_83:
(23, 46415), (Start: 25 @46412 has 138 MA's),

Gene: Rebeuca_72 Start: 44797, Stop: 44669, Start Num: 25
Candidate Starts for Rebeuca_72:
(Start: 25 @44797 has 138 MA's), (26, 44782), (28, 44767), (37, 44701),

Gene: Reindeer_151 Start: 77820, Stop: 77668, Start Num: 25
Candidate Starts for Reindeer_151:
(19, 77868), (Start: 25 @77820 has 138 MA's), (26, 77805), (39, 77706),

Gene: Relief_70 Start: 44513, Stop: 44379, Start Num: 21
Candidate Starts for Relief_70:
(3, 44741), (11, 44615), (13, 44606), (Start: 21 @44513 has 14 MA's), (Start: 25 @44507 has 138 MA's), (26, 44492), (27, 44486), (34, 44426),

Gene: ResDef_72 Start: 45045, Stop: 44917, Start Num: 25
Candidate Starts for ResDef_72:
(Start: 25 @45045 has 138 MA's), (26, 45030),

Gene: Roosevelt_69 Start: 44512, Stop: 44384, Start Num: 25
Candidate Starts for Roosevelt_69:
(11, 44620), (13, 44611), (Start: 21 @44518 has 14 MA's), (Start: 25 @44512 has 138 MA's), (26, 44497), (27, 44491), (34, 44431),

Gene: Rosa24_68 Start: 44538, Stop: 44410, Start Num: 25
Candidate Starts for Rosa24_68:
(3, 44772), (5, 44700), (11, 44646), (13, 44637), (Start: 21 @44544 has 14 MA's), (Start: 25 @44538 has 138 MA's), (26, 44523), (27, 44517), (34, 44457),

Gene: Rowdy_73 Start: 44495, Stop: 44367, Start Num: 25
Candidate Starts for Rowdy_73:
(12, 44600), (15, 44591), (20, 44540), (22, 44501), (Start: 25 @44495 has 138 MA's), (26, 44480), (28, 44465), (37, 44399),

Gene: Sabertooth_71 Start: 44518, Stop: 44384, Start Num: 21
Candidate Starts for Sabertooth_71:
(Start: 21 @44518 has 14 MA's), (Start: 25 @44512 has 138 MA's), (26, 44497), (34, 44431),

Gene: SaturnRing_74 Start: 45089, Stop: 44961, Start Num: 25
Candidate Starts for SaturnRing_74:

(Start: 25 @45089 has 138 MA's), (26, 45074), (34, 45008),

Gene: Scamp_71 Start: 44512, Stop: 44384, Start Num: 25

Candidate Starts for Scamp_71:

(3, 44746), (11, 44620), (13, 44611), (Start: 21 @44518 has 14 MA's), (Start: 25 @44512 has 138 MA's), (26, 44497), (27, 44491), (34, 44431),

Gene: Scout_73 Start: 44265, Stop: 44137, Start Num: 25

Candidate Starts for Scout_73:

(Start: 25 @44265 has 138 MA's), (26, 44250), (34, 44184),

Gene: Severus_69 Start: 43489, Stop: 43361, Start Num: 25

Candidate Starts for Severus_69:

(Start: 25 @43489 has 138 MA's), (26, 43474), (37, 43393),

Gene: Shaka_69 Start: 44505, Stop: 44377, Start Num: 25

Candidate Starts for Shaka_69:

(Start: 21 @44511 has 14 MA's), (Start: 25 @44505 has 138 MA's), (26, 44490), (34, 44424),

Gene: Shapes_73 Start: 44495, Stop: 44367, Start Num: 25

Candidate Starts for Shapes_73:

(12, 44600), (15, 44591), (20, 44540), (22, 44501), (Start: 25 @44495 has 138 MA's), (26, 44480), (28, 44465), (37, 44399),

Gene: SheldonCooper_71 Start: 44945, Stop: 44817, Start Num: 25

Candidate Starts for SheldonCooper_71:

(Start: 21 @44951 has 14 MA's), (Start: 25 @44945 has 138 MA's), (26, 44930), (34, 44864),

Gene: Shygu2_70 Start: 44723, Stop: 44601, Start Num: 25

Candidate Starts for Shygu2_70:

(Start: 21 @44729 has 14 MA's), (Start: 25 @44723 has 138 MA's), (26, 44708), (40, 44612),

Gene: Skipitt_70 Start: 44504, Stop: 44376, Start Num: 25

Candidate Starts for Skipitt_70:

(3, 44738), (11, 44612), (13, 44603), (Start: 21 @44510 has 14 MA's), (Start: 25 @44504 has 138 MA's), (26, 44489), (27, 44483), (34, 44423),

Gene: Smoothie_157 Start: 83364, Stop: 83206, Start Num: 25

Candidate Starts for Smoothie_157:

(Start: 25 @83364 has 138 MA's), (26, 83349),

Gene: Spino_70 Start: 44516, Stop: 44382, Start Num: 21

Candidate Starts for Spino_70:

(5, 44672), (11, 44618), (13, 44609), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (27, 44489), (34, 44429),

Gene: Stasia_70 Start: 44731, Stop: 44609, Start Num: 25

Candidate Starts for Stasia_70:

(8, 44842), (Start: 21 @44737 has 14 MA's), (Start: 25 @44731 has 138 MA's), (26, 44716), (30, 44665),

Gene: Stink_70 Start: 44516, Stop: 44388, Start Num: 21

Candidate Starts for Stink_70:

(1, 44831), (2, 44792), (4, 44672), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's),

Gene: TNguyen7_75 Start: 45047, Stop: 44919, Start Num: 25

Candidate Starts for TNguyen7_75:

(Start: 25 @45047 has 138 MA's), (26, 45032), (34, 44966),

Gene: Taquarus_70 Start: 44513, Stop: 44385, Start Num: 25

Candidate Starts for Taquarus_70:

(3, 44747), (11, 44621), (13, 44612), (Start: 21 @44519 has 14 MA's), (Start: 25 @44513 has 138 MA's), (26, 44498), (27, 44492), (34, 44432),

Gene: Texage_72 Start: 45043, Stop: 44915, Start Num: 25

Candidate Starts for Texage_72:

(Start: 25 @45043 has 138 MA's), (26, 45028),

Gene: Timshel_72 Start: 47629, Stop: 47480, Start Num: 25

Candidate Starts for Timshel_72:

(Start: 25 @47629 has 138 MA's), (26, 47614), (29, 47578), (30, 47560), (36, 47536),

Gene: Tinybot_70 Start: 44537, Stop: 44409, Start Num: 25

Candidate Starts for Tinybot_70:

(5, 44699), (11, 44645), (13, 44636), (Start: 21 @44543 has 14 MA's), (Start: 25 @44537 has 138 MA's), (26, 44522), (27, 44516), (34, 44456),

Gene: TiroTheta9_70 Start: 44504, Stop: 44376, Start Num: 25

Candidate Starts for TiroTheta9_70:

(11, 44612), (13, 44603), (Start: 21 @44510 has 14 MA's), (Start: 25 @44504 has 138 MA's), (26, 44489), (27, 44483), (34, 44423),

Gene: Todacoro_74 Start: 45042, Stop: 44914, Start Num: 25

Candidate Starts for Todacoro_74:

(Start: 25 @45042 has 138 MA's), (26, 45027),

Gene: Toniann_156 Start: 83006, Stop: 82848, Start Num: 25

Candidate Starts for Toniann_156:

(Start: 25 @83006 has 138 MA's), (26, 82991),

Gene: Toro_74 Start: 48604, Stop: 48464, Start Num: 25

Candidate Starts for Toro_74:

(Start: 25 @48604 has 138 MA's), (35, 48514),

Gene: TroyPia_72 Start: 44542, Stop: 44414, Start Num: 25

Candidate Starts for TroyPia_72:

(Start: 21 @44548 has 14 MA's), (Start: 25 @44542 has 138 MA's), (26, 44527), (32, 44464), (34, 44461),

Gene: Twister_70 Start: 44343, Stop: 44215, Start Num: 25

Candidate Starts for Twister_70:

(Start: 25 @44343 has 138 MA's), (26, 44328), (28, 44313), (37, 44247),

Gene: TygerBlood_71 Start: 44510, Stop: 44382, Start Num: 25

Candidate Starts for TygerBlood_71:

(3, 44744), (11, 44618), (13, 44609), (Start: 21 @44516 has 14 MA's), (Start: 25 @44510 has 138 MA's), (26, 44495), (27, 44489), (34, 44429),

Gene: Ulysses_70 Start: 44193, Stop: 44065, Start Num: 25

Candidate Starts for Ulysses_70:

(3, 44427), (11, 44301), (13, 44292), (Start: 21 @44199 has 14 MA's), (Start: 25 @44193 has 138 MA's), (26, 44178), (34, 44112),

Gene: Veracruz_71 Start: 45043, Stop: 44915, Start Num: 25

Candidate Starts for Veracruz_71:

(Start: 25 @45043 has 138 MA's), (26, 45028),

Gene: WalterMcMickey_70 Start: 44343, Stop: 44215, Start Num: 25

Candidate Starts for WalterMcMickey_70:

(Start: 25 @44343 has 138 MA's), (26, 44328), (28, 44313), (37, 44247),

Gene: Wile_69 Start: 44707, Stop: 44579, Start Num: 21

Candidate Starts for Wile_69:

(Start: 21 @44707 has 14 MA's), (Start: 25 @44701 has 138 MA's), (26, 44686), (27, 44680), (40, 44590),

Gene: WilliamBoone_158 Start: 81466, Stop: 81308, Start Num: 25

Candidate Starts for WilliamBoone_158:

(Start: 25 @81466 has 138 MA's), (26, 81451),

Gene: Wizard007_70 Start: 44427, Stop: 44305, Start Num: 25

Candidate Starts for Wizard007_70:

(Start: 21 @44433 has 14 MA's), (Start: 25 @44427 has 138 MA's), (26, 44412), (27, 44406), (40, 44316),

Gene: Xena_69 Start: 44688, Stop: 44566, Start Num: 25

Candidate Starts for Xena_69:

(6, 44814), (7, 44808), (9, 44802), (18, 44742), (Start: 21 @44694 has 14 MA's), (Start: 25 @44688 has 138 MA's), (26, 44673), (40, 44577),

Gene: YoSam321_71 Start: 44511, Stop: 44377, Start Num: 21

Candidate Starts for YoSam321_71:

(3, 44739), (11, 44613), (13, 44604), (Start: 21 @44511 has 14 MA's), (Start: 25 @44505 has 138 MA's), (26, 44490), (27, 44484), (34, 44424),