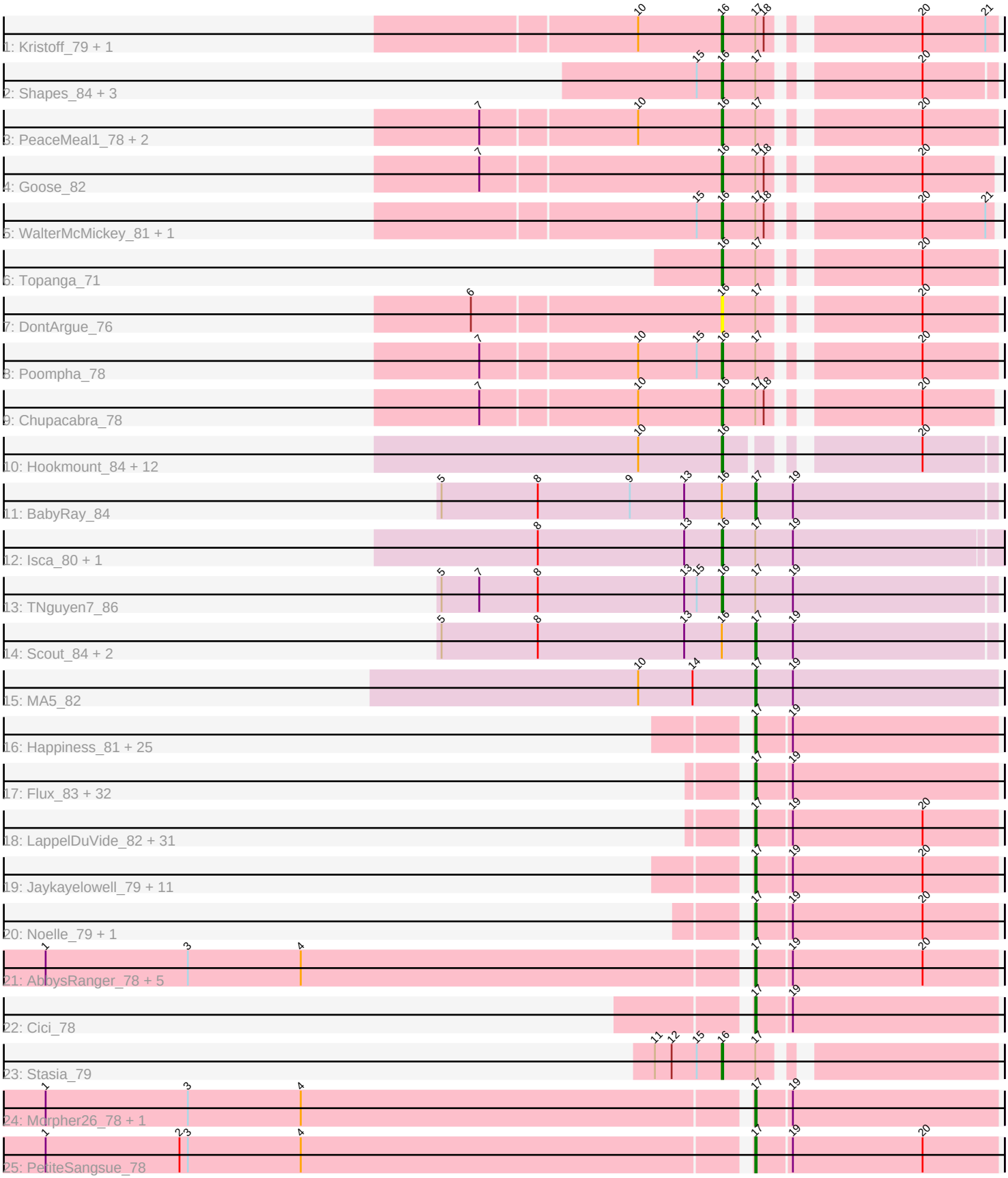
Pham 347342


1: Kristoff_79 + 1
2: Shapes_84 + 3
3: PeaceMeal1_78 + 2
4: Goose_82
5: WalterMcMickey_81 + 1
6: Topanga_71
7: DontArgue_76
8: Poompha_78
9: Chupacabra_78
10: Hookmount_84 + 12
11: BabyRay_84
12: Isca_80 + 1
13: TNguyen7_86
14: Scout_84 + 2
15: MA5_82
16: Happiness_81 + 25
17: Flux_83 + 32
18: LappelDuVide_82 + 31
19: Jaykayelowell_79 + 11
20: Noelle_79 + 1
21: AbbysRanger_78 + 5
22: Cici_78
23: Stasia_79
24: Morpher26_78 + 1
25: PetiteSangsue_78

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 347342 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347342 has 153 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Kristoff_79, Rebeuca_82
• Track 2 : Shapes_84, RhynO_69, DustyMartin_84, Rowdy_84
• Track 3 : PeaceMeal1_78, Severus_79, Drake94_78
• Track 4 : Goose_82
• Track 5 : WalterMcMickey_81, Twister_82
• Track 6 : Topanga_71
• Track 7 : DontArgue_76
• Track 8 : Poompha_78
• Track 9 : Chupacabra_78
• Track 10 : Hookmount_84, Lambert1_84, Caviar_73, Popcicle_84, ResDef_82, Noella_85, Veracruz_81, Pocahontas_83, Margo_84, Norbert_80, Todacoro_84, QuinnKiro_83, Texage_82
• Track 11 : BabyRay_84
• Track 12 : Isca_80, Phantastic_85
• Track 13 : TNguyen7_86
• Track 14 : Scout_84, Heathen_84, Kachowdy_86
• Track 15 : MA5_82
• Track 16 : Happiness_81, Eurydice_83, Nebs_83, Romney_81, DirtyDunning_81, Ohfah_83, Kampy_81, LochMonster_83, ChampagnePapi_85, Kyee_82, Cintron_82, ICleared_81, Spino_81, PeterPeter_82, CentreCat_82, BangNhom_79, Ruin_82, Cerulean_84, TroyPia_83, Dhanush_82, Wilbur_82, LittleB_82, Maxo_84, Sabertooth_82, Phelipe_82, Scamp_82
• Track 17 : Flux_83, Chaph_82, Burger_80, Huxley_74, Funston_81, Thanksgivukkah_81, Koan_79, Palestino_81, Maverick_81, Phighter1804_82, Koreni_81, Eris_81, Mazhar510_82, JoongJeon_81, Caelakin_80, Melvin_84, Bombshell_82, OKaNui_81, Ulysses_81, Lorenzo_82, Wander_82, Millski_81, Pipcraft_78, SenorClean_83, Bruiser_81, KFPoly_81, Alberto7_83, Medusa_81, Phacado_82, SteMason_82, Clarenza_81, Kremtemulon_79, Iracema64_82
• Track 18 : LappelDuVide_82, Peaches_80, Blackmoor_81, Tinybot_81, Annyong_81, BubbleTrouble_81, Holli_81, Kratark_81, Baby16_82, Broseidon_82, Iceman_80, LittleGuy_82, Pumbaa_82, TinaFeyge_80, YoSam321_82, Phontbonne_82, Miramae_82, Florean_82, Taquarus_81, Roosevelt_80, TiroTheta9_81, HamSlice_78, Polymorphads_83, Connomayer_82, Buckaroo_78, LHTSCC_84, Camperdownii_78, Morrow_84, Nyxis_81, Albee_82, Bartimeaus_82, BellusTerra_82
• Track 19 : Jaykayelowell_79, Citius_82, Abdiel_81, Shygu2_80, Sparxx_83, Achebe_77, Lemur_82, Lunsford_82, Shaka_80, JetBlade_83, Junimo_78, Xena_78

• Track 20 : Noelle_79, Mundrea_80
• Track 21 : AbbysRanger_78, Perplexer_78, Wizard007_78, Bumblebee11_77, Druantia_80, Backyardigan_76
• Track 22 : Cici_78
• Track 23 : Stasia_79
• Track 24 : Morpher26_78, Wile_77
• Track 25 : PetiteSangsue_78

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

The start number called the most often in the published annotations is 17, it was called in 118 of the 147 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbysRanger_78, Abdiel_81, Achebe_77, Albee_82, Alberto7_83, Annyong_81, Baby16_82, BabyRay_84, Backyardigan_76, BangNhom_79, Bartimeaus_82, BellusTerra_82, Blackmoor_81, Bombshell_82, Broseidon_82, Bruiser_81, BubbleTrouble_81, Buckaroo_78, Bumblebee11_77, Burger_80, Caelakin_80, Camperdownii_78, CentreCat_82, Cerulean_84, ChampagnePapi_85, Chaph_82, Cici_78, Cintron_82, Citius_82, Clarenza_81, Connomayer_82, Dhanush_82, DirtyDunning_81, Druantia_80, Eris_81, Eurydice_83, Florean_82, Flux_83, Funston_81, HamSlice_78, Happiness_81, Heathen_84, Holli_81, Huxley_74, ICleared_81, Iceman_80, Iracema64_82, Jaykayelowell_79, JetBlade_83, JoongJeon_81, Junimo_78, KFPoly_81, Kachowdy_86, Kampy_81, Koan_79, Koreni_81, Kratark_81, Kremtemulon_79, Kyee_82, LHTSCC_84, LappelDuVide_82, Lemur_82, LittleB_82, LittleGuy_82, LochMonster_83, Lorenzo_82, Lunsford_82, MA5_82, Maverick_81, Maxo_84, Mazhar510_82, Medusa_81, Melvin_84, Millski_81, Miramae_82, Morpher26_78, Morrow_84, Mundrea_80, Nebs_83, Noelle_79, Nyxis_81, OKaNui_81, Ohfah_83, Palestino_81, Peaches_80, Perplexer_78, PeterPeter_82, PetiteSangsue_78, Phacado_82, Phelipe_82, Phighter1804_82, Phontbonne_82, Pipcraft_78, Polymorphads_83, Pumbaa_82, Romney_81, Roosevelt_80, Ruin_82, Sabertooth_82, Scamp_82, Scout_84, SenorClean_83, Shaka_80, Shygu2_80, Sparxx_83, Spino_81, SteMason_82, Taquarus_81, Thanksgivukkah_81, TinaFeyge_80, Tinybot_81, TiroTheta9_81, TroyPia_83, Ulysses_81, Wander_82, Wilbur_82, Wile_77, Wizard007_78, Xena_78, YoSam321_82,

Genes that have the "Most Annotated" start but do not call it:
• Chupacabra_78, DontArgue_76, Drake94_78, DustyMartin_84, Goose_82, Isca_80, Kristoff_79, PeaceMeal1_78, Phantastic_85, Poompha_78, Rebeuca_82, RhynO_69, Rowdy_84, Severus_79, Shapes_84, Stasia_79, TNguyen7_86, Topanga_71, Twister_82, WalterMcMickey_81,

Genes that do not have the "Most Annotated" start:
• Caviar_73, Hookmount_84, Lambert1_84, Margo_84, Noella_85, Norbert_80, Pocahontas_83, Popcicle_84, QuinnKiro_83, ResDef_82, Texage_82, Todacoro_84, Veracruz_81,

Summary by start number:

Start 16:
• Found in 37 of 153 (24.2%) of genes in pham
• Manual Annotations of this start: 29 of 147
• Called 89.2% of time when present
• Phage (with cluster) where this start called: Caviar_73 (A3), Chupacabra_78 (A10), DontArgue_76 (A10), Drake94_78 (A10), DustyMartin_84 (A10), Goose_82 (A10), Hookmount_84 (A3), Isca_80 (A3), Kristoff_79 (A10), Lambert1_84 (A3), Margo_84 (A3), Noella_85 (A3), Norbert_80 (A3), PeaceMeal1_78 (A10), Phantastic_85 (A3), Pocahontas_83 (A3), Poompha_78 (A10), Popcicle_84 (A3), QuinnKiro_83 (A3), Rebeuca_82 (A10), ResDef_82 (A3), RhynO_69 (A10), Rowdy_84 (A10), Severus_79 (A10), Shapes_84 (A10), Stasia_79 (A4), TNguyen7_86 (A3), Texage_82 (A3), Todacoro_84 (A3), Topanga_71 (A10), Twister_82 (A10), Veracruz_81 (A3), WalterMcMickey_81 (A10),

Start 17:
• Found in 140 of 153 (91.5%) of genes in pham
• Manual Annotations of this start: 118 of 147
• Called 85.7% of time when present
• Phage (with cluster) where this start called: AbbysRanger_78 (A4), Abdiel_81 (A4), Achebe_77 (A4), Albee_82 (A4), Alberto7_83 (A4), Annyong_81 (A4), Baby16_82 (A4), BabyRay_84 (A3), Backyardigan_76 (A4), BangNhom_79 (A4), Bartimeaus_82 (A4), BellusTerra_82 (A4), Blackmoor_81 (A4), Bombshell_82 (A4), Broseidon_82 (A4), Bruiser_81 (A4), BubbleTrouble_81 (A4), Buckaroo_78 (A4), Bumblebee11_77 (A4), Burger_80 (A4), Caelakin_80 (A4), Camperdownii_78 (A4), CentreCat_82 (A4), Cerulean_84 (A4), ChampagnePapi_85 (A4), Chaph_82 (A4), Cici_78 (A4), Cintron_82 (A4), Citius_82 (A4), Clarenza_81 (A4), Connomayer_82 (A4), Dhanush_82 (A4), DirtyDunning_81 (A4), Druantia_80 (A4), Eris_81 (A4), Eurydice_83 (A4), Florean_82 (A4), Flux_83 (A4), Funston_81 (A4), HamSlice_78 (A4), Happiness_81 (A4), Heathen_84 (A3), Holli_81 (A4), Huxley_74 (A4), ICleared_81 (A4), Iceman_80 (A4), Iracema64_82 (A4), Jaykayelowell_79 (A4), JetBlade_83 (A4), JoongJeon_81 (A4), Junimo_78 (A4), KFPoly_81 (A4), Kachowdy_86 (A3), Kampy_81 (A4), Koan_79 (A4), Koreni_81 (A4), Kratark_81 (A4), Kremtemulon_79 (A4), Kyee_82 (A4), LHTSCC_84 (A4), LappelDuVide_82 (A4), Lemur_82 (A4), LittleB_82 (A4), LittleGuy_82 (A4), LochMonster_83 (A4), Lorenzo_82 (A4), Lunsford_82 (A4), MA5_82 (A3), Maverick_81 (A4), Maxo_84 (A4), Mazhar510_82 (A4), Medusa_81 (A4), Melvin_84 (A4), Millski_81 (A4), Miramae_82 (A4), Morpher26_78 (A4), Morrow_84 (A4), Mundrea_80 (A4), Nebs_83 (A4), Noelle_79 (A4), Nyxis_81 (A4), OKaNui_81 (A4), Ohfah_83 (A4), Palestino_81 (A4), Peaches_80 (A4), Perplexer_78 (A4), PeterPeter_82 (A4), PetiteSangsue_78 (A4), Phacado_82 (A4), Phelipe_82 (A4), Phighter1804_82 (A4), Phontbonne_82 (A4), Pipcraft_78 (A4), Polymorphads_83 (A4), Pumbaa_82 (A4), Romney_81 (A4), Roosevelt_80 (A4), Ruin_82 (A4), Sabertooth_82 (A4), Scamp_82 (A4), Scout_84 (A3), SenorClean_83 (A4), Shaka_80 (A4), Shygu2_80 (A4), Sparxx_83 (A4), Spino_81 (A4), SteMason_82 (A4), Taquarus_81 (A4), Thanksgivukkah_81 (A4), TinaFeyge_80 (A4), Tinybot_81 (A4), TiroTheta9_81 (A4), TroyPia_83 (A4), Ulysses_81 (A4), Wander_82 (A4), Wilbur_82 (A4), Wile_77 (A4), Wizard007_78 (A4), Xena_78 (A4), YoSam321_82 (A4),

Summary by clusters:

There are 3 clusters represented in this pham: A3, A4, A10,

Info for manual annotations of cluster A10:

•Start number 16 was manually annotated 12 times for cluster A10.

Info for manual annotations of cluster A3:
•Start number 16 was manually annotated 16 times for cluster A3.
•Start number 17 was manually annotated 5 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 16 was manually annotated 1 time for cluster A4.
•Start number 17 was manually annotated 113 times for cluster A4.

Gene Information:

Gene: AbbysRanger_78 Start: 47702, Stop: 47532, Start Num: 17
Candidate Starts for AbbysRanger_78:
(1, 48197), (3, 48095), (4, 48014), (Start: 17 @47702 has 118 MA's), (19, 47678), (20, 47585),

Gene: Abdiel_81 Start: 48078, Stop: 47908, Start Num: 17
Candidate Starts for Abdiel_81:
(Start: 17 @48078 has 118 MA's), (19, 48054), (20, 47961),

Gene: Achebe_77 Start: 47681, Stop: 47511, Start Num: 17
Candidate Starts for Achebe_77:
(Start: 17 @47681 has 118 MA's), (19, 47657), (20, 47564),

Gene: Albee_82 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Albee_82:
(Start: 17 @48066 has 118 MA's), (19, 48042), (20, 47949),

Gene: Alberto7_83 Start: 48403, Stop: 48233, Start Num: 17
Candidate Starts for Alberto7_83:
(Start: 17 @48403 has 118 MA's), (19, 48379),

Gene: Annyong_81 Start: 48111, Stop: 47941, Start Num: 17
Candidate Starts for Annyong_81:
(Start: 17 @48111 has 118 MA's), (19, 48087), (20, 47994),

Gene: Baby16_82 Start: 48077, Stop: 47907, Start Num: 17
Candidate Starts for Baby16_82:
(Start: 17 @48077 has 118 MA's), (19, 48053), (20, 47960),

Gene: BabyRay_84 Start: 47109, Stop: 46939, Start Num: 17
Candidate Starts for BabyRay_84:
(5, 47334), (8, 47265), (9, 47199), (13, 47160), (Start: 16 @47133 has 29 MA's), (Start: 17 @47109 has 118 MA's), (19, 47082),

Gene: Backyardigan_76 Start: 47718, Stop: 47548, Start Num: 17
Candidate Starts for Backyardigan_76:
(1, 48213), (3, 48111), (4, 48030), (Start: 17 @47718 has 118 MA's), (19, 47694), (20, 47601),

Gene: BangNhom_79 Start: 48503, Stop: 48333, Start Num: 17
Candidate Starts for BangNhom_79:

(Start: 17 @48503 has 118 MA's), (19, 48479),

Gene: Bartimeaus_82 Start: 48068, Stop: 47898, Start Num: 17
Candidate Starts for Bartimeaus_82:
(Start: 17 @48068 has 118 MA's), (19, 48044), (20, 47951),

Gene: BellusTerra_82 Start: 47931, Stop: 47761, Start Num: 17
Candidate Starts for BellusTerra_82:
(Start: 17 @47931 has 118 MA's), (19, 47907), (20, 47814),

Gene: Blackmoor_81 Start: 48068, Stop: 47898, Start Num: 17
Candidate Starts for Blackmoor_81:
(Start: 17 @48068 has 118 MA's), (19, 48044), (20, 47951),

Gene: Bombshell_82 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Bombshell_82:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Broseidon_82 Start: 48069, Stop: 47899, Start Num: 17
Candidate Starts for Broseidon_82:
(Start: 17 @48069 has 118 MA's), (19, 48045), (20, 47952),

Gene: Bruiser_81 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Bruiser_81:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: BubbleTrouble_81 Start: 48093, Stop: 47923, Start Num: 17
Candidate Starts for BubbleTrouble_81:
(Start: 17 @48093 has 118 MA's), (19, 48069), (20, 47976),

Gene: Buckaroo_78 Start: 48070, Stop: 47900, Start Num: 17
Candidate Starts for Buckaroo_78:
(Start: 17 @48070 has 118 MA's), (19, 48046), (20, 47953),

Gene: Bumblebee11_77 Start: 47684, Stop: 47514, Start Num: 17
Candidate Starts for Bumblebee11_77:
(1, 48179), (3, 48077), (4, 47996), (Start: 17 @47684 has 118 MA's), (19, 47660), (20, 47567),

Gene: Burger_80 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Burger_80:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: Caelakin_80 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Caelakin_80:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: Camperdownii_78 Start: 47309, Stop: 47139, Start Num: 17
Candidate Starts for Camperdownii_78:
(Start: 17 @47309 has 118 MA's), (19, 47285), (20, 47192),

Gene: Caviar_73 Start: 44224, Stop: 44060, Start Num: 16
Candidate Starts for Caviar_73:
(10, 44284), (Start: 16 @44224 has 29 MA's), (20, 44110),

Gene: CentreCat_82 Start: 48106, Stop: 47936, Start Num: 17
Candidate Starts for CentreCat_82:
(Start: 17 @48106 has 118 MA's), (19, 48082),

Gene: Cerulean_84 Start: 48504, Stop: 48334, Start Num: 17
Candidate Starts for Cerulean_84:
(Start: 17 @48504 has 118 MA's), (19, 48480),

Gene: ChampagnePapi_85 Start: 48506, Stop: 48336, Start Num: 17
Candidate Starts for ChampagnePapi_85:
(Start: 17 @48506 has 118 MA's), (19, 48482),

Gene: Chaph_82 Start: 48077, Stop: 47907, Start Num: 17
Candidate Starts for Chaph_82:
(Start: 17 @48077 has 118 MA's), (19, 48053),

Gene: Chupacabra_78 Start: 47676, Stop: 47506, Start Num: 16
Candidate Starts for Chupacabra_78:
(7, 47844), (10, 47736), (Start: 16 @47676 has 29 MA's), (Start: 17 @47652 has 118 MA's), (18, 47646), (20, 47556),

Gene: Cici_78 Start: 47697, Stop: 47527, Start Num: 17
Candidate Starts for Cici_78:
(Start: 17 @47697 has 118 MA's), (19, 47673),

Gene: Cintron_82 Start: 48182, Stop: 48012, Start Num: 17
Candidate Starts for Cintron_82:
(Start: 17 @48182 has 118 MA's), (19, 48158),

Gene: Citius_82 Start: 48087, Stop: 47917, Start Num: 17
Candidate Starts for Citius_82:
(Start: 17 @48087 has 118 MA's), (19, 48063), (20, 47970),

Gene: Clarenza_81 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Clarenza_81:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Connomayer_82 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Connomayer_82:
(Start: 17 @48066 has 118 MA's), (19, 48042), (20, 47949),

Gene: Dhanush_82 Start: 48069, Stop: 47899, Start Num: 17
Candidate Starts for Dhanush_82:
(Start: 17 @48069 has 118 MA's), (19, 48045),

Gene: DirtyDunning_81 Start: 48078, Stop: 47908, Start Num: 17
Candidate Starts for DirtyDunning_81:
(Start: 17 @48078 has 118 MA's), (19, 48054),

Gene: DontArgue_76 Start: 46542, Stop: 46369, Start Num: 16
Candidate Starts for DontArgue_76:
(6, 46716), (Start: 16 @46542 has 29 MA's), (Start: 17 @46518 has 118 MA's), (20, 46422),

Gene: Drake94_78 Start: 46836, Stop: 46663, Start Num: 16
Candidate Starts for Drake94_78:
(7, 47004), (10, 46896), (Start: 16 @46836 has 29 MA's), (Start: 17 @46812 has 118 MA's), (20, 46716),

Gene: Druantia_80 Start: 47893, Stop: 47723, Start Num: 17
Candidate Starts for Druantia_80:
(1, 48388), (3, 48286), (4, 48205), (Start: 17 @47893 has 118 MA's), (19, 47869), (20, 47776),

Gene: DustyMartin_84 Start: 47933, Stop: 47763, Start Num: 16
Candidate Starts for DustyMartin_84:
(15, 47951), (Start: 16 @47933 has 29 MA's), (Start: 17 @47909 has 118 MA's), (20, 47813),

Gene: Eris_81 Start: 48078, Stop: 47908, Start Num: 17
Candidate Starts for Eris_81:
(Start: 17 @48078 has 118 MA's), (19, 48054),

Gene: Eurydice_83 Start: 48103, Stop: 47933, Start Num: 17
Candidate Starts for Eurydice_83:
(Start: 17 @48103 has 118 MA's), (19, 48079),

Gene: Florean_82 Start: 48065, Stop: 47895, Start Num: 17
Candidate Starts for Florean_82:
(Start: 17 @48065 has 118 MA's), (19, 48041), (20, 47948),

Gene: Flux_83 Start: 48064, Stop: 47894, Start Num: 17
Candidate Starts for Flux_83:
(Start: 17 @48064 has 118 MA's), (19, 48040),

Gene: Funston_81 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Funston_81:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Goose_82 Start: 47487, Stop: 47317, Start Num: 16
Candidate Starts for Goose_82:
(7, 47655), (Start: 16 @47487 has 29 MA's), (Start: 17 @47463 has 118 MA's), (18, 47457), (20, 47367),

Gene: HamSlice_78 Start: 48065, Stop: 47895, Start Num: 17
Candidate Starts for HamSlice_78:
(Start: 17 @48065 has 118 MA's), (19, 48041), (20, 47948),

Gene: Happiness_81 Start: 48089, Stop: 47919, Start Num: 17
Candidate Starts for Happiness_81:
(Start: 17 @48089 has 118 MA's), (19, 48065),

Gene: Heathen_84 Start: 47262, Stop: 47092, Start Num: 17
Candidate Starts for Heathen_84:
(5, 47487), (8, 47418), (13, 47313), (Start: 16 @47286 has 29 MA's), (Start: 17 @47262 has 118 MA's), (19, 47235),

Gene: Holli_81 Start: 47856, Stop: 47686, Start Num: 17

Candidate Starts for Holli_81:
(Start: 17 @47856 has 118 MA's), (19, 47832), (20, 47739),

Gene: Hookmount_84 Start: 47227, Stop: 47063, Start Num: 16
Candidate Starts for Hookmount_84:
(10, 47287), (Start: 16 @47227 has 29 MA's), (20, 47113),

Gene: Huxley_74 Start: 45959, Stop: 45789, Start Num: 17
Candidate Starts for Huxley_74:
(Start: 17 @45959 has 118 MA's), (19, 45935),

Gene: ICleared_81 Start: 48134, Stop: 47964, Start Num: 17
Candidate Starts for ICleared_81:
(Start: 17 @48134 has 118 MA's), (19, 48110),

Gene: Iceman_80 Start: 48356, Stop: 48186, Start Num: 17
Candidate Starts for Iceman_80:
(Start: 17 @48356 has 118 MA's), (19, 48332), (20, 48239),

Gene: Iracema64_82 Start: 48330, Stop: 48160, Start Num: 17
Candidate Starts for Iracema64_82:
(Start: 17 @48330 has 118 MA's), (19, 48306),

Gene: Isca_80 Start: 46413, Stop: 46216, Start Num: 16
Candidate Starts for Isca_80:
(8, 46545), (13, 46440), (Start: 16 @46413 has 29 MA's), (Start: 17 @46389 has 118 MA's), (19, 46362),

Gene: Jaykayelowell_79 Start: 48059, Stop: 47889, Start Num: 17
Candidate Starts for Jaykayelowell_79:
(Start: 17 @48059 has 118 MA's), (19, 48035), (20, 47942),

Gene: JetBlade_83 Start: 48094, Stop: 47924, Start Num: 17
Candidate Starts for JetBlade_83:
(Start: 17 @48094 has 118 MA's), (19, 48070), (20, 47977),

Gene: JoongJeon_81 Start: 48060, Stop: 47890, Start Num: 17
Candidate Starts for JoongJeon_81:
(Start: 17 @48060 has 118 MA's), (19, 48036),

Gene: Junimo_78 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Junimo_78:
(Start: 17 @48066 has 118 MA's), (19, 48042), (20, 47949),

Gene: KFPoly_81 Start: 48060, Stop: 47890, Start Num: 17
Candidate Starts for KFPoly_81:
(Start: 17 @48060 has 118 MA's), (19, 48036),

Gene: Kachowdy_86 Start: 47514, Stop: 47344, Start Num: 17
Candidate Starts for Kachowdy_86:
(5, 47739), (8, 47670), (13, 47565), (Start: 16 @47538 has 29 MA's), (Start: 17 @47514 has 118 MA's), (19, 47487),

Gene: Kampy_81 Start: 48069, Stop: 47899, Start Num: 17
Candidate Starts for Kampy_81:
(Start: 17 @48069 has 118 MA's), (19, 48045),

Gene: Koan_79 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Koan_79:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: Koreni_81 Start: 47747, Stop: 47577, Start Num: 17
Candidate Starts for Koreni_81:
(Start: 17 @47747 has 118 MA's), (19, 47723),

Gene: Kratark_81 Start: 48100, Stop: 47930, Start Num: 17
Candidate Starts for Kratark_81:
(Start: 17 @48100 has 118 MA's), (19, 48076), (20, 47983),

Gene: Kremtemulon_79 Start: 47946, Stop: 47776, Start Num: 17
Candidate Starts for Kremtemulon_79:
(Start: 17 @47946 has 118 MA's), (19, 47922),

Gene: Kristoff_79 Start: 48111, Stop: 47938, Start Num: 16
Candidate Starts for Kristoff_79:
(10, 48171), (Start: 16 @48111 has 29 MA's), (Start: 17 @48087 has 118 MA's), (18, 48081), (20, 47991), (21, 47946),

Gene: Kyee_82 Start: 48061, Stop: 47891, Start Num: 17
Candidate Starts for Kyee_82:
(Start: 17 @48061 has 118 MA's), (19, 48037),

Gene: LHTSCC_84 Start: 48506, Stop: 48336, Start Num: 17
Candidate Starts for LHTSCC_84:
(Start: 17 @48506 has 118 MA's), (19, 48482), (20, 48389),

Gene: Lambert1_84 Start: 47228, Stop: 47064, Start Num: 16
Candidate Starts for Lambert1_84:
(10, 47288), (Start: 16 @47228 has 29 MA's), (20, 47114),

Gene: LappelDuVide_82 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for LappelDuVide_82:
(Start: 17 @48066 has 118 MA's), (19, 48042), (20, 47949),

Gene: Lemur_82 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Lemur_82:
(Start: 17 @48063 has 118 MA's), (19, 48039), (20, 47946),

Gene: LittleB_82 Start: 48067, Stop: 47897, Start Num: 17
Candidate Starts for LittleB_82:
(Start: 17 @48067 has 118 MA's), (19, 48043),

Gene: LittleGuy_82 Start: 47957, Stop: 47784, Start Num: 17
Candidate Starts for LittleGuy_82:
(Start: 17 @47957 has 118 MA's), (19, 47930), (20, 47837),

Gene: LochMonster_83 Start: 48303, Stop: 48133, Start Num: 17
Candidate Starts for LochMonster_83:
(Start: 17 @48303 has 118 MA's), (19, 48279),

Gene: Lorenzo_82 Start: 48064, Stop: 47894, Start Num: 17
Candidate Starts for Lorenzo_82:
(Start: 17 @48064 has 118 MA's), (19, 48040),

Gene: Lunsford_82 Start: 48059, Stop: 47889, Start Num: 17
Candidate Starts for Lunsford_82:
(Start: 17 @48059 has 118 MA's), (19, 48035), (20, 47942),

Gene: MA5_82 Start: 46285, Stop: 46112, Start Num: 17
Candidate Starts for MA5_82:
(10, 46369), (14, 46330), (Start: 17 @46285 has 118 MA's), (19, 46258),

Gene: Margo_84 Start: 47253, Stop: 47089, Start Num: 16
Candidate Starts for Margo_84:
(10, 47313), (Start: 16 @47253 has 29 MA's), (20, 47139),

Gene: Maverick_81 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Maverick_81:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Maxo_84 Start: 48069, Stop: 47899, Start Num: 17
Candidate Starts for Maxo_84:
(Start: 17 @48069 has 118 MA's), (19, 48045),

Gene: Mazhar510_82 Start: 48064, Stop: 47894, Start Num: 17
Candidate Starts for Mazhar510_82:
(Start: 17 @48064 has 118 MA's), (19, 48040),

Gene: Medusa_81 Start: 48079, Stop: 47909, Start Num: 17
Candidate Starts for Medusa_81:
(Start: 17 @48079 has 118 MA's), (19, 48055),

Gene: Melvin_84 Start: 48061, Stop: 47891, Start Num: 17
Candidate Starts for Melvin_84:
(Start: 17 @48061 has 118 MA's), (19, 48037),

Gene: Millski_81 Start: 48067, Stop: 47897, Start Num: 17
Candidate Starts for Millski_81:
(Start: 17 @48067 has 118 MA's), (19, 48043),

Gene: Miramae_82 Start: 47982, Stop: 47812, Start Num: 17
Candidate Starts for Miramae_82:
(Start: 17 @47982 has 118 MA's), (19, 47958), (20, 47865),

Gene: Morpher26_78 Start: 47705, Stop: 47535, Start Num: 17
Candidate Starts for Morpher26_78:
(1, 48200), (3, 48098), (4, 48017), (Start: 17 @47705 has 118 MA's), (19, 47681),

Gene: Morrow_84 Start: 48106, Stop: 47936, Start Num: 17

Candidate Starts for Morrow_84:
(Start: 17 @48106 has 118 MA's), (19, 48082), (20, 47989),

Gene: Mundrea_80 Start: 47944, Stop: 47774, Start Num: 17
Candidate Starts for Mundrea_80:
(Start: 17 @47944 has 118 MA's), (19, 47920), (20, 47827),

Gene: Nebs_83 Start: 48106, Stop: 47936, Start Num: 17
Candidate Starts for Nebs_83:
(Start: 17 @48106 has 118 MA's), (19, 48082),

Gene: Noella_85 Start: 47229, Stop: 47065, Start Num: 16
Candidate Starts for Noella_85:
(10, 47289), (Start: 16 @47229 has 29 MA's), (20, 47115),

Gene: Noelle_79 Start: 47911, Stop: 47741, Start Num: 17
Candidate Starts for Noelle_79:
(Start: 17 @47911 has 118 MA's), (19, 47887), (20, 47794),

Gene: Norbert_80 Start: 47226, Stop: 47062, Start Num: 16
Candidate Starts for Norbert_80:
(10, 47286), (Start: 16 @47226 has 29 MA's), (20, 47112),

Gene: Nyxis_81 Start: 47951, Stop: 47778, Start Num: 17
Candidate Starts for Nyxis_81:
(Start: 17 @47951 has 118 MA's), (19, 47924), (20, 47831),

Gene: OKaNui_81 Start: 48117, Stop: 47947, Start Num: 17
Candidate Starts for OKaNui_81:
(Start: 17 @48117 has 118 MA's), (19, 48093),

Gene: Ohfah_83 Start: 48106, Stop: 47936, Start Num: 17
Candidate Starts for Ohfah_83:
(Start: 17 @48106 has 118 MA's), (19, 48082),

Gene: Palestino_81 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Palestino_81:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: PeaceMeal1_78 Start: 46844, Stop: 46671, Start Num: 16
Candidate Starts for PeaceMeal1_78:
(7, 47012), (10, 46904), (Start: 16 @46844 has 29 MA's), (Start: 17 @46820 has 118 MA's), (20, 46724),

Gene: Peaches_80 Start: 48071, Stop: 47898, Start Num: 17
Candidate Starts for Peaches_80:
(Start: 17 @48071 has 118 MA's), (19, 48044), (20, 47951),

Gene: Perplexer_78 Start: 47685, Stop: 47515, Start Num: 17
Candidate Starts for Perplexer_78:
(1, 48180), (3, 48078), (4, 47997), (Start: 17 @47685 has 118 MA's), (19, 47661), (20, 47568),

Gene: PeterPeter_82 Start: 48060, Stop: 47890, Start Num: 17

Candidate Starts for PeterPeter_82:
(Start: 17 @48060 has 118 MA's), (19, 48036),

Gene: PetiteSangsue_78 Start: 47688, Stop: 47518, Start Num: 17
Candidate Starts for PetiteSangsue_78:
(1, 48183), (2, 48087), (3, 48081), (4, 48000), (Start: 17 @47688 has 118 MA's), (19, 47664), (20, 47571),

Gene: Phacado_82 Start: 48062, Stop: 47892, Start Num: 17
Candidate Starts for Phacado_82:
(Start: 17 @48062 has 118 MA's), (19, 48038),

Gene: Phantastic_85 Start: 46741, Stop: 46544, Start Num: 16
Candidate Starts for Phantastic_85:
(8, 46873), (13, 46768), (Start: 16 @46741 has 29 MA's), (Start: 17 @46717 has 118 MA's), (19, 46690),

Gene: Phelipe_82 Start: 48027, Stop: 47857, Start Num: 17
Candidate Starts for Phelipe_82:
(Start: 17 @48027 has 118 MA's), (19, 48003),

Gene: Phighter1804_82 Start: 48127, Stop: 47957, Start Num: 17
Candidate Starts for Phighter1804_82:
(Start: 17 @48127 has 118 MA's), (19, 48103),

Gene: Phontbonne_82 Start: 47967, Stop: 47794, Start Num: 17
Candidate Starts for Phontbonne_82:
(Start: 17 @47967 has 118 MA's), (19, 47940), (20, 47847),

Gene: Pipcraft_78 Start: 48067, Stop: 47897, Start Num: 17
Candidate Starts for Pipcraft_78:
(Start: 17 @48067 has 118 MA's), (19, 48043),

Gene: Pocahontas_83 Start: 47224, Stop: 47060, Start Num: 16
Candidate Starts for Pocahontas_83:
(10, 47284), (Start: 16 @47224 has 29 MA's), (20, 47110),

Gene: Polymorphads_83 Start: 48087, Stop: 47917, Start Num: 17
Candidate Starts for Polymorphads_83:
(Start: 17 @48087 has 118 MA's), (19, 48063), (20, 47970),

Gene: Poompha_78 Start: 46842, Stop: 46669, Start Num: 16
Candidate Starts for Poompha_78:
(7, 47010), (10, 46902), (15, 46860), (Start: 16 @46842 has 29 MA's), (Start: 17 @46818 has 118 MA's), (20, 46722),

Gene: Popcicle_84 Start: 47224, Stop: 47060, Start Num: 16
Candidate Starts for Popcicle_84:
(10, 47284), (Start: 16 @47224 has 29 MA's), (20, 47110),

Gene: Pumbaa_82 Start: 48011, Stop: 47841, Start Num: 17
Candidate Starts for Pumbaa_82:
(Start: 17 @48011 has 118 MA's), (19, 47987), (20, 47894),

Gene: QuinnKiro_83 Start: 47227, Stop: 47063, Start Num: 16
Candidate Starts for QuinnKiro_83:
(10, 47287), (Start: 16 @47227 has 29 MA's), (20, 47113),

Gene: Rebeuca_82 Start: 48112, Stop: 47939, Start Num: 16
Candidate Starts for Rebeuca_82:
(10, 48172), (Start: 16 @48112 has 29 MA's), (Start: 17 @48088 has 118 MA's), (18, 48082), (20, 47992), (21, 47947),

Gene: ResDef_82 Start: 47230, Stop: 47066, Start Num: 16
Candidate Starts for ResDef_82:
(10, 47290), (Start: 16 @47230 has 29 MA's), (20, 47116),

Gene: RhynO_69 Start: 43547, Stop: 43377, Start Num: 16
Candidate Starts for RhynO_69:
(15, 43565), (Start: 16 @43547 has 29 MA's), (Start: 17 @43523 has 118 MA's), (20, 43427),

Gene: Romney_81 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Romney_81:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Roosevelt_80 Start: 48068, Stop: 47898, Start Num: 17
Candidate Starts for Roosevelt_80:
(Start: 17 @48068 has 118 MA's), (19, 48044), (20, 47951),

Gene: Rowdy_84 Start: 47933, Stop: 47763, Start Num: 16
Candidate Starts for Rowdy_84:
(15, 47951), (Start: 16 @47933 has 29 MA's), (Start: 17 @47909 has 118 MA's), (20, 47813),

Gene: Ruin_82 Start: 48059, Stop: 47889, Start Num: 17
Candidate Starts for Ruin_82:
(Start: 17 @48059 has 118 MA's), (19, 48035),

Gene: Sabertooth_82 Start: 48071, Stop: 47901, Start Num: 17
Candidate Starts for Sabertooth_82:
(Start: 17 @48071 has 118 MA's), (19, 48047),

Gene: Scamp_82 Start: 48068, Stop: 47898, Start Num: 17
Candidate Starts for Scamp_82:
(Start: 17 @48068 has 118 MA's), (19, 48044),

Gene: Scout_84 Start: 46725, Stop: 46555, Start Num: 17
Candidate Starts for Scout_84:
(5, 46950), (8, 46881), (13, 46776), (Start: 16 @46749 has 29 MA's), (Start: 17 @46725 has 118 MA's), (19, 46698),

Gene: SenorClean_83 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for SenorClean_83:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: Severus_79 Start: 46842, Stop: 46669, Start Num: 16
Candidate Starts for Severus_79:

(7, 47010), (10, 46902), (Start: 16 @46842 has 29 MA's), (Start: 17 @46818 has 118 MA's), (20, 46722),

Gene: Shaka_80 Start: 48064, Stop: 47894, Start Num: 17
Candidate Starts for Shaka_80:
(Start: 17 @48064 has 118 MA's), (19, 48040), (20, 47947),

Gene: Shapes_84 Start: 47933, Stop: 47763, Start Num: 16
Candidate Starts for Shapes_84:
(15, 47951), (Start: 16 @47933 has 29 MA's), (Start: 17 @47909 has 118 MA's), (20, 47813),

Gene: Shygu2_80 Start: 48010, Stop: 47840, Start Num: 17
Candidate Starts for Shygu2_80:
(Start: 17 @48010 has 118 MA's), (19, 47986), (20, 47893),

Gene: Sparxx_83 Start: 48062, Stop: 47892, Start Num: 17
Candidate Starts for Sparxx_83:
(Start: 17 @48062 has 118 MA's), (19, 48038), (20, 47945),

Gene: Spino_81 Start: 48066, Stop: 47896, Start Num: 17
Candidate Starts for Spino_81:
(Start: 17 @48066 has 118 MA's), (19, 48042),

Gene: Stasia_79 Start: 48019, Stop: 47846, Start Num: 16
Candidate Starts for Stasia_79:
(11, 48067), (12, 48055), (15, 48037), (Start: 16 @48019 has 29 MA's), (Start: 17 @47995 has 118 MA's),

Gene: SteMason_82 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for SteMason_82:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: TNguyen7_86 Start: 47526, Stop: 47332, Start Num: 16
Candidate Starts for TNguyen7_86:
(5, 47727), (7, 47700), (8, 47658), (13, 47553), (15, 47544), (Start: 16 @47526 has 29 MA's), (Start: 17 @47502 has 118 MA's), (19, 47475),

Gene: Taquarus_81 Start: 48075, Stop: 47902, Start Num: 17
Candidate Starts for Taquarus_81:
(Start: 17 @48075 has 118 MA's), (19, 48048), (20, 47955),

Gene: Texage_82 Start: 47228, Stop: 47064, Start Num: 16
Candidate Starts for Texage_82:
(10, 47288), (Start: 16 @47228 has 29 MA's), (20, 47114),

Gene: Thanksgivukkah_81 Start: 48064, Stop: 47894, Start Num: 17
Candidate Starts for Thanksgivukkah_81:
(Start: 17 @48064 has 118 MA's), (19, 48040),

Gene: TinaFeyge_80 Start: 48061, Stop: 47891, Start Num: 17
Candidate Starts for TinaFeyge_80:
(Start: 17 @48061 has 118 MA's), (19, 48037), (20, 47944),

Gene: Tinybot_81 Start: 48093, Stop: 47923, Start Num: 17
Candidate Starts for Tinybot_81:
(Start: 17 @48093 has 118 MA's), (19, 48069), (20, 47976),

Gene: TiroTheta9_81 Start: 48060, Stop: 47890, Start Num: 17
Candidate Starts for TiroTheta9_81:
(Start: 17 @48060 has 118 MA's), (19, 48036), (20, 47943),

Gene: Todacoro_84 Start: 47227, Stop: 47063, Start Num: 16
Candidate Starts for Todacoro_84:
(10, 47287), (Start: 16 @47227 has 29 MA's), (20, 47113),

Gene: Topanga_71 Start: 44568, Stop: 44395, Start Num: 16
Candidate Starts for Topanga_71:
(Start: 16 @44568 has 29 MA's), (Start: 17 @44544 has 118 MA's), (20, 44448),

Gene: TroyPia_83 Start: 48101, Stop: 47931, Start Num: 17
Candidate Starts for TroyPia_83:
(Start: 17 @48101 has 118 MA's), (19, 48077),

Gene: Twister_82 Start: 47776, Stop: 47606, Start Num: 16
Candidate Starts for Twister_82:
(15, 47794), (Start: 16 @47776 has 29 MA's), (Start: 17 @47752 has 118 MA's), (18, 47746), (20, 47656), (21, 47611),

Gene: Ulysses_81 Start: 47749, Stop: 47579, Start Num: 17
Candidate Starts for Ulysses_81:
(Start: 17 @47749 has 118 MA's), (19, 47725),

Gene: Veracruz_81 Start: 47228, Stop: 47064, Start Num: 16
Candidate Starts for Veracruz_81:
(10, 47288), (Start: 16 @47228 has 29 MA's), (20, 47114),

Gene: WalterMcMickey_81 Start: 47776, Stop: 47606, Start Num: 16
Candidate Starts for WalterMcMickey_81:
(15, 47794), (Start: 16 @47776 has 29 MA's), (Start: 17 @47752 has 118 MA's), (18, 47746), (20, 47656), (21, 47611),

Gene: Wander_82 Start: 48060, Stop: 47890, Start Num: 17
Candidate Starts for Wander_82:
(Start: 17 @48060 has 118 MA's), (19, 48036),

Gene: Wilbur_82 Start: 48063, Stop: 47893, Start Num: 17
Candidate Starts for Wilbur_82:
(Start: 17 @48063 has 118 MA's), (19, 48039),

Gene: Wile_77 Start: 47714, Stop: 47544, Start Num: 17
Candidate Starts for Wile_77:
(1, 48209), (3, 48107), (4, 48026), (Start: 17 @47714 has 118 MA's), (19, 47690),

Gene: Wizard007_78 Start: 47440, Stop: 47270, Start Num: 17
Candidate Starts for Wizard007_78:
(1, 47935), (3, 47833), (4, 47752), (Start: 17 @47440 has 118 MA's), (19, 47416), (20, 47323),

Gene: Xena_78 Start: 47885, Stop: 47715, Start Num: 17
Candidate Starts for Xena_78:
(Start: 17 @47885 has 118 MA's), (19, 47861), (20, 47768),

Gene: YoSam321_82 Start: 48061, Stop: 47891, Start Num: 17
Candidate Starts for YoSam321_82:
(Start: 17 @48061 has 118 MA's), (19, 48037), (20, 47944),