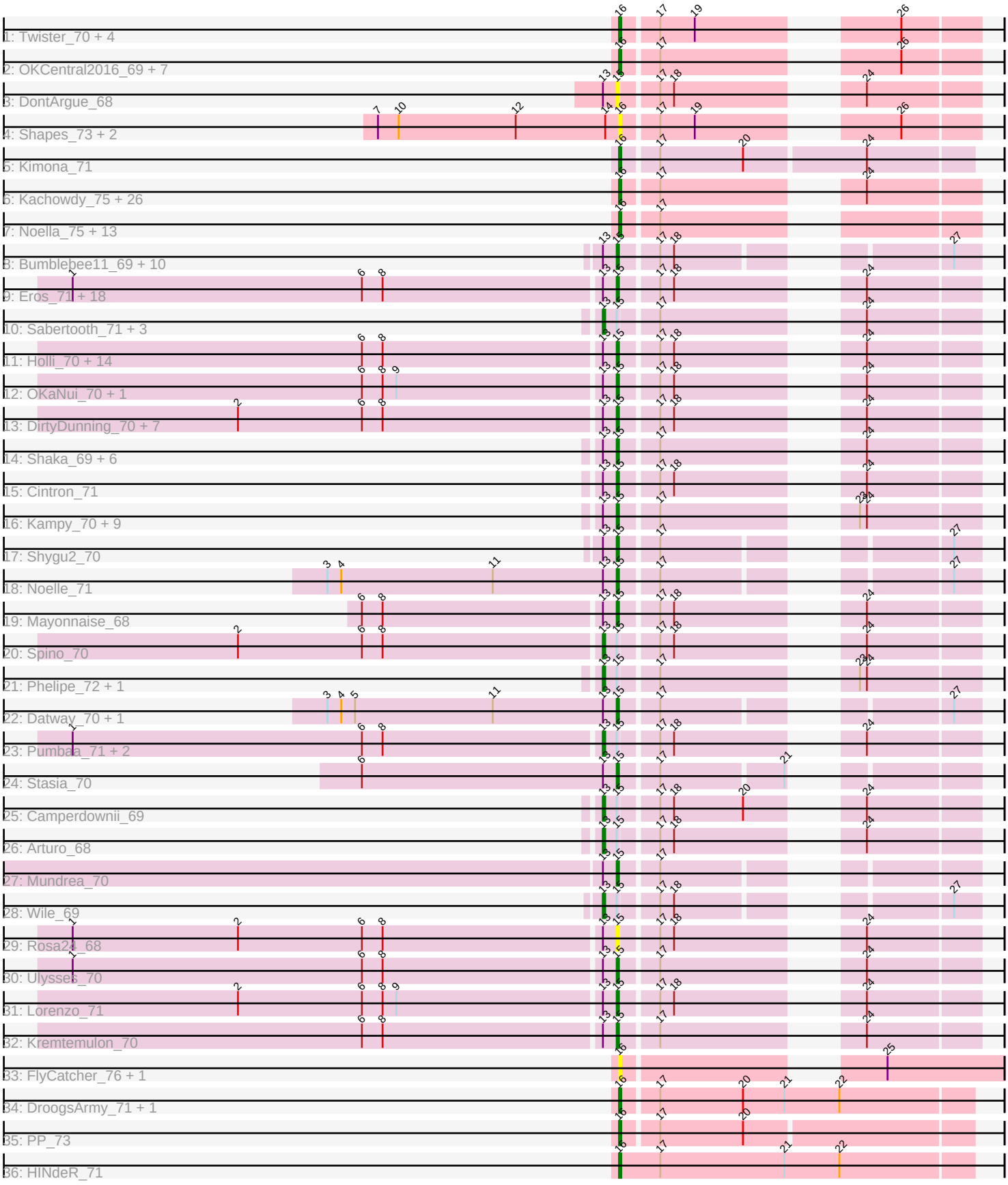
Pham 347328


1: Twister_70 + 4
2: OKCentral2016_69 + 7
3: DontArgue_68
4: Shapes_73 + 2
5: Kimona_71
6: Kachowdy_75 + 26
7: Noella_75 + 13
8: Bumblebee11_69 + 10
9: Eros_71 + 18
10: Sabertooth_71 + 3
11: Holli_70 + 14
12: OKaNui_70 + 1
13: DirtyDunning_70 + 7
14: Shaka_69 + 6
15: Cintron_71
16: Kampy_70 + 9
17: Shygu2_70
18: Noelle_71
19: Mayonnaise_68
20: Spino_70
21: Phelipe_72 + 1
22: Datway_70 + 1
23: Pumbaa_71 + 2
24: Stasia_70
25: Camperdownii_69
26: Arturo_68
27: Mundrea_70
28: Wile_69
29: Rosa24_68
30: Ulysses_70
31: Lorenzo_71
32: Kremtemulon_70
33: FlyCatcher_76 + 1
34: DroogsArmy_71 + 1
35: PP_73
36: HINdeR_71

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 347328 Report

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

Pham number 347328 has 162 members, 20 are drafts.

Phages represented in each track:
• Track 1 : Twister_70, Edison31_68, WalterMcMickey_70, Rebeuca_72, Kristoff_70
• Track 2 : OKCentral2016_69, Severus_69, Chupacabra_69, Poompha_68, Drake94_69, Goose_72, KittenMittens_68, PeaceMeal1_69
• Track 3 : DontArgue_68
• Track 4 : Shapes_73, DustyMartin_73, Rowdy_73
• Track 5 : Kimona_71
• Track 6 : Kachowdy_75, JF2_72, Giroux_77, Pistachio_75, BlueBird_77, BabyRay_75, Idleandcovert_75, HelDan_74, JF4_72, Goose1D_66, DropBear_75, Isca_72, Phantastic_76, Shep_72, Roimos_72, Marchesa_73, B1_66, Bugatti_77, MA5_74, Puppy_75, Fred313_72, TNguyen7_75, SaturnRing_74, Clammy_76, Zarafa_72, Heathen_74, Scout_73
• Track 7 : Noella_75, EtoileNova_72, Pocahontas_73, QuinnKiro_73, Veracruz_71, Panamaxus_72, ResDef_72, Texage_72, Norbert_70, Lambert1_74, Hookmount_74, Popcicle_74, Margo_74, Todacoro_74
• Track 8 : Bumblebee11_69, AbbysRanger_70, Perplexer_70, Cici_70, Achebe_69, Morpher26_70, Backyardigan_68, Wizard007_70, PetiteSangsue_70, Katalie136_70, Badger_69
• Track 9 : Eros_71, NorthStar_69, Iceman_70, Skadoosh_69, SenorClean_72, Jaykayelowell_68, Connomayer_71, Taquarus_70, Skipitt_70, TygerBlood_71, SteMason_71, Albee_71, Koreni_70, Pipcraft_68, Scamp_71, Flux_71, LittleB_71, Lunsford_71, Chaph_71
• Track 10 : Sabertooth_71, BangNhom_69, LHTSCC_73, ChampagnePapi_73
• Track 11 : Holli_70, Buckaroo_67, TiroTheta9_70, Kingmustik0402_71, Northrop_68, Rocksand_68, KekoraPapaka_68, Koan_68, Deano_68, Roosevelt_69, Florean_71, Alberto7_72, Citius_71, Junimo_67, Baby16_71
• Track 12 : OKaNui_70, Phontbonne_71
• Track 13 : DirtyDunning_70, LochMonster_72, Mazhar510_71, PeterPeter_71, Kyee_71, Nemo27_70, Tinybot_70, Phighter1804_71
• Track 14 : Shaka_69, Obama12_72, Happiness_70, SheldonCooper_71, JetBlade_71, Cindaradix_67, Cerulean_72
• Track 15 : Cintron_71
• Track 16 : Kampy_70, Eagle_70, Ohfah_72, TroyPia_72, LeoAvram_70, CentreCat_71, Polymorphads_71, Maxo_73, Eurydice_72, Nebs_72
• Track 17 : Shygu2_70
• Track 18 : Noelle_71
• Track 19 : Mayonnaise_68
• Track 20 : Spino_70

• Track 21 : Phelipe_72, BellusTerra_72
• Track 22 : Datway_70, Xena_69
• Track 23 : Pumbaa_71, YoSam321_71, Relief_70
• Track 24 : Stasia_70
• Track 25 : Camperdownii_69
• Track 26 : Arturo_68
• Track 27 : Mundrea_70
• Track 28 : Wile_69
• Track 29 : Rosa24_68
• Track 30 : Ulysses_70
• Track 31 : Lorenzo_71
• Track 32 : Kremtemulon_70
• Track 33 : FlyCatcher_76, Toro_74
• Track 34 : DroogsArmy_71, Timshel_72
• Track 35 : PP_73
• Track 36 : HINdeR_71

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

The start number called the most often in the published annotations is 15, it was called in 77 of the 142 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbysRanger_70, Achebe_69, Albee_71, Alberto7_72, Baby16_71, Backyardigan_68, Badger_69, Buckaroo_67, Bumblebee11_69, CentreCat_71, Cerulean_72, Chaph_71, Cici_70, Cindaradix_67, Cintron_71, Citius_71, Connomayer_71, Datway_70, Deano_68, DirtyDunning_70, DontArgue_68, Eagle_70, Eros_71, Eurydice_72, Florean_71, Flux_71, Happiness_70, Holli_70, Iceman_70, Jaykayelowell_68, JetBlade_71, Junimo_67, Kampy_70, Katalie136_70, KekoraPapaka_68, Kingmustik0402_71, Koan_68, Koreni_70, Kremtemulon_70, Kyee_71, LeoAvram_70, LittleB_71, LochMonster_72, Lorenzo_71, Lunsford_71, Maxo_73, Mayonnaise_68, Mazhar510_71, Morpher26_70, Mundrea_70, Nebs_72, Nemo27_70, Noelle_71, NorthStar_69, Northrop_68, OKaNui_70, Obama12_72, Ohfah_72, Perplexer_70, PeterPeter_71, PetiteSangsue_70, Phighter1804_71, Phontbonne_71, Pipcraft_68, Polymorphads_71, Rocksand_68, Roosevelt_69, Rosa24_68, Scamp_71, SenorClean_72, Shaka_69, SheldonCooper_71, Shygu2_70, Skadoosh_69, Skipitt_70, Stasia_70, SteMason_71, Taquarus_70, Tinybot_70, TiroTheta9_70, TroyPia_72, TygerBlood_71, Ulysses_70, Wizard007_70, Xena_69,

Genes that have the "Most Annotated" start but do not call it:
• Arturo_68, BangNhom_69, BellusTerra_72, Camperdownii_69, ChampagnePapi_73, LHTSCC_73, Phelipe_72, Pumbaa_71, Relief_70, Sabertooth_71, Spino_70, Wile_69, YoSam321_71,

Genes that do not have the "Most Annotated" start:
• B1_66, BabyRay_75, BlueBird_77, Bugatti_77, Chupacabra_69, Clammy_76, Drake94_69, DroogsArmy_71, DropBear_75, DustyMartin_73, Edison31_68, EtoileNova_72, FlyCatcher_76, Fred313_72, Giroux_77, Goose1D_66, Goose_72, HINdeR_71, Heathen_74, HelDan_74, Hookmount_74, Idleandcovert_75, Isca_72,

JF2_72, JF4_72, Kachowdy_75, Kimona_71, KittenMittens_68, Kristoff_70, Lambert1_74, MA5_74, Marchesa_73, Margo_74, Noella_75, Norbert_70, OKCentral2016_69, PP_73, Panamaxus_72, PeaceMeal1_69, Phantastic_76, Pistachio_75, Pocahontas_73, Poompha_68, Popcicle_74, Puppy_75, QuinnKiro_73, Rebeuca_72, ResDef_72, Roimos_72, Rowdy_73, SaturnRing_74, Scout_73, Severus_69, Shapes_73, Shep_72, TNguyen7_75, Texage_72, Timshel_72, Todacoro_74, Toro_74, Twister_70, Veracruz_71, WalterMcMickey_70, Zarafa_72,

Summary by start number:

Start 13:
• Found in 98 of 162 (60.5%) of genes in pham
• Manual Annotations of this start: 13 of 142
• Called 13.3% 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), Wile_69 (A4), YoSam321_71 (A4),

Start 15:
• Found in 98 of 162 (60.5%) of genes in pham
• Manual Annotations of this start: 77 of 142
• Called 86.7% of time when present
• Phage (with cluster) where this start called: AbbysRanger_70 (A4), Achebe_69 (A4), Albee_71 (A4), Alberto7_72 (A4), Baby16_71 (A4), Backyardigan_68 (A4), Badger_69 (A4), Buckaroo_67 (A4), Bumblebee11_69 (A4), CentreCat_71 (A4), Cerulean_72 (A4), Chaph_71 (A4), Cici_70 (A4), Cindaradix_67 (A4), Cintron_71 (A4), Citius_71 (A4), Connomayer_71 (A4), Datway_70 (A4), Deano_68 (A4), DirtyDunning_70 (A4), DontArgue_68 (A10), Eagle_70 (A4), Eros_71 (A4), Eurydice_72 (A4), Florean_71 (A4), Flux_71 (A4), Happiness_70 (A4), Holli_70 (A4), Iceman_70 (A4), Jaykayelowell_68 (A4), JetBlade_71 (A4), Junimo_67 (A4), Kampy_70 (A4), Katalie136_70 (A4), KekoraPapaka_68 (A4), Kingmustik0402_71 (A4), Koan_68 (A4), Koreni_70 (A4), Kremtemulon_70 (A4), Kyee_71 (A4), LeoAvram_70 (A4), LittleB_71 (A4), LochMonster_72 (A4), Lorenzo_71 (A4), Lunsford_71 (A4), Maxo_73 (A4), Mayonnaise_68 (A4), Mazhar510_71 (A4), Morpher26_70 (A4), Mundrea_70 (A4), Nebs_72 (A4), Nemo27_70 (A4), Noelle_71 (A4), NorthStar_69 (A4), Northrop_68 (A4), OKaNui_70 (A4), Obama12_72 (A4), Ohfah_72 (A4), Perplexer_70 (A4), PeterPeter_71 (A4), PetiteSangsue_70 (A4), Phighter1804_71 (A4), Phontbonne_71 (A4), Pipcraft_68 (A4), Polymorphads_71 (A4), Rocksand_68 (A4), Roosevelt_69 (A4), Rosa24_68 (A4), Scamp_71 (A4), SenorClean_72 (A4), Shaka_69 (A4), SheldonCooper_71 (A4), Shygu2_70 (A4), Skadoosh_69 (A4), Skipitt_70 (A4), Stasia_70 (A4), SteMason_71 (A4), Taquarus_70 (A4), Tinybot_70 (A4), TiroTheta9_70 (A4), TroyPia_72 (A4), TygerBlood_71 (A4), Ulysses_70 (A4), Wizard007_70 (A4), Xena_69 (A4),

Start 16:
• Found in 64 of 162 (39.5%) of genes in pham
• Manual Annotations of this start: 52 of 142
• Called 100.0% of time when present
• Phage (with cluster) where this start called: B1_66 (A3), BabyRay_75 (A3), BlueBird_77 (A3), Bugatti_77 (A3), Chupacabra_69 (A10), Clammy_76 (A3), Drake94_69 (A10), DroogsArmy_71 (A7), DropBear_75 (A3), DustyMartin_73 (A10), Edison31_68 (A10), EtoileNova_72 (A3), FlyCatcher_76 (A7), Fred313_72 (A3),

Giroux_77 (A3), Goose1D_66 (A3), Goose_72 (A10), HINdeR_71 (A7), Heathen_74 (A3), HelDan_74 (A3), Hookmount_74 (A3), Idleandcovert_75 (A3), Isca_72 (A3), JF2_72 (A3), JF4_72 (A3), Kachowdy_75 (A3), Kimona_71 (A19), KittenMittens_68 (A10), Kristoff_70 (A10), Lambert1_74 (A3), MA5_74 (A3), Marchesa_73 (A3), Margo_74 (A3), Noella_75 (A3), Norbert_70 (A3), OKCentral2016_69 (A10), PP_73 (A7), Panamaxus_72 (A3), PeaceMeal1_69 (A10), Phantastic_76 (A3), Pistachio_75 (A3), Pocahontas_73 (A3), Poompha_68 (A10), Popcicle_74 (A3), Puppy_75 (A3), QuinnKiro_73 (A3), Rebeuca_72 (A10), ResDef_72 (A3), Roimos_72 (A3), Rowdy_73 (A10), SaturnRing_74 (A3), Scout_73 (A3), Severus_69 (A10), Shapes_73 (A10), Shep_72 (A3), TNguyen7_75 (A3), Texage_72 (A3), Timshel_72 (A7), Todacoro_74 (A3), Toro_74 (A7), Twister_70 (A10), Veracruz_71 (A3), WalterMcMickey_70 (A10), Zarafa_72 (A3),

Summary by clusters:

There are 5 clusters represented in this pham: A3, A19, A4, A7, A10,

Info for manual annotations of cluster A10:
•Start number 16 was manually annotated 13 times for cluster A10.

Info for manual annotations of cluster A19:
•Start number 16 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:
•Start number 16 was manually annotated 34 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 13 was manually annotated 13 times for cluster A4.
•Start number 15 was manually annotated 77 times for cluster A4.

Info for manual annotations of cluster A7:
•Start number 16 was manually annotated 4 times for cluster A7.

Gene Information:

Gene: AbbysRanger_70 Start: 44685, Stop: 44563, Start Num: 15
Candidate Starts for AbbysRanger_70:
(Start: 13 @44691 has 13 MA's), (Start: 15 @44685 has 77 MA's), (17, 44670), (18, 44664), (27, 44574),

Gene: Achebe_69 Start: 44668, Stop: 44546, Start Num: 15
Candidate Starts for Achebe_69:
(Start: 13 @44674 has 13 MA's), (Start: 15 @44668 has 77 MA's), (17, 44653), (18, 44647), (27, 44557),

Gene: Albee_71 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Albee_71:
(1, 44744), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Alberto7_72 Start: 44847, Stop: 44719, Start Num: 15

Candidate Starts for Alberto7_72:
(6, 44955), (8, 44946), (Start: 13 @44853 has 13 MA's), (Start: 15 @44847 has 77 MA's), (17, 44832), (18, 44826), (24, 44766),

Gene: Arturo_68 Start: 44641, Stop: 44507, Start Num: 13
Candidate Starts for Arturo_68:
(Start: 13 @44641 has 13 MA's), (Start: 15 @44635 has 77 MA's), (17, 44620), (18, 44614), (24, 44554),

Gene: B1_66 Start: 43265, Stop: 43137, Start Num: 16
Candidate Starts for B1_66:
(Start: 16 @43265 has 52 MA's), (17, 43250), (24, 43184),

Gene: Baby16_71 Start: 44521, Stop: 44393, Start Num: 15
Candidate Starts for Baby16_71:
(6, 44629), (8, 44620), (Start: 13 @44527 has 13 MA's), (Start: 15 @44521 has 77 MA's), (17, 44506), (18, 44500), (24, 44440),

Gene: BabyRay_75 Start: 45018, Stop: 44890, Start Num: 16
Candidate Starts for BabyRay_75:
(Start: 16 @45018 has 52 MA's), (17, 45003), (24, 44937),

Gene: Backyardigan_68 Start: 44701, Stop: 44579, Start Num: 15
Candidate Starts for Backyardigan_68:
(Start: 13 @44707 has 13 MA's), (Start: 15 @44701 has 77 MA's), (17, 44686), (18, 44680), (27, 44590),

Gene: Badger_69 Start: 44669, Stop: 44547, Start Num: 15
Candidate Starts for Badger_69:
(Start: 13 @44675 has 13 MA's), (Start: 15 @44669 has 77 MA's), (17, 44654), (18, 44648), (27, 44558),

Gene: BangNhom_69 Start: 44950, Stop: 44816, Start Num: 13
Candidate Starts for BangNhom_69:
(Start: 13 @44950 has 13 MA's), (Start: 15 @44944 has 77 MA's), (17, 44929), (24, 44863),

Gene: BellusTerra_72 Start: 44554, Stop: 44420, Start Num: 13
Candidate Starts for BellusTerra_72:
(Start: 13 @44554 has 13 MA's), (Start: 15 @44548 has 77 MA's), (17, 44533), (23, 44470), (24, 44467),

Gene: BlueBird_77 Start: 45089, Stop: 44961, Start Num: 16
Candidate Starts for BlueBird_77:
(Start: 16 @45089 has 52 MA's), (17, 45074), (24, 45008),

Gene: Buckaroo_67 Start: 44514, Stop: 44386, Start Num: 15
Candidate Starts for Buckaroo_67:
(6, 44622), (8, 44613), (Start: 13 @44520 has 13 MA's), (Start: 15 @44514 has 77 MA's), (17, 44499), (18, 44493), (24, 44433),

Gene: Bugatti_77 Start: 45089, Stop: 44961, Start Num: 16
Candidate Starts for Bugatti_77:
(Start: 16 @45089 has 52 MA's), (17, 45074), (24, 45008),

Gene: Bumblebee11_69 Start: 44671, Stop: 44549, Start Num: 15
Candidate Starts for Bumblebee11_69:
(Start: 13 @44677 has 13 MA's), (Start: 15 @44671 has 77 MA's), (17, 44656), (18, 44650), (27, 44560),

Gene: Camperdownii_69 Start: 44185, Stop: 44051, Start Num: 13
Candidate Starts for Camperdownii_69:
(Start: 13 @44185 has 13 MA's), (Start: 15 @44179 has 77 MA's), (17, 44164), (18, 44158), (20, 44128), (24, 44098),

Gene: CentreCat_71 Start: 44547, Stop: 44419, Start Num: 15
Candidate Starts for CentreCat_71:
(Start: 13 @44553 has 13 MA's), (Start: 15 @44547 has 77 MA's), (17, 44532), (23, 44469), (24, 44466),

Gene: Cerulean_72 Start: 44945, Stop: 44817, Start Num: 15
Candidate Starts for Cerulean_72:
(Start: 13 @44951 has 13 MA's), (Start: 15 @44945 has 77 MA's), (17, 44930), (24, 44864),

Gene: ChampagnePapi_73 Start: 44950, Stop: 44816, Start Num: 13
Candidate Starts for ChampagnePapi_73:
(Start: 13 @44950 has 13 MA's), (Start: 15 @44944 has 77 MA's), (17, 44929), (24, 44863),

Gene: Chaph_71 Start: 44521, Stop: 44393, Start Num: 15
Candidate Starts for Chaph_71:
(1, 44755), (6, 44629), (8, 44620), (Start: 13 @44527 has 13 MA's), (Start: 15 @44521 has 77 MA's), (17, 44506), (18, 44500), (24, 44440),

Gene: Chupacabra_69 Start: 44351, Stop: 44223, Start Num: 16
Candidate Starts for Chupacabra_69:
(Start: 16 @44351 has 52 MA's), (17, 44336), (26, 44255),

Gene: Cici_70 Start: 44686, Stop: 44564, Start Num: 15
Candidate Starts for Cici_70:
(Start: 13 @44692 has 13 MA's), (Start: 15 @44686 has 77 MA's), (17, 44671), (18, 44665), (27, 44575),

Gene: Cindaradix_67 Start: 44408, Stop: 44280, Start Num: 15
Candidate Starts for Cindaradix_67:
(Start: 13 @44414 has 13 MA's), (Start: 15 @44408 has 77 MA's), (17, 44393), (24, 44327),

Gene: Cintron_71 Start: 44658, Stop: 44530, Start Num: 15
Candidate Starts for Cintron_71:
(Start: 13 @44664 has 13 MA's), (Start: 15 @44658 has 77 MA's), (17, 44643), (18, 44637), (24, 44577),

Gene: Citius_71 Start: 44531, Stop: 44403, Start Num: 15
Candidate Starts for Citius_71:
(6, 44639), (8, 44630), (Start: 13 @44537 has 13 MA's), (Start: 15 @44531 has 77 MA's), (17, 44516), (18, 44510), (24, 44450),

Gene: Clammy_76 Start: 45089, Stop: 44961, Start Num: 16

Candidate Starts for Clammy_76:
(Start: 16 @45089 has 52 MA's), (17, 45074), (24, 45008),

Gene: Connomayer_71 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Connomayer_71:
(1, 44744), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Datway_70 Start: 44680, Stop: 44558, Start Num: 15
Candidate Starts for Datway_70:
(3, 44806), (4, 44800), (5, 44794), (11, 44734), (Start: 13 @44686 has 13 MA's), (Start: 15 @44680 has 77 MA's), (17, 44665), (27, 44569),

Gene: Deano_68 Start: 44518, Stop: 44390, Start Num: 15
Candidate Starts for Deano_68:
(6, 44626), (8, 44617), (Start: 13 @44524 has 13 MA's), (Start: 15 @44518 has 77 MA's), (17, 44503), (18, 44497), (24, 44437),

Gene: DirtyDunning_70 Start: 44522, Stop: 44394, Start Num: 15
Candidate Starts for DirtyDunning_70:
(2, 44684), (6, 44630), (8, 44621), (Start: 13 @44528 has 13 MA's), (Start: 15 @44522 has 77 MA's), (17, 44507), (18, 44501), (24, 44441),

Gene: DontArgue_68 Start: 43342, Stop: 43214, Start Num: 15
Candidate Starts for DontArgue_68:
(Start: 13 @43348 has 13 MA's), (Start: 15 @43342 has 77 MA's), (17, 43327), (18, 43321), (24, 43261),

Gene: Drake94_69 Start: 43482, Stop: 43354, Start Num: 16
Candidate Starts for Drake94_69:
(Start: 16 @43482 has 52 MA's), (17, 43467), (26, 43386),

Gene: DroogsArmy_71 Start: 47818, Stop: 47669, Start Num: 16
Candidate Starts for DroogsArmy_71:
(Start: 16 @47818 has 52 MA's), (17, 47803), (20, 47767), (21, 47749), (22, 47725),

Gene: DropBear_75 Start: 45013, Stop: 44885, Start Num: 16
Candidate Starts for DropBear_75:
(Start: 16 @45013 has 52 MA's), (17, 44998), (24, 44932),

Gene: DustyMartin_73 Start: 44495, Stop: 44367, Start Num: 16
Candidate Starts for DustyMartin_73:
(7, 44600), (10, 44591), (12, 44540), (14, 44501), (Start: 16 @44495 has 52 MA's), (17, 44480), (19, 44465), (26, 44399),

Gene: Eagle_70 Start: 44569, Stop: 44441, Start Num: 15
Candidate Starts for Eagle_70:
(Start: 13 @44575 has 13 MA's), (Start: 15 @44569 has 77 MA's), (17, 44554), (23, 44491), (24, 44488),

Gene: Edison31_68 Start: 44218, Stop: 44090, Start Num: 16
Candidate Starts for Edison31_68:
(Start: 16 @44218 has 52 MA's), (17, 44203), (19, 44188), (26, 44122),

Gene: Eros_71 Start: 44512, Stop: 44384, Start Num: 15
Candidate Starts for Eros_71:
(1, 44746), (6, 44620), (8, 44611), (Start: 13 @44518 has 13 MA's), (Start: 15 @44512 has 77 MA's), (17, 44497), (18, 44491), (24, 44431),

Gene: EtoileNova_72 Start: 45046, Stop: 44918, Start Num: 16
Candidate Starts for EtoileNova_72:
(Start: 16 @45046 has 52 MA's), (17, 45031),

Gene: Eurydice_72 Start: 44544, Stop: 44416, Start Num: 15
Candidate Starts for Eurydice_72:
(Start: 13 @44550 has 13 MA's), (Start: 15 @44544 has 77 MA's), (17, 44529), (23, 44466), (24, 44463),

Gene: Florean_71 Start: 44509, Stop: 44381, Start Num: 15
Candidate Starts for Florean_71:
(6, 44617), (8, 44608), (Start: 13 @44515 has 13 MA's), (Start: 15 @44509 has 77 MA's), (17, 44494), (18, 44488), (24, 44428),

Gene: Flux_71 Start: 44508, Stop: 44380, Start Num: 15
Candidate Starts for Flux_71:
(1, 44742), (6, 44616), (8, 44607), (Start: 13 @44514 has 13 MA's), (Start: 15 @44508 has 77 MA's), (17, 44493), (18, 44487), (24, 44427),

Gene: FlyCatcher_76 Start: 48604, Stop: 48464, Start Num: 16
Candidate Starts for FlyCatcher_76:
(Start: 16 @48604 has 52 MA's), (25, 48514),

Gene: Fred313_72 Start: 44707, Stop: 44579, Start Num: 16
Candidate Starts for Fred313_72:
(Start: 16 @44707 has 52 MA's), (17, 44692), (24, 44626),

Gene: Giroux_77 Start: 45088, Stop: 44960, Start Num: 16
Candidate Starts for Giroux_77:
(Start: 16 @45088 has 52 MA's), (17, 45073), (24, 45007),

Gene: Goose_72 Start: 44162, Stop: 44034, Start Num: 16
Candidate Starts for Goose_72:
(Start: 16 @44162 has 52 MA's), (17, 44147), (26, 44066),

Gene: Goose1D_66 Start: 41188, Stop: 41060, Start Num: 16
Candidate Starts for Goose1D_66:
(Start: 16 @41188 has 52 MA's), (17, 41173), (24, 41107),

Gene: HINdeR_71 Start: 47193, Stop: 47041, Start Num: 16
Candidate Starts for HINdeR_71:
(Start: 16 @47193 has 52 MA's), (17, 47175), (21, 47121), (22, 47097),

Gene: Happiness_70 Start: 44527, Stop: 44399, Start Num: 15
Candidate Starts for Happiness_70:
(Start: 13 @44533 has 13 MA's), (Start: 15 @44527 has 77 MA's), (17, 44512), (24, 44446),

Gene: Heathen_74 Start: 44802, Stop: 44674, Start Num: 16
Candidate Starts for Heathen_74:
(Start: 16 @44802 has 52 MA's), (17, 44787), (24, 44721),

Gene: HelDan_74 Start: 45018, Stop: 44890, Start Num: 16
Candidate Starts for HelDan_74:
(Start: 16 @45018 has 52 MA's), (17, 45003), (24, 44937),

Gene: Holli_70 Start: 44300, Stop: 44172, Start Num: 15
Candidate Starts for Holli_70:
(6, 44408), (8, 44399), (Start: 13 @44306 has 13 MA's), (Start: 15 @44300 has 77 MA's), (17, 44285), (18, 44279), (24, 44219),

Gene: Hookmount_74 Start: 45042, Stop: 44914, Start Num: 16
Candidate Starts for Hookmount_74:
(Start: 16 @45042 has 52 MA's), (17, 45027),

Gene: Iceman_70 Start: 44800, Stop: 44672, Start Num: 15
Candidate Starts for Iceman_70:
(1, 45034), (6, 44908), (8, 44899), (Start: 13 @44806 has 13 MA's), (Start: 15 @44800 has 77 MA's), (17, 44785), (18, 44779), (24, 44719),

Gene: Idleandcovert_75 Start: 45089, Stop: 44961, Start Num: 16
Candidate Starts for Idleandcovert_75:
(Start: 16 @45089 has 52 MA's), (17, 45074), (24, 45008),

Gene: Isca_72 Start: 44569, Stop: 44441, Start Num: 16
Candidate Starts for Isca_72:
(Start: 16 @44569 has 52 MA's), (17, 44554), (24, 44488),

Gene: JF2_72 Start: 43265, Stop: 43137, Start Num: 16
Candidate Starts for JF2_72:
(Start: 16 @43265 has 52 MA's), (17, 43250), (24, 43184),

Gene: JF4_72 Start: 43265, Stop: 43137, Start Num: 16
Candidate Starts for JF4_72:
(Start: 16 @43265 has 52 MA's), (17, 43250), (24, 43184),

Gene: Jaykayelowell_68 Start: 44503, Stop: 44375, Start Num: 15
Candidate Starts for Jaykayelowell_68:
(1, 44737), (6, 44611), (8, 44602), (Start: 13 @44509 has 13 MA's), (Start: 15 @44503 has 77 MA's), (17, 44488), (18, 44482), (24, 44422),

Gene: JetBlade_71 Start: 44535, Stop: 44407, Start Num: 15
Candidate Starts for JetBlade_71:
(Start: 13 @44541 has 13 MA's), (Start: 15 @44535 has 77 MA's), (17, 44520), (24, 44454),

Gene: Junimo_67 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Junimo_67:
(6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Kachowdy_75 Start: 45054, Stop: 44926, Start Num: 16

Candidate Starts for Kachowdy_75:
(Start: 16 @45054 has 52 MA's), (17, 45039), (24, 44973),

Gene: Kampy_70 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Kampy_70:
(Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (23, 44432), (24, 44429),

Gene: Katalie136_70 Start: 44671, Stop: 44549, Start Num: 15
Candidate Starts for Katalie136_70:
(Start: 13 @44677 has 13 MA's), (Start: 15 @44671 has 77 MA's), (17, 44656), (18, 44650), (27, 44560),

Gene: KekoraPapaka_68 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for KekoraPapaka_68:
(6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Kimona_71 Start: 43589, Stop: 43443, Start Num: 16
Candidate Starts for Kimona_71:
(Start: 16 @43589 has 52 MA's), (17, 43574), (20, 43538), (24, 43487),

Gene: Kingmustik0402_71 Start: 44499, Stop: 44371, Start Num: 15
Candidate Starts for Kingmustik0402_71:
(6, 44607), (8, 44598), (Start: 13 @44505 has 13 MA's), (Start: 15 @44499 has 77 MA's), (17, 44484), (18, 44478), (24, 44418),

Gene: KittenMittens_68 Start: 43490, Stop: 43362, Start Num: 16
Candidate Starts for KittenMittens_68:
(Start: 16 @43490 has 52 MA's), (17, 43475), (26, 43394),

Gene: Koan_68 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Koan_68:
(6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Koreni_70 Start: 44191, Stop: 44063, Start Num: 15
Candidate Starts for Koreni_70:
(1, 44425), (6, 44299), (8, 44290), (Start: 13 @44197 has 13 MA's), (Start: 15 @44191 has 77 MA's), (17, 44176), (18, 44170), (24, 44110),

Gene: Kremtemulon_70 Start: 44643, Stop: 44515, Start Num: 15
Candidate Starts for Kremtemulon_70:
(6, 44751), (8, 44742), (Start: 13 @44649 has 13 MA's), (Start: 15 @44643 has 77 MA's), (17, 44628), (24, 44562),

Gene: Kristoff_70 Start: 44796, Stop: 44668, Start Num: 16
Candidate Starts for Kristoff_70:
(Start: 16 @44796 has 52 MA's), (17, 44781), (19, 44766), (26, 44700),

Gene: Kyee_71 Start: 44505, Stop: 44377, Start Num: 15
Candidate Starts for Kyee_71:

(2, 44667), (6, 44613), (8, 44604), (Start: 13 @44511 has 13 MA's), (Start: 15 @44505 has 77 MA's), (17, 44490), (18, 44484), (24, 44424),

Gene: LHTSCC_73 Start: 44950, Stop: 44816, Start Num: 13
Candidate Starts for LHTSCC_73:
(Start: 13 @44950 has 13 MA's), (Start: 15 @44944 has 77 MA's), (17, 44929), (24, 44863),

Gene: Lambert1_74 Start: 45043, Stop: 44915, Start Num: 16
Candidate Starts for Lambert1_74:
(Start: 16 @45043 has 52 MA's), (17, 45028),

Gene: LeoAvram_70 Start: 44538, Stop: 44410, Start Num: 15
Candidate Starts for LeoAvram_70:
(Start: 13 @44544 has 13 MA's), (Start: 15 @44538 has 77 MA's), (17, 44523), (23, 44460), (24, 44457),

Gene: LittleB_71 Start: 44511, Stop: 44383, Start Num: 15
Candidate Starts for LittleB_71:
(1, 44745), (6, 44619), (8, 44610), (Start: 13 @44517 has 13 MA's), (Start: 15 @44511 has 77 MA's), (17, 44496), (18, 44490), (24, 44430),

Gene: LochMonster_72 Start: 44746, Stop: 44618, Start Num: 15
Candidate Starts for LochMonster_72:
(2, 44908), (6, 44854), (8, 44845), (Start: 13 @44752 has 13 MA's), (Start: 15 @44746 has 77 MA's), (17, 44731), (18, 44725), (24, 44665),

Gene: Lorenzo_71 Start: 44508, Stop: 44380, Start Num: 15
Candidate Starts for Lorenzo_71:
(2, 44670), (6, 44616), (8, 44607), (9, 44601), (Start: 13 @44514 has 13 MA's), (Start: 15 @44508 has 77 MA's), (17, 44493), (18, 44487), (24, 44427),

Gene: Lunsford_71 Start: 44503, Stop: 44375, Start Num: 15
Candidate Starts for Lunsford_71:
(1, 44737), (6, 44611), (8, 44602), (Start: 13 @44509 has 13 MA's), (Start: 15 @44503 has 77 MA's), (17, 44488), (18, 44482), (24, 44422),

Gene: MA5_74 Start: 44473, Stop: 44345, Start Num: 16
Candidate Starts for MA5_74:
(Start: 16 @44473 has 52 MA's), (17, 44458), (24, 44392),

Gene: Marchesa_73 Start: 45006, Stop: 44878, Start Num: 16
Candidate Starts for Marchesa_73:
(Start: 16 @45006 has 52 MA's), (17, 44991), (24, 44925),

Gene: Margo_74 Start: 45068, Stop: 44940, Start Num: 16
Candidate Starts for Margo_74:
(Start: 16 @45068 has 52 MA's), (17, 45053),

Gene: Maxo_73 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for Maxo_73:
(Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (23, 44432), (24, 44429),

Gene: Mayonnaise_68 Start: 44507, Stop: 44379, Start Num: 15
Candidate Starts for Mayonnaise_68:
(6, 44615), (8, 44606), (Start: 13 @44513 has 13 MA's), (Start: 15 @44507 has 77 MA's), (17, 44492), (18, 44486), (24, 44426),

Gene: Mazhar510_71 Start: 44508, Stop: 44380, Start Num: 15
Candidate Starts for Mazhar510_71:
(2, 44670), (6, 44616), (8, 44607), (Start: 13 @44514 has 13 MA's), (Start: 15 @44508 has 77 MA's), (17, 44493), (18, 44487), (24, 44427),

Gene: Morpher26_70 Start: 44692, Stop: 44570, Start Num: 15
Candidate Starts for Morpher26_70:
(Start: 13 @44698 has 13 MA's), (Start: 15 @44692 has 77 MA's), (17, 44677), (18, 44671), (27, 44581),

Gene: Mundrea_70 Start: 44689, Stop: 44567, Start Num: 15
Candidate Starts for Mundrea_70:
(Start: 13 @44695 has 13 MA's), (Start: 15 @44689 has 77 MA's), (17, 44674),

Gene: Nebs_72 Start: 44547, Stop: 44419, Start Num: 15
Candidate Starts for Nebs_72:
(Start: 13 @44553 has 13 MA's), (Start: 15 @44547 has 77 MA's), (17, 44532), (23, 44469), (24, 44466),

Gene: Nemo27_70 Start: 44506, Stop: 44378, Start Num: 15
Candidate Starts for Nemo27_70:
(2, 44668), (6, 44614), (8, 44605), (Start: 13 @44512 has 13 MA's), (Start: 15 @44506 has 77 MA's), (17, 44491), (18, 44485), (24, 44425),

Gene: Noella_75 Start: 45044, Stop: 44916, Start Num: 16
Candidate Starts for Noella_75:
(Start: 16 @45044 has 52 MA's), (17, 45029),

Gene: Noelle_71 Start: 45009, Stop: 44887, Start Num: 15
Candidate Starts for Noelle_71:
(3, 45135), (4, 45129), (11, 45063), (Start: 13 @45015 has 13 MA's), (Start: 15 @45009 has 77 MA's), (17, 44994), (27, 44898),

Gene: Norbert_70 Start: 45041, Stop: 44913, Start Num: 16
Candidate Starts for Norbert_70:
(Start: 16 @45041 has 52 MA's), (17, 45026),

Gene: NorthStar_69 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for NorthStar_69:
(1, 44744), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Northrop_68 Start: 44506, Stop: 44378, Start Num: 15
Candidate Starts for Northrop_68:
(6, 44614), (8, 44605), (Start: 13 @44512 has 13 MA's), (Start: 15 @44506 has 77 MA's), (17, 44491), (18, 44485), (24, 44425),

Gene: OKCentral2016_69 Start: 43589, Stop: 43461, Start Num: 16

Candidate Starts for OKCentral2016_69:
(Start: 16 @43589 has 52 MA's), (17, 43574), (26, 43493),

Gene: OKaNui_70 Start: 44560, Stop: 44432, Start Num: 15
Candidate Starts for OKaNui_70:
(6, 44668), (8, 44659), (9, 44653), (Start: 13 @44566 has 13 MA's), (Start: 15 @44560 has 77 MA's), (17, 44545), (18, 44539), (24, 44479),

Gene: Obama12_72 Start: 44928, Stop: 44800, Start Num: 15
Candidate Starts for Obama12_72:
(Start: 13 @44934 has 13 MA's), (Start: 15 @44928 has 77 MA's), (17, 44913), (24, 44847),

Gene: Ohfah_72 Start: 44547, Stop: 44419, Start Num: 15
Candidate Starts for Ohfah_72:
(Start: 13 @44553 has 13 MA's), (Start: 15 @44547 has 77 MA's), (17, 44532), (23, 44469), (24, 44466),

Gene: PP_73 Start: 49011, Stop: 48865, Start Num: 16
Candidate Starts for PP_73:
(Start: 16 @49011 has 52 MA's), (17, 48996), (20, 48960),

Gene: Panamaxus_72 Start: 45043, Stop: 44915, Start Num: 16
Candidate Starts for Panamaxus_72:
(Start: 16 @45043 has 52 MA's), (17, 45028),

Gene: PeaceMeal1_69 Start: 43491, Stop: 43363, Start Num: 16
Candidate Starts for PeaceMeal1_69:
(Start: 16 @43491 has 52 MA's), (17, 43476), (26, 43395),

Gene: Perplexer_70 Start: 44668, Stop: 44546, Start Num: 15
Candidate Starts for Perplexer_70:
(Start: 13 @44674 has 13 MA's), (Start: 15 @44668 has 77 MA's), (17, 44653), (18, 44647), (27, 44557),

Gene: PeterPeter_71 Start: 44504, Stop: 44376, Start Num: 15
Candidate Starts for PeterPeter_71:
(2, 44666), (6, 44612), (8, 44603), (Start: 13 @44510 has 13 MA's), (Start: 15 @44504 has 77 MA's), (17, 44489), (18, 44483), (24, 44423),

Gene: PetiteSangsue_70 Start: 44671, Stop: 44549, Start Num: 15
Candidate Starts for PetiteSangsue_70:
(Start: 13 @44677 has 13 MA's), (Start: 15 @44671 has 77 MA's), (17, 44656), (18, 44650), (27, 44560),

Gene: Phantastic_76 Start: 44730, Stop: 44602, Start Num: 16
Candidate Starts for Phantastic_76:
(Start: 16 @44730 has 52 MA's), (17, 44715), (24, 44649),

Gene: Phelipe_72 Start: 44553, Stop: 44419, Start Num: 13
Candidate Starts for Phelipe_72:
(Start: 13 @44553 has 13 MA's), (Start: 15 @44547 has 77 MA's), (17, 44532), (23, 44469), (24, 44466),

Gene: Phighter1804_71 Start: 44571, Stop: 44443, Start Num: 15
Candidate Starts for Phighter1804_71:
(2, 44733), (6, 44679), (8, 44670), (Start: 13 @44577 has 13 MA's), (Start: 15 @44571 has 77 MA's), (17, 44556), (18, 44550), (24, 44490),

Gene: Phontbonne_71 Start: 44405, Stop: 44277, Start Num: 15
Candidate Starts for Phontbonne_71:
(6, 44513), (8, 44504), (9, 44498), (Start: 13 @44411 has 13 MA's), (Start: 15 @44405 has 77 MA's), (17, 44390), (18, 44384), (24, 44324),

Gene: Pipcraft_68 Start: 44511, Stop: 44383, Start Num: 15
Candidate Starts for Pipcraft_68:
(1, 44745), (6, 44619), (8, 44610), (Start: 13 @44517 has 13 MA's), (Start: 15 @44511 has 77 MA's), (17, 44496), (18, 44490), (24, 44430),

Gene: Pistachio_75 Start: 44636, Stop: 44508, Start Num: 16
Candidate Starts for Pistachio_75:
(Start: 16 @44636 has 52 MA's), (17, 44621), (24, 44555),

Gene: Pocahontas_73 Start: 45039, Stop: 44911, Start Num: 16
Candidate Starts for Pocahontas_73:
(Start: 16 @45039 has 52 MA's), (17, 45024),

Gene: Polymorphads_71 Start: 44528, Stop: 44400, Start Num: 15
Candidate Starts for Polymorphads_71:
(Start: 13 @44534 has 13 MA's), (Start: 15 @44528 has 77 MA's), (17, 44513), (23, 44450), (24, 44447),

Gene: Poompha_68 Start: 43489, Stop: 43361, Start Num: 16
Candidate Starts for Poompha_68:
(Start: 16 @43489 has 52 MA's), (17, 43474), (26, 43393),

Gene: Popcicle_74 Start: 45039, Stop: 44911, Start Num: 16
Candidate Starts for Popcicle_74:
(Start: 16 @45039 has 52 MA's), (17, 45024),

Gene: Pumbaa_71 Start: 44461, Stop: 44327, Start Num: 13
Candidate Starts for Pumbaa_71:
(1, 44689), (6, 44563), (8, 44554), (Start: 13 @44461 has 13 MA's), (Start: 15 @44455 has 77 MA's), (17, 44440), (18, 44434), (24, 44374),

Gene: Puppy_75 Start: 44706, Stop: 44578, Start Num: 16
Candidate Starts for Puppy_75:
(Start: 16 @44706 has 52 MA's), (17, 44691), (24, 44625),

Gene: QuinnKiro_73 Start: 45042, Stop: 44914, Start Num: 16
Candidate Starts for QuinnKiro_73:
(Start: 16 @45042 has 52 MA's), (17, 45027),

Gene: Rebeuca_72 Start: 44797, Stop: 44669, Start Num: 16
Candidate Starts for Rebeuca_72:
(Start: 16 @44797 has 52 MA's), (17, 44782), (19, 44767), (26, 44701),

Gene: Relief_70 Start: 44513, Stop: 44379, Start Num: 13
Candidate Starts for Relief_70:
(1, 44741), (6, 44615), (8, 44606), (Start: 13 @44513 has 13 MA's), (Start: 15 @44507 has 77 MA's), (17, 44492), (18, 44486), (24, 44426),

Gene: ResDef_72 Start: 45045, Stop: 44917, Start Num: 16
Candidate Starts for ResDef_72:
(Start: 16 @45045 has 52 MA's), (17, 45030),

Gene: Rocksand_68 Start: 44506, Stop: 44378, Start Num: 15
Candidate Starts for Rocksand_68:
(6, 44614), (8, 44605), (Start: 13 @44512 has 13 MA's), (Start: 15 @44506 has 77 MA's), (17, 44491), (18, 44485), (24, 44425),

Gene: Roimos_72 Start: 44940, Stop: 44812, Start Num: 16
Candidate Starts for Roimos_72:
(Start: 16 @44940 has 52 MA's), (17, 44925), (24, 44859),

Gene: Roosevelt_69 Start: 44512, Stop: 44384, Start Num: 15
Candidate Starts for Roosevelt_69:
(6, 44620), (8, 44611), (Start: 13 @44518 has 13 MA's), (Start: 15 @44512 has 77 MA's), (17, 44497), (18, 44491), (24, 44431),

Gene: Rosa24_68 Start: 44538, Stop: 44410, Start Num: 15
Candidate Starts for Rosa24_68:
(1, 44772), (2, 44700), (6, 44646), (8, 44637), (Start: 13 @44544 has 13 MA's), (Start: 15 @44538 has 77 MA's), (17, 44523), (18, 44517), (24, 44457),

Gene: Rowdy_73 Start: 44495, Stop: 44367, Start Num: 16
Candidate Starts for Rowdy_73:
(7, 44600), (10, 44591), (12, 44540), (14, 44501), (Start: 16 @44495 has 52 MA's), (17, 44480), (19, 44465), (26, 44399),

Gene: Sabertooth_71 Start: 44518, Stop: 44384, Start Num: 13
Candidate Starts for Sabertooth_71:
(Start: 13 @44518 has 13 MA's), (Start: 15 @44512 has 77 MA's), (17, 44497), (24, 44431),

Gene: SaturnRing_74 Start: 45089, Stop: 44961, Start Num: 16
Candidate Starts for SaturnRing_74:
(Start: 16 @45089 has 52 MA's), (17, 45074), (24, 45008),

Gene: Scamp_71 Start: 44512, Stop: 44384, Start Num: 15
Candidate Starts for Scamp_71:
(1, 44746), (6, 44620), (8, 44611), (Start: 13 @44518 has 13 MA's), (Start: 15 @44512 has 77 MA's), (17, 44497), (18, 44491), (24, 44431),

Gene: Scout_73 Start: 44265, Stop: 44137, Start Num: 16
Candidate Starts for Scout_73:
(Start: 16 @44265 has 52 MA's), (17, 44250), (24, 44184),

Gene: SenorClean_72 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for SenorClean_72:

(1, 44744), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Severus_69 Start: 43489, Stop: 43361, Start Num: 16
Candidate Starts for Severus_69:
(Start: 16 @43489 has 52 MA's), (17, 43474), (26, 43393),

Gene: Shaka_69 Start: 44505, Stop: 44377, Start Num: 15
Candidate Starts for Shaka_69:
(Start: 13 @44511 has 13 MA's), (Start: 15 @44505 has 77 MA's), (17, 44490), (24, 44424),

Gene: Shapes_73 Start: 44495, Stop: 44367, Start Num: 16
Candidate Starts for Shapes_73:
(7, 44600), (10, 44591), (12, 44540), (14, 44501), (Start: 16 @44495 has 52 MA's), (17, 44480), (19, 44465), (26, 44399),

Gene: SheldonCooper_71 Start: 44945, Stop: 44817, Start Num: 15
Candidate Starts for SheldonCooper_71:
(Start: 13 @44951 has 13 MA's), (Start: 15 @44945 has 77 MA's), (17, 44930), (24, 44864),

Gene: Shep_72 Start: 44009, Stop: 43881, Start Num: 16
Candidate Starts for Shep_72:
(Start: 16 @44009 has 52 MA's), (17, 43994), (24, 43928),

Gene: Shygu2_70 Start: 44723, Stop: 44601, Start Num: 15
Candidate Starts for Shygu2_70:
(Start: 13 @44729 has 13 MA's), (Start: 15 @44723 has 77 MA's), (17, 44708), (27, 44612),

Gene: Skadoosh_69 Start: 44507, Stop: 44379, Start Num: 15
Candidate Starts for Skadoosh_69:
(1, 44741), (6, 44615), (8, 44606), (Start: 13 @44513 has 13 MA's), (Start: 15 @44507 has 77 MA's), (17, 44492), (18, 44486), (24, 44426),

Gene: Skipitt_70 Start: 44504, Stop: 44376, Start Num: 15
Candidate Starts for Skipitt_70:
(1, 44738), (6, 44612), (8, 44603), (Start: 13 @44510 has 13 MA's), (Start: 15 @44504 has 77 MA's), (17, 44489), (18, 44483), (24, 44423),

Gene: Spino_70 Start: 44516, Stop: 44382, Start Num: 13
Candidate Starts for Spino_70:
(2, 44672), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Stasia_70 Start: 44731, Stop: 44609, Start Num: 15
Candidate Starts for Stasia_70:
(6, 44842), (Start: 13 @44737 has 13 MA's), (Start: 15 @44731 has 77 MA's), (17, 44716), (21, 44665),

Gene: SteMason_71 Start: 44507, Stop: 44379, Start Num: 15
Candidate Starts for SteMason_71:
(1, 44741), (6, 44615), (8, 44606), (Start: 13 @44513 has 13 MA's), (Start: 15 @44507 has 77 MA's), (17, 44492), (18, 44486), (24, 44426),

Gene: TNguyen7_75 Start: 45047, Stop: 44919, Start Num: 16

Candidate Starts for TNguyen7_75:
(Start: 16 @45047 has 52 MA's), (17, 45032), (24, 44966),

Gene: Taquarus_70 Start: 44513, Stop: 44385, Start Num: 15
Candidate Starts for Taquarus_70:
(1, 44747), (6, 44621), (8, 44612), (Start: 13 @44519 has 13 MA's), (Start: 15 @44513 has 77 MA's), (17, 44498), (18, 44492), (24, 44432),

Gene: Texage_72 Start: 45043, Stop: 44915, Start Num: 16
Candidate Starts for Texage_72:
(Start: 16 @45043 has 52 MA's), (17, 45028),

Gene: Timshel_72 Start: 47629, Stop: 47480, Start Num: 16
Candidate Starts for Timshel_72:
(Start: 16 @47629 has 52 MA's), (17, 47614), (20, 47578), (21, 47560), (22, 47536),

Gene: Tinybot_70 Start: 44537, Stop: 44409, Start Num: 15
Candidate Starts for Tinybot_70:
(2, 44699), (6, 44645), (8, 44636), (Start: 13 @44543 has 13 MA's), (Start: 15 @44537 has 77 MA's), (17, 44522), (18, 44516), (24, 44456),

Gene: TiroTheta9_70 Start: 44504, Stop: 44376, Start Num: 15
Candidate Starts for TiroTheta9_70:
(6, 44612), (8, 44603), (Start: 13 @44510 has 13 MA's), (Start: 15 @44504 has 77 MA's), (17, 44489), (18, 44483), (24, 44423),

Gene: Todacoro_74 Start: 45042, Stop: 44914, Start Num: 16
Candidate Starts for Todacoro_74:
(Start: 16 @45042 has 52 MA's), (17, 45027),

Gene: Toro_74 Start: 48604, Stop: 48464, Start Num: 16
Candidate Starts for Toro_74:
(Start: 16 @48604 has 52 MA's), (25, 48514),

Gene: TroyPia_72 Start: 44542, Stop: 44414, Start Num: 15
Candidate Starts for TroyPia_72:
(Start: 13 @44548 has 13 MA's), (Start: 15 @44542 has 77 MA's), (17, 44527), (23, 44464), (24, 44461),

Gene: Twister_70 Start: 44343, Stop: 44215, Start Num: 16
Candidate Starts for Twister_70:
(Start: 16 @44343 has 52 MA's), (17, 44328), (19, 44313), (26, 44247),

Gene: TygerBlood_71 Start: 44510, Stop: 44382, Start Num: 15
Candidate Starts for TygerBlood_71:
(1, 44744), (6, 44618), (8, 44609), (Start: 13 @44516 has 13 MA's), (Start: 15 @44510 has 77 MA's), (17, 44495), (18, 44489), (24, 44429),

Gene: Ulysses_70 Start: 44193, Stop: 44065, Start Num: 15
Candidate Starts for Ulysses_70:
(1, 44427), (6, 44301), (8, 44292), (Start: 13 @44199 has 13 MA's), (Start: 15 @44193 has 77 MA's), (17, 44178), (24, 44112),

Gene: Veracruz_71 Start: 45043, Stop: 44915, Start Num: 16
Candidate Starts for Veracruz_71:
(Start: 16 @45043 has 52 MA's), (17, 45028),

Gene: WalterMcMickey_70 Start: 44343, Stop: 44215, Start Num: 16
Candidate Starts for WalterMcMickey_70:
(Start: 16 @44343 has 52 MA's), (17, 44328), (19, 44313), (26, 44247),

Gene: Wile_69 Start: 44707, Stop: 44579, Start Num: 13
Candidate Starts for Wile_69:
(Start: 13 @44707 has 13 MA's), (Start: 15 @44701 has 77 MA's), (17, 44686), (18, 44680), (27, 44590),

Gene: Wizard007_70 Start: 44427, Stop: 44305, Start Num: 15
Candidate Starts for Wizard007_70:
(Start: 13 @44433 has 13 MA's), (Start: 15 @44427 has 77 MA's), (17, 44412), (18, 44406), (27, 44316),

Gene: Xena_69 Start: 44688, Stop: 44566, Start Num: 15
Candidate Starts for Xena_69:
(3, 44814), (4, 44808), (5, 44802), (11, 44742), (Start: 13 @44694 has 13 MA's), (Start: 15 @44688 has 77 MA's), (17, 44673), (27, 44577),

Gene: YoSam321_71 Start: 44511, Stop: 44377, Start Num: 13
Candidate Starts for YoSam321_71:
(1, 44739), (6, 44613), (8, 44604), (Start: 13 @44511 has 13 MA's), (Start: 15 @44505 has 77 MA's), (17, 44490), (18, 44484), (24, 44424),

Gene: Zarafa_72 Start: 45026, Stop: 44898, Start Num: 16
Candidate Starts for Zarafa_72:
(Start: 16 @45026 has 52 MA's), (17, 45011), (24, 44945),