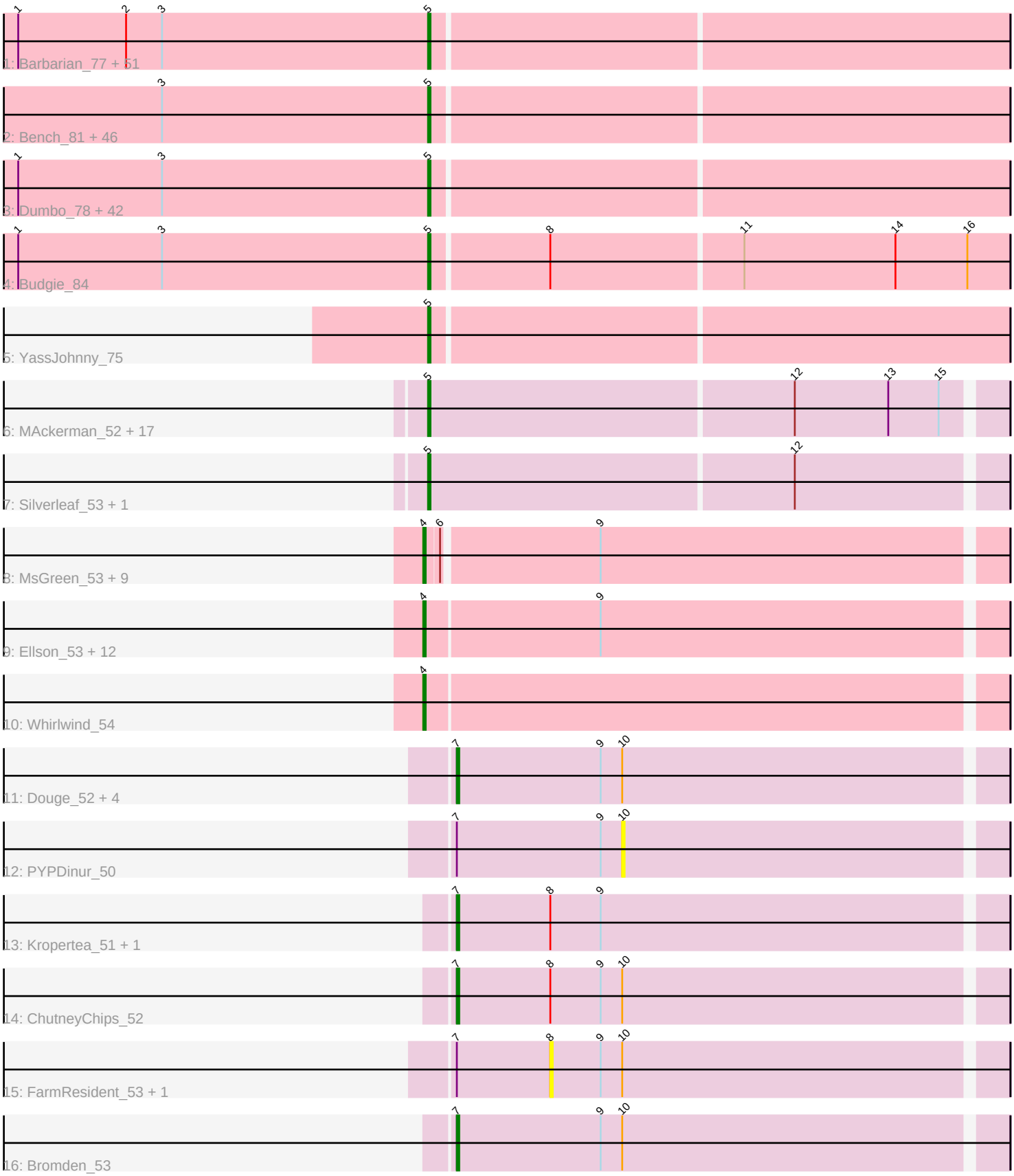
Pham 345397


1
2
3
5
1: Barbarian_77 + 51
3
5
2: Bench_81 + 46
1
3
5
3: Dumbo_78 + 42
1
3
5
8
11
14
16
4: Budgie_84
5
5: YassJohnny_75
5
12
13
15
6: MAckerman_52 + 17
5
12
7: Silverleaf_53 + 1
4
6
9
8: MsGreen_53 + 9
4
9
9: Ellson_53 + 12
4
10: Whirlwind_54
7
9
10
11: Douge_52 + 4
7
9
10
12: PYPDinur_50
7
8
9
13: Kropertea_51 + 1
7
8
9
10
14: ChutneyChips_52
7
8
9
10
15: FarmResident_53 + 1
7
9
10
16: Bromden_53

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 345397 Report

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

Pham number 345397 has 200 members, 23 are drafts.

Phages represented in each track:
• Track 1 : Barbarian_77, Traaww1_74, HufflyPuff_81, Bogg_78, Teaspoon_79, IHOP_76, Porky_77, Kostya_78, Flypotenuse_74, SophKB_75, Goldilocks_81, NelitzaMV_76, FoghornLeghorn_72, Glexan_77, Eureka_76, TBrady12_81, Command613_80, AmericanBeauty_82, Sotrice96_79, Icee_79, Harella_78, ABCat_75, Inca_75, Balomoji_78, Dusk_75, Gator_76, Brewer_74, Kanye_75, Cactus_81, Elite2014_77, Emmina_78, Daikon_80, Goku_76, Moldemort_81, BadStone_75, Argent26_82, Asriel_77, GooberAzure_81, Gemini_83, xkcd_81, Phaja_76, Lilpickle_77, Holt_83, Ptowny_75, Murica_81, Wiggin_80, Tuco_79, ChosenOne_78, Quallification_79, Adnama_82, Stank_81, GoldenSpark_82
• Track 2 : Bench_81, BigBubba_78, Tarkin_77, Mosby_74, PaddyBaddy_78, HanKaySha_78, Filch_79, Maxxinista_80, Czyszczon1_79, Thresher_80, Miniwave_73, Pumpkin_81, RiverMonster_78, Terminus_81, Lilizi_79, Livelaughbron_80, Hopey_78, Sassay_73, Elph10_78, MPhalcon_79, Policronamos_81, Murphy_78, Pharsalus_75, Youngblood_81, Stark_79, Phrux_75, Contagion_74, Palpatine_80, Cjw1_78, BugsBunny_78, Willez_73, BaboJay_75, MISSy_79, Misfit_79, PhatBacter_82, Lilac_80, Phaux_80, Bruin_75, Xandras_77, Greep_82, Becksu_77, Rakim_79, DrDrey_78, NonchalantPear_78, Paperbeatsrock_77, Thimble_79, StellaBean_76
• Track 3 : Dumbo_78, Petra64142_82, Myrale_78, Mindy_77, Tomaszewski_73, Kimchi_82, Marshmallow_76, Easy2Say_79, OrionPax_77, ShamWow_78, Rimmer_79, Buck_79, NoSleep_79, Highbury_77, Amao_78, FireRed_82, SirDuracell_77, Pat3_76, Cookies_75, FairyPath_79, Toto_76, ChotaBhai_78, Manda_79, Saints25_77, CrystalP_77, JeTaime_78, Ukulele_73, Hoonter_81, Nimrod_79, TeamEdward_80, Simpliphy_77, Nala_80, Henry_76, DoctorDiddles_77, TeardropMSU_74, Bask21_78, ShereKhan_76, StormChicken_80, Gage_80, MollyToe_73, MadamMonkfish_78, StolenFromERC_81, BilboSwaggins_76
• Track 4 : Budgie_84
• Track 5 : YassJohnny_75
• Track 6 : MAckerman_52, JoeDirt_51, CicholasNage_52, Poochiewood_52, Enceladus_51, DirkDirk_50, OhShagHennessy_50, Wamburgrxpress_52, Wyatt2_53, Appletree2_51, Zaria_53, Rose5_52, Tyson_52, Acquire49_53, LeBron_52, UPIE_52, Calm_53, Halena_51
• Track 7 : Silverleaf_53, AvadaKedavra_53
• Track 8 : MsGreen_53, Jobypre_54, Bellis_54, Clautastrophe_53, Red305_54, TriFive_55, Jubie_53, Snenia_53, Moostard_53, Lumos_55
• Track 9 : Ellson_53, LiyuLake_53, MiniLon_56, Krypton555_55, BourbonZero_54, Samty_53, Kingsolomon_53, KirDoubleO7_52, DuncansLeg_54, Finnry_53,

Nicholas_53, Lolly9_53, MiniMac_56
• Track 10 : Whirlwind_54
• Track 11 : Douge_52, Chaser_50, BrainDrainer_52, Sheng711_52, Douzhi_52
• Track 12 : PYPDinur_50
• Track 13 : Kropertea_51, DyoEdafos_54
• Track 14 : ChutneyChips_52
• Track 15 : FarmResident_53, Quby_51
• Track 16 : Bromden_53

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

The start number called the most often in the published annotations is 5, it was called in 152 of the 177 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ABCat_75, Acquire49_53, Adnama_82, Amao_78, AmericanBeauty_82, Appletree2_51, Argent26_82, Asriel_77, AvadaKedavra_53, BaboJay_75, BadStone_75, Balomoji_78, Barbarian_77, Bask21_78, Becksu_77, Bench_81, BigBubba_78, BilboSwaggins_76, Bogg_78, Brewer_74, Bruin_75, Buck_79, Budgie_84, BugsBunny_78, Cactus_81, Calm_53, ChosenOne_78, ChotaBhai_78, CicholasNage_52, Cjw1_78, Command613_80, Contagion_74, Cookies_75, CrystalP_77, Czyszczon1_79, Daikon_80, DirkDirk_50, DoctorDiddles_77, DrDrey_78, Dumbo_78, Dusk_75, Easy2Say_79, Elite2014_77, Elph10_78, Emmina_78, Enceladus_51, Eureka_76, FairyPath_79, Filch_79, FireRed_82, Flypotenuse_74, FoghornLeghorn_72, Gage_80, Gator_76, Gemini_83, Glexan_77, Goku_76, GoldenSpark_82, Goldilocks_81, GooberAzure_81, Greep_82, Halena_51, HanKaySha_78, Harella_78, Henry_76, Highbury_77, Holt_83, Hoonter_81, Hopey_78, HufflyPuff_81, IHOP_76, Icee_79, Inca_75, JeTaime_78, JoeDirt_51, Kanye_75, Kimchi_82, Kostya_78, LeBron_52, Lilac_80, Lilizi_79, Lilpickle_77, Livelaughbron_80, MAckerman_52, MISSy_79, MPhalcon_79, MadamMonkfish_78, Manda_79, Marshmallow_76, Maxxinista_80, Mindy_77, Miniwave_73, Misfit_79, Moldemort_81, MollyToe_73, Mosby_74, Murica_81, Murphy_78, Myrale_78, Nala_80, NelitzaMV_76, Nimrod_79, NoSleep_79, NonchalantPear_78, OhShagHennessy_50, OrionPax_77, PaddyBaddy_78, Palpatine_80, Paperbeatsrock_77, Pat3_76, Petra64142_82, Phaja_76, Pharsalus_75, PhatBacter_82, Phaux_80, Phrux_75, Policronamos_81, Poochiewood_52, Porky_77, Ptowny_75, Pumpkin_81, Quallification_79, Rakim_79, Rimmer_79, RiverMonster_78, Rose5_52, Saints25_77, Sassay_73, ShamWow_78, ShereKhan_76, Silverleaf_53, Simpliphy_77, SirDuracell_77, SophKB_75, Sotrice96_79, Stank_81, Stark_79, StellaBean_76, StolenFromERC_81, StormChicken_80, TBrady12_81, Tarkin_77, TeamEdward_80, TeardropMSU_74, Teaspoon_79, Terminus_81, Thimble_79, Thresher_80, Tomaszewski_73, Toto_76, Traaww1_74, Tuco_79, Tyson_52, UPIE_52, Ukulele_73, Wamburgrxpress_52, Wiggin_80, Willez_73, Wyatt2_53, Xandras_77, YassJohnny_75, Youngblood_81, Zaria_53, xkcd_81,

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

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

• Bellis_54, BourbonZero_54, BrainDrainer_52, Bromden_53, Chaser_50, ChutneyChips_52, Clautastrophe_53, Douge_52, Douzhi_52, DuncansLeg_54, DyoEdafos_54, Ellson_53, FarmResident_53, Finnry_53, Jobypre_54, Jubie_53, Kingsolomon_53, KirDoubleO7_52, Kropertea_51, Krypton555_55, LiyuLake_53, Lolly9_53, Lumos_55, MiniLon_56, MiniMac_56, Moostard_53, MsGreen_53, Nicholas_53, PYPDinur_50, Quby_51, Red305_54, Samty_53, Sheng711_52, Snenia_53, TriFive_55, Whirlwind_54,

Summary by start number:

Start 4:
• Found in 24 of 200 (12.0%) of genes in pham
• Manual Annotations of this start: 19 of 177
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bellis_54 (L3), BourbonZero_54 (L3), Clautastrophe_53 (L3), DuncansLeg_54 (L3), Ellson_53 (L3), Finnry_53 (L3), Jobypre_54 (L3), Jubie_53 (L3), Kingsolomon_53 (L3), KirDoubleO7_52 (L3), Krypton555_55 (L3), LiyuLake_53 (L3), Lolly9_53 (L3), Lumos_55 (L3), MiniLon_56 (L3), MiniMac_56 (L3), Moostard_53 (L3), MsGreen_53 (L3), Nicholas_53 (L3), Red305_54 (L3), Samty_53 (L3), Snenia_53 (L3), TriFive_55 (L3), Whirlwind_54 (L3),

Start 5:
• Found in 164 of 200 (82.0%) of genes in pham
• Manual Annotations of this start: 152 of 177
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ABCat_75 (E), Acquire49_53 (L1), Adnama_82 (E), Amao_78 (E), AmericanBeauty_82 (E), Appletree2_51 (L1), Argent26_82 (E), Asriel_77 (E), AvadaKedavra_53 (L1), BaboJay_75 (E), BadStone_75 (E), Balomoji_78 (E), Barbarian_77 (E), Bask21_78 (E), Becksu_77 (E), Bench_81 (E), BigBubba_78 (E), BilboSwaggins_76 (E), Bogg_78 (E), Brewer_74 (E), Bruin_75 (E), Buck_79 (E), Budgie_84 (E), BugsBunny_78 (E), Cactus_81 (E), Calm_53 (L1), ChosenOne_78 (E), ChotaBhai_78 (E), CicholasNage_52 (L1), Cjw1_78 (E), Command613_80 (E), Contagion_74 (E), Cookies_75 (E), CrystalP_77 (E), Czyszczon1_79 (E), Daikon_80 (E), DirkDirk_50 (L1), DoctorDiddles_77 (E), DrDrey_78 (E), Dumbo_78 (E), Dusk_75 (E), Easy2Say_79 (E), Elite2014_77 (E), Elph10_78 (E), Emmina_78 (E), Enceladus_51 (L1), Eureka_76 (E), FairyPath_79 (E), Filch_79 (E), FireRed_82 (E), Flypotenuse_74 (E), FoghornLeghorn_72 (E), Gage_80 (E), Gator_76 (E), Gemini_83 (E), Glexan_77 (E), Goku_76 (E), GoldenSpark_82 (E), Goldilocks_81 (E), GooberAzure_81 (E), Greep_82 (E), Halena_51 (L1), HanKaySha_78 (E), Harella_78 (E), Henry_76 (E), Highbury_77 (E), Holt_83 (E), Hoonter_81 (E), Hopey_78 (E), HufflyPuff_81 (E), IHOP_76 (E), Icee_79 (E), Inca_75 (E), JeTaime_78 (E), JoeDirt_51 (L1), Kanye_75 (E), Kimchi_82 (E), Kostya_78 (E), LeBron_52 (L1), Lilac_80 (E), Lilizi_79 (E), Lilpickle_77 (E), Livelaughbron_80 (E), MAckerman_52 (L1), MISSy_79 (E), MPhalcon_79 (E), MadamMonkfish_78 (E), Manda_79 (E), Marshmallow_76 (E), Maxxinista_80 (E), Mindy_77 (E), Miniwave_73 (E), Misfit_79 (E), Moldemort_81 (E), MollyToe_73 (E), Mosby_74 (E), Murica_81 (E), Murphy_78 (E), Myrale_78 (E), Nala_80 (E), NelitzaMV_76 (E), Nimrod_79 (E), NoSleep_79 (E), NonchalantPear_78 (E), OhShagHennessy_50 (L1), OrionPax_77 (E), PaddyBaddy_78 (E), Palpatine_80 (E), Paperbeatsrock_77 (E), Pat3_76 (E), Petra64142_82 (E), Phaja_76 (E), Pharsalus_75 (E), PhatBacter_82 (E), Phaux_80 (E), Phrux_75 (E), Policronamos_81 (E), Poochiewood_52 (L1), Porky_77 (E), Ptowny_75 (E), Pumpkin_81 (E), Quallification_79 (E), Rakim_79 (E), Rimmer_79 (E), RiverMonster_78 (E), Rose5_52

(L1), Saints25_77 (E), Sassay_73 (E), ShamWow_78 (E), ShereKhan_76 (E), Silverleaf_53 (L1), Simpliphy_77 (E), SirDuracell_77 (E), SophKB_75 (E), Sotrice96_79 (E), Stank_81 (E), Stark_79 (E), StellaBean_76 (E), StolenFromERC_81 (E), StormChicken_80 (E), TBrady12_81 (E), Tarkin_77 (E), TeamEdward_80 (E), TeardropMSU_74 (E), Teaspoon_79 (E), Terminus_81 (E), Thimble_79 (E), Thresher_80 (E), Tomaszewski_73 (E), Toto_76 (E), Traaww1_74 (E), Tuco_79 (E), Tyson_52 (L1), UPIE_52 (L1), Ukulele_73 (E), Wamburgrxpress_52 (L1), Wiggin_80 (E), Willez_73 (E), Wyatt2_53 (L1), Xandras_77 (E), YassJohnny_75 (E), Youngblood_81 (E), Zaria_53 (L1), xkcd_81 (E),

Start 7:
• Found in 12 of 200 (6.0%) of genes in pham
• Manual Annotations of this start: 6 of 177
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BrainDrainer_52 (L4), Bromden_53 (L4), Chaser_50 (L4), ChutneyChips_52 (L4), Douge_52 (L4), Douzhi_52 (L4), DyoEdafos_54 (L4), Kropertea_51 (L4), Sheng711_52 (L4),

Start 8:
• Found in 6 of 200 (3.0%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: FarmResident_53 (L4), Quby_51 (L4),

Start 10:
• Found in 10 of 200 (5.0%) of genes in pham
• No Manual Annotations of this start.
• Called 10.0% of time when present
• Phage (with cluster) where this start called: PYPDinur_50 (L4),

Summary by clusters:

There are 4 clusters represented in this pham: L4, E, L3, L1,

Info for manual annotations of cluster E:
•Start number 5 was manually annotated 133 times for cluster E.

Info for manual annotations of cluster L1:
•Start number 5 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L3:
•Start number 4 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:
•Start number 7 was manually annotated 6 times for cluster L4.

Gene Information:

Gene: ABCat_75 Start: 49269, Stop: 49505, Start Num: 5
Candidate Starts for ABCat_75:
(1, 49098), (2, 49143), (3, 49158), (Start: 5 @49269 has 152 MA's),

Gene: Acquire49_53 Start: 38583, Stop: 38816, Start Num: 5
Candidate Starts for Acquire49_53:
(Start: 5 @38583 has 152 MA's), (12, 38733), (13, 38772), (15, 38793),

Gene: Adnama_82 Start: 49295, Stop: 49531, Start Num: 5
Candidate Starts for Adnama_82:
(1, 49124), (2, 49169), (3, 49184), (Start: 5 @49295 has 152 MA's),

Gene: Amao_78 Start: 48689, Stop: 48925, Start Num: 5
Candidate Starts for Amao_78:
(1, 48518), (3, 48578), (Start: 5 @48689 has 152 MA's),

Gene: AmericanBeauty_82 Start: 49438, Stop: 49674, Start Num: 5
Candidate Starts for AmericanBeauty_82:
(1, 49267), (2, 49312), (3, 49327), (Start: 5 @49438 has 152 MA's),

Gene: Appletree2_51 Start: 38416, Stop: 38649, Start Num: 5
Candidate Starts for Appletree2_51:
(Start: 5 @38416 has 152 MA's), (12, 38566), (13, 38605), (15, 38626),

Gene: Argent26_82 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for Argent26_82:
(1, 48905), (2, 48950), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: Asriel_77 Start: 47632, Stop: 47868, Start Num: 5
Candidate Starts for Asriel_77:
(1, 47461), (2, 47506), (3, 47521), (Start: 5 @47632 has 152 MA's),

Gene: AvadaKedavra_53 Start: 38663, Stop: 38896, Start Num: 5
Candidate Starts for AvadaKedavra_53:
(Start: 5 @38663 has 152 MA's), (12, 38813),

Gene: BaboJay_75 Start: 48469, Stop: 48705, Start Num: 5
Candidate Starts for BaboJay_75:
(3, 48358), (Start: 5 @48469 has 152 MA's),

Gene: BadStone_75 Start: 48838, Stop: 49074, Start Num: 5
Candidate Starts for BadStone_75:
(1, 48667), (2, 48712), (3, 48727), (Start: 5 @48838 has 152 MA's),

Gene: Balomoji_78 Start: 49399, Stop: 49635, Start Num: 5
Candidate Starts for Balomoji_78:
(1, 49228), (2, 49273), (3, 49288), (Start: 5 @49399 has 152 MA's),

Gene: Barbarian_77 Start: 47632, Stop: 47868, Start Num: 5
Candidate Starts for Barbarian_77:
(1, 47461), (2, 47506), (3, 47521), (Start: 5 @47632 has 152 MA's),

Gene: Bask21_78 Start: 48252, Stop: 48488, Start Num: 5
Candidate Starts for Bask21_78:
(1, 48081), (3, 48141), (Start: 5 @48252 has 152 MA's),

Gene: Becksu_77 Start: 49468, Stop: 49704, Start Num: 5
Candidate Starts for Becksu_77:
(3, 49357), (Start: 5 @49468 has 152 MA's),

Gene: Bellis_54 Start: 40576, Stop: 40809, Start Num: 4
Candidate Starts for Bellis_54:
(Start: 4 @40576 has 19 MA's), (6, 40582), (9, 40645),

Gene: Bench_81 Start: 48936, Stop: 49172, Start Num: 5
Candidate Starts for Bench_81:
(3, 48825), (Start: 5 @48936 has 152 MA's),

Gene: BigBubba_78 Start: 48648, Stop: 48884, Start Num: 5
Candidate Starts for BigBubba_78:
(3, 48537), (Start: 5 @48648 has 152 MA's),

Gene: BilboSwaggins_76 Start: 49277, Stop: 49513, Start Num: 5
Candidate Starts for BilboSwaggins_76:
(1, 49106), (3, 49166), (Start: 5 @49277 has 152 MA's),

Gene: Bogg_78 Start: 48215, Stop: 48451, Start Num: 5
Candidate Starts for Bogg_78:
(1, 48044), (2, 48089), (3, 48104), (Start: 5 @48215 has 152 MA's),

Gene: BourbonZero_54 Start: 40622, Stop: 40858, Start Num: 4
Candidate Starts for BourbonZero_54:
(Start: 4 @40622 has 19 MA's), (9, 40694),

Gene: BrainDrainer_52 Start: 39152, Stop: 39376, Start Num: 7
Candidate Starts for BrainDrainer_52:
(Start: 7 @39152 has 6 MA's), (9, 39212), (10, 39221),

Gene: Brewer_74 Start: 47738, Stop: 47974, Start Num: 5
Candidate Starts for Brewer_74:
(1, 47567), (2, 47612), (3, 47627), (Start: 5 @47738 has 152 MA's),

Gene: Bromden_53 Start: 39820, Stop: 40044, Start Num: 7
Candidate Starts for Bromden_53:
(Start: 7 @39820 has 6 MA's), (9, 39880), (10, 39889),

Gene: Bruin_75 Start: 47812, Stop: 48048, Start Num: 5
Candidate Starts for Bruin_75:
(3, 47701), (Start: 5 @47812 has 152 MA's),

Gene: Buck_79 Start: 49517, Stop: 49753, Start Num: 5
Candidate Starts for Buck_79:
(1, 49346), (3, 49406), (Start: 5 @49517 has 152 MA's),

Gene: Budgie_84 Start: 49307, Stop: 49543, Start Num: 5
Candidate Starts for Budgie_84:
(1, 49136), (3, 49196), (Start: 5 @49307 has 152 MA's), (8, 49355), (11, 49433), (14, 49496), (16, 49526),

Gene: BugsBunny_78 Start: 49344, Stop: 49580, Start Num: 5
Candidate Starts for BugsBunny_78:
(3, 49233), (Start: 5 @49344 has 152 MA's),

Gene: Cactus_81 Start: 48293, Stop: 48529, Start Num: 5
Candidate Starts for Cactus_81:
(1, 48122), (2, 48167), (3, 48182), (Start: 5 @48293 has 152 MA's),

Gene: Calm_53 Start: 38598, Stop: 38831, Start Num: 5
Candidate Starts for Calm_53:
(Start: 5 @38598 has 152 MA's), (12, 38748), (13, 38787), (15, 38808),

Gene: Chaser_50 Start: 38908, Stop: 39132, Start Num: 7
Candidate Starts for Chaser_50:
(Start: 7 @38908 has 6 MA's), (9, 38968), (10, 38977),

Gene: ChosenOne_78 Start: 48293, Stop: 48529, Start Num: 5
Candidate Starts for ChosenOne_78:
(1, 48122), (2, 48167), (3, 48182), (Start: 5 @48293 has 152 MA's),

Gene: ChotaBhai_78 Start: 48617, Stop: 48853, Start Num: 5
Candidate Starts for ChotaBhai_78:
(1, 48446), (3, 48506), (Start: 5 @48617 has 152 MA's),

Gene: ChutneyChips_52 Start: 39184, Stop: 39408, Start Num: 7
Candidate Starts for ChutneyChips_52:
(Start: 7 @39184 has 6 MA's), (8, 39223), (9, 39244), (10, 39253),

Gene: CicholasNage_52 Start: 38619, Stop: 38852, Start Num: 5
Candidate Starts for CicholasNage_52:
(Start: 5 @38619 has 152 MA's), (12, 38769), (13, 38808), (15, 38829),

Gene: Cjw1_78 Start: 49990, Stop: 50226, Start Num: 5
Candidate Starts for Cjw1_78:
(3, 49879), (Start: 5 @49990 has 152 MA's),

Gene: Clautastrophe_53 Start: 40573, Stop: 40806, Start Num: 4
Candidate Starts for Clautastrophe_53:
(Start: 4 @40573 has 19 MA's), (6, 40579), (9, 40642),

Gene: Command613_80 Start: 49332, Stop: 49568, Start Num: 5
Candidate Starts for Command613_80:
(1, 49161), (2, 49206), (3, 49221), (Start: 5 @49332 has 152 MA's),

Gene: Contagion_74 Start: 48093, Stop: 48329, Start Num: 5
Candidate Starts for Contagion_74:
(3, 47982), (Start: 5 @48093 has 152 MA's),

Gene: Cookies_75 Start: 48474, Stop: 48710, Start Num: 5
Candidate Starts for Cookies_75:
(1, 48303), (3, 48363), (Start: 5 @48474 has 152 MA's),

Gene: CrystalP_77 Start: 49277, Stop: 49513, Start Num: 5

Candidate Starts for CrystalP_77:
(1, 49106), (3, 49166), (Start: 5 @49277 has 152 MA's),

Gene: Czyszczon1_79 Start: 48799, Stop: 49035, Start Num: 5
Candidate Starts for Czyszczon1_79:
(3, 48688), (Start: 5 @48799 has 152 MA's),

Gene: Daikon_80 Start: 49420, Stop: 49656, Start Num: 5
Candidate Starts for Daikon_80:
(1, 49249), (2, 49294), (3, 49309), (Start: 5 @49420 has 152 MA's),

Gene: DirkDirk_50 Start: 38462, Stop: 38695, Start Num: 5
Candidate Starts for DirkDirk_50:
(Start: 5 @38462 has 152 MA's), (12, 38612), (13, 38651), (15, 38672),

Gene: DoctorDiddles_77 Start: 48661, Stop: 48897, Start Num: 5
Candidate Starts for DoctorDiddles_77:
(1, 48490), (3, 48550), (Start: 5 @48661 has 152 MA's),

Gene: Douge_52 Start: 38906, Stop: 39130, Start Num: 7
Candidate Starts for Douge_52:
(Start: 7 @38906 has 6 MA's), (9, 38966), (10, 38975),

Gene: Douzhi_52 Start: 38980, Stop: 39204, Start Num: 7
Candidate Starts for Douzhi_52:
(Start: 7 @38980 has 6 MA's), (9, 39040), (10, 39049),

Gene: DrDrey_78 Start: 49718, Stop: 49954, Start Num: 5
Candidate Starts for DrDrey_78:
(3, 49607), (Start: 5 @49718 has 152 MA's),

Gene: Dumbo_78 Start: 48198, Stop: 48434, Start Num: 5
Candidate Starts for Dumbo_78:
(1, 48027), (3, 48087), (Start: 5 @48198 has 152 MA's),

Gene: DuncansLeg_54 Start: 40604, Stop: 40840, Start Num: 4
Candidate Starts for DuncansLeg_54:
(Start: 4 @40604 has 19 MA's), (9, 40676),

Gene: Dusk_75 Start: 48498, Stop: 48734, Start Num: 5
Candidate Starts for Dusk_75:
(1, 48327), (2, 48372), (3, 48387), (Start: 5 @48498 has 152 MA's),

Gene: DyoEdafos_54 Start: 39182, Stop: 39406, Start Num: 7
Candidate Starts for DyoEdafos_54:
(Start: 7 @39182 has 6 MA's), (8, 39221), (9, 39242),

Gene: Easy2Say_79 Start: 49742, Stop: 49978, Start Num: 5
Candidate Starts for Easy2Say_79:
(1, 49571), (3, 49631), (Start: 5 @49742 has 152 MA's),

Gene: Elite2014_77 Start: 48292, Stop: 48528, Start Num: 5
Candidate Starts for Elite2014_77:

(1, 48121), (2, 48166), (3, 48181), (Start: 5 @48292 has 152 MA's),

Gene: Ellson_53 Start: 40634, Stop: 40870, Start Num: 4
Candidate Starts for Ellson_53:
(Start: 4 @40634 has 19 MA's), (9, 40706),

Gene: Elph10_78 Start: 48297, Stop: 48533, Start Num: 5
Candidate Starts for Elph10_78:
(3, 48186), (Start: 5 @48297 has 152 MA's),

Gene: Emmina_78 Start: 48199, Stop: 48435, Start Num: 5
Candidate Starts for Emmina_78:
(1, 48028), (2, 48073), (3, 48088), (Start: 5 @48199 has 152 MA's),

Gene: Enceladus_51 Start: 38457, Stop: 38690, Start Num: 5
Candidate Starts for Enceladus_51:
(Start: 5 @38457 has 152 MA's), (12, 38607), (13, 38646), (15, 38667),

Gene: Eureka_76 Start: 48763, Stop: 48999, Start Num: 5
Candidate Starts for Eureka_76:
(1, 48592), (2, 48637), (3, 48652), (Start: 5 @48763 has 152 MA's),

Gene: FairyPath_79 Start: 49411, Stop: 49647, Start Num: 5
Candidate Starts for FairyPath_79:
(1, 49240), (3, 49300), (Start: 5 @49411 has 152 MA's),

Gene: FarmResident_53 Start: 38980, Stop: 39165, Start Num: 8
Candidate Starts for FarmResident_53:
(Start: 7 @38941 has 6 MA's), (8, 38980), (9, 39001), (10, 39010),

Gene: Filch_79 Start: 48224, Stop: 48460, Start Num: 5
Candidate Starts for Filch_79:
(3, 48113), (Start: 5 @48224 has 152 MA's),

Gene: Finnry_53 Start: 40841, Stop: 41077, Start Num: 4
Candidate Starts for Finnry_53:
(Start: 4 @40841 has 19 MA's), (9, 40913),

Gene: FireRed_82 Start: 49786, Stop: 50022, Start Num: 5
Candidate Starts for FireRed_82:
(1, 49615), (3, 49675), (Start: 5 @49786 has 152 MA's),

Gene: Flypotenuse_74 Start: 48283, Stop: 48519, Start Num: 5
Candidate Starts for Flypotenuse_74:
(1, 48112), (2, 48157), (3, 48172), (Start: 5 @48283 has 152 MA's),

Gene: FoghornLeghorn_72 Start: 47296, Stop: 47532, Start Num: 5
Candidate Starts for FoghornLeghorn_72:
(1, 47125), (2, 47170), (3, 47185), (Start: 5 @47296 has 152 MA's),

Gene: Gage_80 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for Gage_80:
(1, 48905), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: Gator_76 Start: 49129, Stop: 49365, Start Num: 5
Candidate Starts for Gator_76:
(1, 48958), (2, 49003), (3, 49018), (Start: 5 @49129 has 152 MA's),

Gene: Gemini_83 Start: 49593, Stop: 49829, Start Num: 5
Candidate Starts for Gemini_83:
(1, 49422), (2, 49467), (3, 49482), (Start: 5 @49593 has 152 MA's),

Gene: Glexan_77 Start: 49413, Stop: 49649, Start Num: 5
Candidate Starts for Glexan_77:
(1, 49242), (2, 49287), (3, 49302), (Start: 5 @49413 has 152 MA's),

Gene: Goku_76 Start: 48492, Stop: 48728, Start Num: 5
Candidate Starts for Goku_76:
(1, 48321), (2, 48366), (3, 48381), (Start: 5 @48492 has 152 MA's),

Gene: GoldenSpark_82 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for GoldenSpark_82:
(1, 48905), (2, 48950), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: Goldilocks_81 Start: 48574, Stop: 48810, Start Num: 5
Candidate Starts for Goldilocks_81:
(1, 48403), (2, 48448), (3, 48463), (Start: 5 @48574 has 152 MA's),

Gene: GooberAzure_81 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for GooberAzure_81:
(1, 48905), (2, 48950), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: Greep_82 Start: 50075, Stop: 50311, Start Num: 5
Candidate Starts for Greep_82:
(3, 49964), (Start: 5 @50075 has 152 MA's),

Gene: Halena_51 Start: 38499, Stop: 38732, Start Num: 5
Candidate Starts for Halena_51:
(Start: 5 @38499 has 152 MA's), (12, 38649), (13, 38688), (15, 38709),

Gene: HanKaySha_78 Start: 48377, Stop: 48613, Start Num: 5
Candidate Starts for HanKaySha_78:
(3, 48266), (Start: 5 @48377 has 152 MA's),

Gene: Harella_78 Start: 49929, Stop: 50165, Start Num: 5
Candidate Starts for Harella_78:
(1, 49758), (2, 49803), (3, 49818), (Start: 5 @49929 has 152 MA's),

Gene: Henry_76 Start: 48717, Stop: 48953, Start Num: 5
Candidate Starts for Henry_76:
(1, 48546), (3, 48606), (Start: 5 @48717 has 152 MA's),

Gene: Highbury_77 Start: 48365, Stop: 48601, Start Num: 5
Candidate Starts for Highbury_77:
(1, 48194), (3, 48254), (Start: 5 @48365 has 152 MA's),

Gene: Holt_83 Start: 49490, Stop: 49726, Start Num: 5
Candidate Starts for Holt_83:
(1, 49319), (2, 49364), (3, 49379), (Start: 5 @49490 has 152 MA's),

Gene: Hoonter_81 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for Hoonter_81:
(1, 48905), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: Hopey_78 Start: 48909, Stop: 49145, Start Num: 5
Candidate Starts for Hopey_78:
(3, 48798), (Start: 5 @48909 has 152 MA's),

Gene: HufflyPuff_81 Start: 49742, Stop: 49978, Start Num: 5
Candidate Starts for HufflyPuff_81:
(1, 49571), (2, 49616), (3, 49631), (Start: 5 @49742 has 152 MA's),

Gene: IHOP_76 Start: 48841, Stop: 49077, Start Num: 5
Candidate Starts for IHOP_76:
(1, 48670), (2, 48715), (3, 48730), (Start: 5 @48841 has 152 MA's),

Gene: Icee_79 Start: 48740, Stop: 48976, Start Num: 5
Candidate Starts for Icee_79:
(1, 48569), (2, 48614), (3, 48629), (Start: 5 @48740 has 152 MA's),

Gene: Inca_75 Start: 47366, Stop: 47602, Start Num: 5
Candidate Starts for Inca_75:
(1, 47195), (2, 47240), (3, 47255), (Start: 5 @47366 has 152 MA's),

Gene: JeTaime_78 Start: 49558, Stop: 49794, Start Num: 5
Candidate Starts for JeTaime_78:
(1, 49387), (3, 49447), (Start: 5 @49558 has 152 MA's),

Gene: Jobypre_54 Start: 40573, Stop: 40806, Start Num: 4
Candidate Starts for Jobypre_54:
(Start: 4 @40573 has 19 MA's), (6, 40579), (9, 40642),

Gene: JoeDirt_51 Start: 38456, Stop: 38689, Start Num: 5
Candidate Starts for JoeDirt_51:
(Start: 5 @38456 has 152 MA's), (12, 38606), (13, 38645), (15, 38666),

Gene: Jubie_53 Start: 40708, Stop: 40941, Start Num: 4
Candidate Starts for Jubie_53:
(Start: 4 @40708 has 19 MA's), (6, 40714), (9, 40777),

Gene: Kanye_75 Start: 48422, Stop: 48658, Start Num: 5
Candidate Starts for Kanye_75:
(1, 48251), (2, 48296), (3, 48311), (Start: 5 @48422 has 152 MA's),

Gene: Kimchi_82 Start: 49079, Stop: 49315, Start Num: 5
Candidate Starts for Kimchi_82:
(1, 48908), (3, 48968), (Start: 5 @49079 has 152 MA's),

Gene: Kingsolomon_53 Start: 40577, Stop: 40813, Start Num: 4

Candidate Starts for Kingsolomon_53:
(Start: 4 @40577 has 19 MA's), (9, 40649),

Gene: KirDoubleO7_52 Start: 40608, Stop: 40844, Start Num: 4
Candidate Starts for KirDoubleO7_52:
(Start: 4 @40608 has 19 MA's), (9, 40680),

Gene: Kostya_78 Start: 48940, Stop: 49176, Start Num: 5
Candidate Starts for Kostya_78:
(1, 48769), (2, 48814), (3, 48829), (Start: 5 @48940 has 152 MA's),

Gene: Kropertea_51 Start: 39081, Stop: 39305, Start Num: 7
Candidate Starts for Kropertea_51:
(Start: 7 @39081 has 6 MA's), (8, 39120), (9, 39141),

Gene: Krypton555_55 Start: 40810, Stop: 41046, Start Num: 4
Candidate Starts for Krypton555_55:
(Start: 4 @40810 has 19 MA's), (9, 40882),

Gene: LeBron_52 Start: 38500, Stop: 38733, Start Num: 5
Candidate Starts for LeBron_52:
(Start: 5 @38500 has 152 MA's), (12, 38650), (13, 38689), (15, 38710),

Gene: Lilac_80 Start: 48694, Stop: 48930, Start Num: 5
Candidate Starts for Lilac_80:
(3, 48583), (Start: 5 @48694 has 152 MA's),

Gene: Lilizi_79 Start: 48407, Stop: 48643, Start Num: 5
Candidate Starts for Lilizi_79:
(3, 48296), (Start: 5 @48407 has 152 MA's),

Gene: Lilpickle_77 Start: 48292, Stop: 48528, Start Num: 5
Candidate Starts for Lilpickle_77:
(1, 48121), (2, 48166), (3, 48181), (Start: 5 @48292 has 152 MA's),

Gene: Livelaughbron_80 Start: 49870, Stop: 50106, Start Num: 5
Candidate Starts for Livelaughbron_80:
(3, 49759), (Start: 5 @49870 has 152 MA's),

Gene: LiyuLake_53 Start: 40624, Stop: 40860, Start Num: 4
Candidate Starts for LiyuLake_53:
(Start: 4 @40624 has 19 MA's), (9, 40696),

Gene: Lolly9_53 Start: 40395, Stop: 40631, Start Num: 4
Candidate Starts for Lolly9_53:
(Start: 4 @40395 has 19 MA's), (9, 40467),

Gene: Lumos_55 Start: 40570, Stop: 40803, Start Num: 4
Candidate Starts for Lumos_55:
(Start: 4 @40570 has 19 MA's), (6, 40576), (9, 40639),

Gene: MAckerman_52 Start: 38492, Stop: 38725, Start Num: 5
Candidate Starts for MAckerman_52:

(Start: 5 @38492 has 152 MA's), (12, 38642), (13, 38681), (15, 38702),

Gene: MISSy_79 Start: 48798, Stop: 49034, Start Num: 5
Candidate Starts for MISSy_79:
(3, 48687), (Start: 5 @48798 has 152 MA's),

Gene: MPhalcon_79 Start: 48791, Stop: 49027, Start Num: 5
Candidate Starts for MPhalcon_79:
(3, 48680), (Start: 5 @48791 has 152 MA's),

Gene: MadamMonkfish_78 Start: 48016, Stop: 48252, Start Num: 5
Candidate Starts for MadamMonkfish_78:
(1, 47845), (3, 47905), (Start: 5 @48016 has 152 MA's),

Gene: Manda_79 Start: 49878, Stop: 50114, Start Num: 5
Candidate Starts for Manda_79:
(1, 49707), (3, 49767), (Start: 5 @49878 has 152 MA's),

Gene: Marshmallow_76 Start: 49571, Stop: 49807, Start Num: 5
Candidate Starts for Marshmallow_76:
(1, 49400), (3, 49460), (Start: 5 @49571 has 152 MA's),

Gene: Maxxinista_80 Start: 48667, Stop: 48903, Start Num: 5
Candidate Starts for Maxxinista_80:
(3, 48556), (Start: 5 @48667 has 152 MA's),

Gene: Mindy_77 Start: 47883, Stop: 48119, Start Num: 5
Candidate Starts for Mindy_77:
(1, 47712), (3, 47772), (Start: 5 @47883 has 152 MA's),

Gene: MiniLon_56 Start: 40396, Stop: 40632, Start Num: 4
Candidate Starts for MiniLon_56:
(Start: 4 @40396 has 19 MA's), (9, 40468),

Gene: MiniMac_56 Start: 40394, Stop: 40630, Start Num: 4
Candidate Starts for MiniMac_56:
(Start: 4 @40394 has 19 MA's), (9, 40466),

Gene: Miniwave_73 Start: 48336, Stop: 48572, Start Num: 5
Candidate Starts for Miniwave_73:
(3, 48225), (Start: 5 @48336 has 152 MA's),

Gene: Misfit_79 Start: 49810, Stop: 50046, Start Num: 5
Candidate Starts for Misfit_79:
(3, 49699), (Start: 5 @49810 has 152 MA's),

Gene: Moldemort_81 Start: 48895, Stop: 49131, Start Num: 5
Candidate Starts for Moldemort_81:
(1, 48724), (2, 48769), (3, 48784), (Start: 5 @48895 has 152 MA's),

Gene: MollyToe_73 Start: 47637, Stop: 47873, Start Num: 5
Candidate Starts for MollyToe_73:
(1, 47466), (3, 47526), (Start: 5 @47637 has 152 MA's),

Gene: Moostard_53 Start: 40576, Stop: 40809, Start Num: 4
Candidate Starts for Moostard_53:
(Start: 4 @40576 has 19 MA's), (6, 40582), (9, 40645),

Gene: Mosby_74 Start: 48093, Stop: 48329, Start Num: 5
Candidate Starts for Mosby_74:
(3, 47982), (Start: 5 @48093 has 152 MA's),

Gene: MsGreen_53 Start: 40573, Stop: 40806, Start Num: 4
Candidate Starts for MsGreen_53:
(Start: 4 @40573 has 19 MA's), (6, 40579), (9, 40642),

Gene: Murica_81 Start: 49742, Stop: 49978, Start Num: 5
Candidate Starts for Murica_81:
(1, 49571), (2, 49616), (3, 49631), (Start: 5 @49742 has 152 MA's),

Gene: Murphy_78 Start: 49179, Stop: 49415, Start Num: 5
Candidate Starts for Murphy_78:
(3, 49068), (Start: 5 @49179 has 152 MA's),

Gene: Myrale_78 Start: 49436, Stop: 49672, Start Num: 5
Candidate Starts for Myrale_78:
(1, 49265), (3, 49325), (Start: 5 @49436 has 152 MA's),

Gene: Nala_80 Start: 49300, Stop: 49536, Start Num: 5
Candidate Starts for Nala_80:
(1, 49129), (3, 49189), (Start: 5 @49300 has 152 MA's),

Gene: NelitzaMV_76 Start: 48382, Stop: 48618, Start Num: 5
Candidate Starts for NelitzaMV_76:
(1, 48211), (2, 48256), (3, 48271), (Start: 5 @48382 has 152 MA's),

Gene: Nicholas_53 Start: 40577, Stop: 40813, Start Num: 4
Candidate Starts for Nicholas_53:
(Start: 4 @40577 has 19 MA's), (9, 40649),

Gene: Nimrod_79 Start: 50003, Stop: 50239, Start Num: 5
Candidate Starts for Nimrod_79:
(1, 49832), (3, 49892), (Start: 5 @50003 has 152 MA's),

Gene: NoSleep_79 Start: 48637, Stop: 48873, Start Num: 5
Candidate Starts for NoSleep_79:
(1, 48466), (3, 48526), (Start: 5 @48637 has 152 MA's),

Gene: NonchalantPear_78 Start: 48490, Stop: 48726, Start Num: 5
Candidate Starts for NonchalantPear_78:
(3, 48379), (Start: 5 @48490 has 152 MA's),

Gene: OhShagHennessy_50 Start: 37486, Stop: 37719, Start Num: 5
Candidate Starts for OhShagHennessy_50:
(Start: 5 @37486 has 152 MA's), (12, 37636), (13, 37675), (15, 37696),

Gene: OrionPax_77 Start: 48388, Stop: 48624, Start Num: 5
Candidate Starts for OrionPax_77:
(1, 48217), (3, 48277), (Start: 5 @48388 has 152 MA's),

Gene: PYPDinur_50 Start: 39082, Stop: 39237, Start Num: 10
Candidate Starts for PYPDinur_50:
(Start: 7 @39013 has 6 MA's), (9, 39073), (10, 39082),

Gene: PaddyBaddy_78 Start: 48391, Stop: 48627, Start Num: 5
Candidate Starts for PaddyBaddy_78:
(3, 48280), (Start: 5 @48391 has 152 MA's),

Gene: Palpatine_80 Start: 49769, Stop: 50005, Start Num: 5
Candidate Starts for Palpatine_80:
(3, 49658), (Start: 5 @49769 has 152 MA's),

Gene: Paperbeatsrock_77 Start: 49014, Stop: 49250, Start Num: 5
Candidate Starts for Paperbeatsrock_77:
(3, 48903), (Start: 5 @49014 has 152 MA's),

Gene: Pat3_76 Start: 47546, Stop: 47782, Start Num: 5
Candidate Starts for Pat3_76:
(1, 47375), (3, 47435), (Start: 5 @47546 has 152 MA's),

Gene: Petra64142_82 Start: 50233, Stop: 50469, Start Num: 5
Candidate Starts for Petra64142_82:
(1, 50062), (3, 50122), (Start: 5 @50233 has 152 MA's),

Gene: Phaja_76 Start: 48840, Stop: 49076, Start Num: 5
Candidate Starts for Phaja_76:
(1, 48669), (2, 48714), (3, 48729), (Start: 5 @48840 has 152 MA's),

Gene: Pharsalus_75 Start: 48814, Stop: 49050, Start Num: 5
Candidate Starts for Pharsalus_75:
(3, 48703), (Start: 5 @48814 has 152 MA's),

Gene: PhatBacter_82 Start: 49786, Stop: 50022, Start Num: 5
Candidate Starts for PhatBacter_82:
(3, 49675), (Start: 5 @49786 has 152 MA's),

Gene: Phaux_80 Start: 49781, Stop: 50017, Start Num: 5
Candidate Starts for Phaux_80:
(3, 49670), (Start: 5 @49781 has 152 MA's),

Gene: Phrux_75 Start: 48377, Stop: 48613, Start Num: 5
Candidate Starts for Phrux_75:
(3, 48266), (Start: 5 @48377 has 152 MA's),

Gene: Policronamos_81 Start: 49781, Stop: 50017, Start Num: 5
Candidate Starts for Policronamos_81:
(3, 49670), (Start: 5 @49781 has 152 MA's),

Gene: Poochiewood_52 Start: 38571, Stop: 38804, Start Num: 5

Candidate Starts for Poochiewood_52:
(Start: 5 @38571 has 152 MA's), (12, 38721), (13, 38760), (15, 38781),

Gene: Porky_77 Start: 48207, Stop: 48443, Start Num: 5
Candidate Starts for Porky_77:
(1, 48036), (2, 48081), (3, 48096), (Start: 5 @48207 has 152 MA's),

Gene: Ptowny_75 Start: 47676, Stop: 47912, Start Num: 5
Candidate Starts for Ptowny_75:
(1, 47505), (2, 47550), (3, 47565), (Start: 5 @47676 has 152 MA's),

Gene: Pumpkin_81 Start: 49435, Stop: 49671, Start Num: 5
Candidate Starts for Pumpkin_81:
(3, 49324), (Start: 5 @49435 has 152 MA's),

Gene: Quallification_79 Start: 49422, Stop: 49658, Start Num: 5
Candidate Starts for Quallification_79:
(1, 49251), (2, 49296), (3, 49311), (Start: 5 @49422 has 152 MA's),

Gene: Quby_51 Start: 38905, Stop: 39090, Start Num: 8
Candidate Starts for Quby_51:
(Start: 7 @38866 has 6 MA's), (8, 38905), (9, 38926), (10, 38935),

Gene: Rakim_79 Start: 48891, Stop: 49127, Start Num: 5
Candidate Starts for Rakim_79:
(3, 48780), (Start: 5 @48891 has 152 MA's),

Gene: Red305_54 Start: 40573, Stop: 40806, Start Num: 4
Candidate Starts for Red305_54:
(Start: 4 @40573 has 19 MA's), (6, 40579), (9, 40642),

Gene: Rimmer_79 Start: 49127, Stop: 49363, Start Num: 5
Candidate Starts for Rimmer_79:
(1, 48956), (3, 49016), (Start: 5 @49127 has 152 MA's),

Gene: RiverMonster_78 Start: 48955, Stop: 49191, Start Num: 5
Candidate Starts for RiverMonster_78:
(3, 48844), (Start: 5 @48955 has 152 MA's),

Gene: Rose5_52 Start: 38583, Stop: 38816, Start Num: 5
Candidate Starts for Rose5_52:
(Start: 5 @38583 has 152 MA's), (12, 38733), (13, 38772), (15, 38793),

Gene: Saints25_77 Start: 48365, Stop: 48601, Start Num: 5
Candidate Starts for Saints25_77:
(1, 48194), (3, 48254), (Start: 5 @48365 has 152 MA's),

Gene: Samty_53 Start: 40578, Stop: 40814, Start Num: 4
Candidate Starts for Samty_53:
(Start: 4 @40578 has 19 MA's), (9, 40650),

Gene: Sassay_73 Start: 47055, Stop: 47291, Start Num: 5
Candidate Starts for Sassay_73:

(3, 46944), (Start: 5 @47055 has 152 MA's),

Gene: ShamWow_78 Start: 49277, Stop: 49513, Start Num: 5
Candidate Starts for ShamWow_78:
(1, 49106), (3, 49166), (Start: 5 @49277 has 152 MA's),

Gene: Sheng711_52 Start: 38990, Stop: 39214, Start Num: 7
Candidate Starts for Sheng711_52:
(Start: 7 @38990 has 6 MA's), (9, 39050), (10, 39059),

Gene: ShereKhan_76 Start: 49347, Stop: 49583, Start Num: 5
Candidate Starts for ShereKhan_76:
(1, 49176), (3, 49236), (Start: 5 @49347 has 152 MA's),

Gene: Silverleaf_53 Start: 38655, Stop: 38888, Start Num: 5
Candidate Starts for Silverleaf_53:
(Start: 5 @38655 has 152 MA's), (12, 38805),

Gene: Simpliphy_77 Start: 48355, Stop: 48591, Start Num: 5
Candidate Starts for Simpliphy_77:
(1, 48184), (3, 48244), (Start: 5 @48355 has 152 MA's),

Gene: SirDuracell_77 Start: 47641, Stop: 47877, Start Num: 5
Candidate Starts for SirDuracell_77:
(1, 47470), (3, 47530), (Start: 5 @47641 has 152 MA's),

Gene: Snenia_53 Start: 40574, Stop: 40807, Start Num: 4
Candidate Starts for Snenia_53:
(Start: 4 @40574 has 19 MA's), (6, 40580), (9, 40643),

Gene: SophKB_75 Start: 48033, Stop: 48269, Start Num: 5
Candidate Starts for SophKB_75:
(1, 47862), (2, 47907), (3, 47922), (Start: 5 @48033 has 152 MA's),

Gene: Sotrice96_79 Start: 49036, Stop: 49272, Start Num: 5
Candidate Starts for Sotrice96_79:
(1, 48865), (2, 48910), (3, 48925), (Start: 5 @49036 has 152 MA's),

Gene: Stank_81 Start: 49294, Stop: 49530, Start Num: 5
Candidate Starts for Stank_81:
(1, 49123), (2, 49168), (3, 49183), (Start: 5 @49294 has 152 MA's),

Gene: Stark_79 Start: 48838, Stop: 49074, Start Num: 5
Candidate Starts for Stark_79:
(3, 48727), (Start: 5 @48838 has 152 MA's),

Gene: StellaBean_76 Start: 48601, Stop: 48837, Start Num: 5
Candidate Starts for StellaBean_76:
(3, 48490), (Start: 5 @48601 has 152 MA's),

Gene: StolenFromERC_81 Start: 49076, Stop: 49312, Start Num: 5
Candidate Starts for StolenFromERC_81:
(1, 48905), (3, 48965), (Start: 5 @49076 has 152 MA's),

Gene: StormChicken_80 Start: 49734, Stop: 49970, Start Num: 5
Candidate Starts for StormChicken_80:
(1, 49563), (3, 49623), (Start: 5 @49734 has 152 MA's),

Gene: TBrady12_81 Start: 48775, Stop: 49011, Start Num: 5
Candidate Starts for TBrady12_81:
(1, 48604), (2, 48649), (3, 48664), (Start: 5 @48775 has 152 MA's),

Gene: Tarkin_77 Start: 49023, Stop: 49259, Start Num: 5
Candidate Starts for Tarkin_77:
(3, 48912), (Start: 5 @49023 has 152 MA's),

Gene: TeamEdward_80 Start: 49728, Stop: 49964, Start Num: 5
Candidate Starts for TeamEdward_80:
(1, 49557), (3, 49617), (Start: 5 @49728 has 152 MA's),

Gene: TeardropMSU_74 Start: 48023, Stop: 48259, Start Num: 5
Candidate Starts for TeardropMSU_74:
(1, 47852), (3, 47912), (Start: 5 @48023 has 152 MA's),

Gene: Teaspoon_79 Start: 48917, Stop: 49153, Start Num: 5
Candidate Starts for Teaspoon_79:
(1, 48746), (2, 48791), (3, 48806), (Start: 5 @48917 has 152 MA's),

Gene: Terminus_81 Start: 49810, Stop: 50046, Start Num: 5
Candidate Starts for Terminus_81:
(3, 49699), (Start: 5 @49810 has 152 MA's),

Gene: Thimble_79 Start: 48258, Stop: 48494, Start Num: 5
Candidate Starts for Thimble_79:
(3, 48147), (Start: 5 @48258 has 152 MA's),

Gene: Thresher_80 Start: 49897, Stop: 50133, Start Num: 5
Candidate Starts for Thresher_80:
(3, 49786), (Start: 5 @49897 has 152 MA's),

Gene: Tomaszewski_73 Start: 48186, Stop: 48422, Start Num: 5
Candidate Starts for Tomaszewski_73:
(1, 48015), (3, 48075), (Start: 5 @48186 has 152 MA's),

Gene: Toto_76 Start: 49277, Stop: 49513, Start Num: 5
Candidate Starts for Toto_76:
(1, 49106), (3, 49166), (Start: 5 @49277 has 152 MA's),

Gene: Traaww1_74 Start: 48461, Stop: 48697, Start Num: 5
Candidate Starts for Traaww1_74:
(1, 48290), (2, 48335), (3, 48350), (Start: 5 @48461 has 152 MA's),

Gene: TriFive_55 Start: 40573, Stop: 40806, Start Num: 4
Candidate Starts for TriFive_55:
(Start: 4 @40573 has 19 MA's), (6, 40579), (9, 40642),

Gene: Tuco_79 Start: 49785, Stop: 50021, Start Num: 5
Candidate Starts for Tuco_79:
(1, 49614), (2, 49659), (3, 49674), (Start: 5 @49785 has 152 MA's),

Gene: Tyson_52 Start: 38585, Stop: 38818, Start Num: 5
Candidate Starts for Tyson_52:
(Start: 5 @38585 has 152 MA's), (12, 38735), (13, 38774), (15, 38795),

Gene: UPIE_52 Start: 38471, Stop: 38704, Start Num: 5
Candidate Starts for UPIE_52:
(Start: 5 @38471 has 152 MA's), (12, 38621), (13, 38660), (15, 38681),

Gene: Ukulele_73 Start: 48168, Stop: 48404, Start Num: 5
Candidate Starts for Ukulele_73:
(1, 47997), (3, 48057), (Start: 5 @48168 has 152 MA's),

Gene: Wamburgrxpress_52 Start: 38487, Stop: 38720, Start Num: 5
Candidate Starts for Wamburgrxpress_52:
(Start: 5 @38487 has 152 MA's), (12, 38637), (13, 38676), (15, 38697),

Gene: Whirlwind_54 Start: 40389, Stop: 40625, Start Num: 4
Candidate Starts for Whirlwind_54:
(Start: 4 @40389 has 19 MA's),

Gene: Wiggin_80 Start: 48862, Stop: 49098, Start Num: 5
Candidate Starts for Wiggin_80:
(1, 48691), (2, 48736), (3, 48751), (Start: 5 @48862 has 152 MA's),

Gene: Willez_73 Start: 47055, Stop: 47291, Start Num: 5
Candidate Starts for Willez_73:
(3, 46944), (Start: 5 @47055 has 152 MA's),

Gene: Wyatt2_53 Start: 38583, Stop: 38816, Start Num: 5
Candidate Starts for Wyatt2_53:
(Start: 5 @38583 has 152 MA's), (12, 38733), (13, 38772), (15, 38793),

Gene: Xandras_77 Start: 48270, Stop: 48506, Start Num: 5
Candidate Starts for Xandras_77:
(3, 48159), (Start: 5 @48270 has 152 MA's),

Gene: YassJohnny_75 Start: 48225, Stop: 48461, Start Num: 5
Candidate Starts for YassJohnny_75:
(Start: 5 @48225 has 152 MA's),

Gene: Youngblood_81 Start: 49737, Stop: 49973, Start Num: 5
Candidate Starts for Youngblood_81:
(3, 49626), (Start: 5 @49737 has 152 MA's),

Gene: Zaria_53 Start: 38598, Stop: 38831, Start Num: 5
Candidate Starts for Zaria_53:
(Start: 5 @38598 has 152 MA's), (12, 38748), (13, 38787), (15, 38808),

Gene: xkcd_81 Start: 49927, Stop: 50163, Start Num: 5

Candidate Starts for xkcd_81:
(1, 49756), (2, 49801), (3, 49816), (Start: 5 @49927 has 152 MA's),