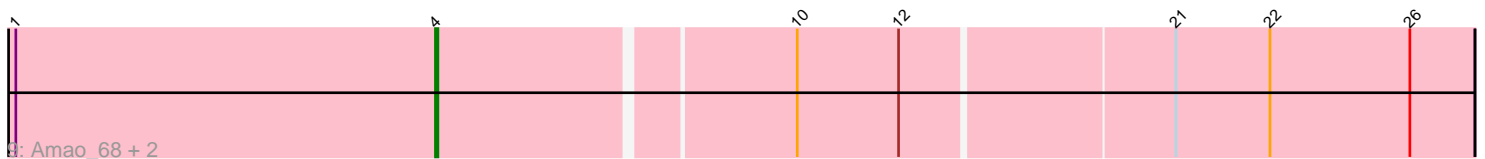
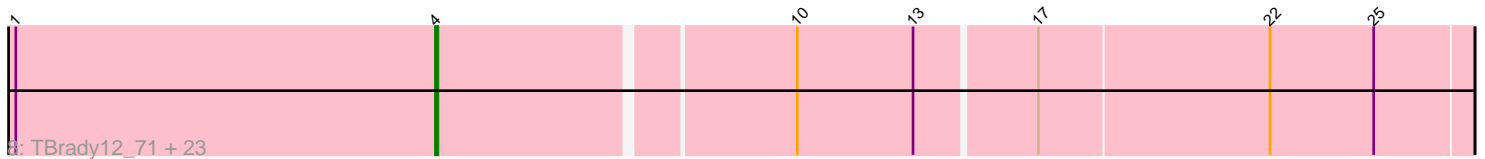
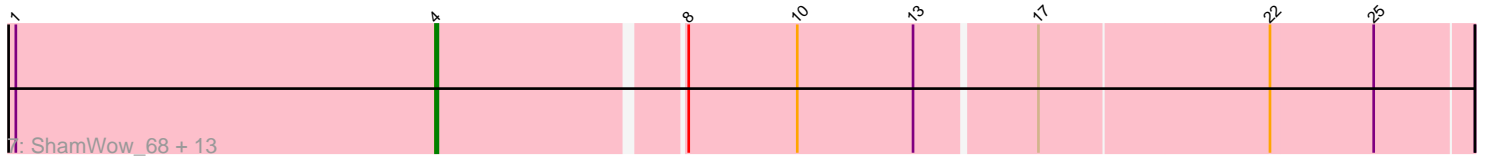
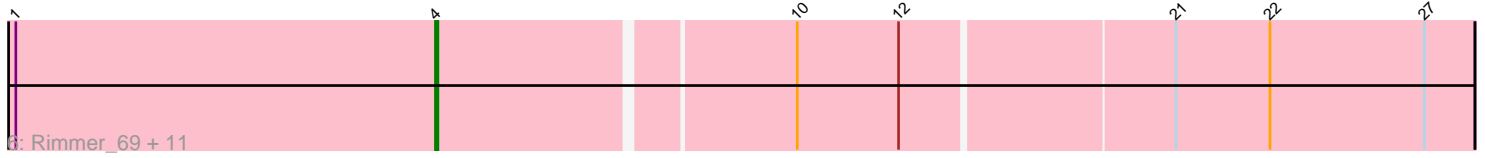
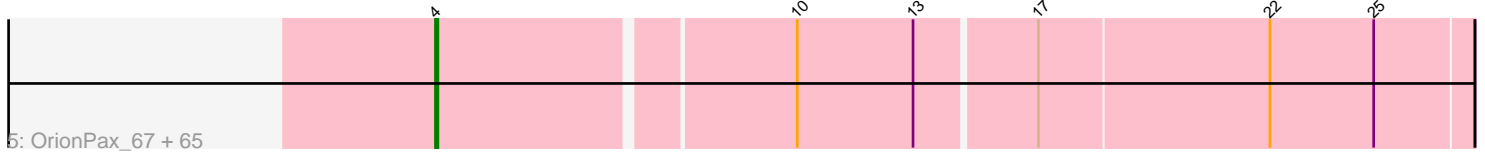
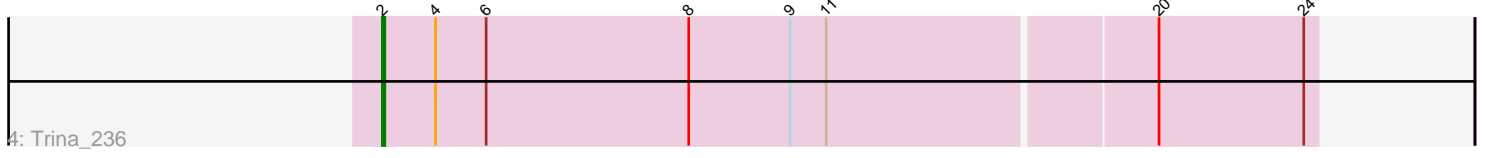
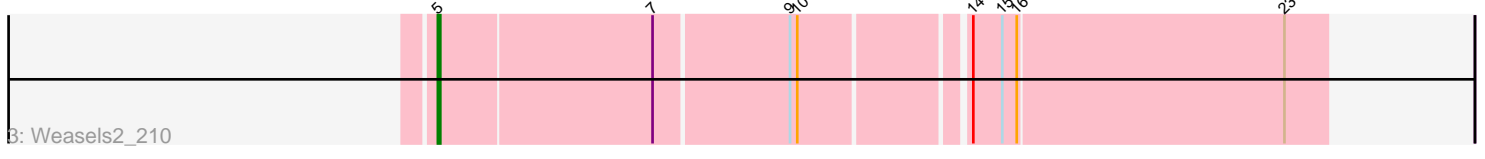
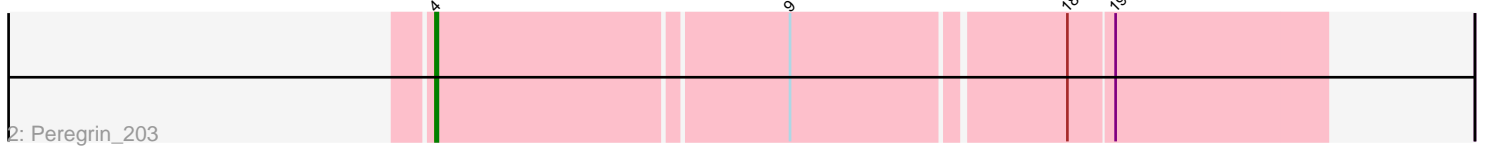
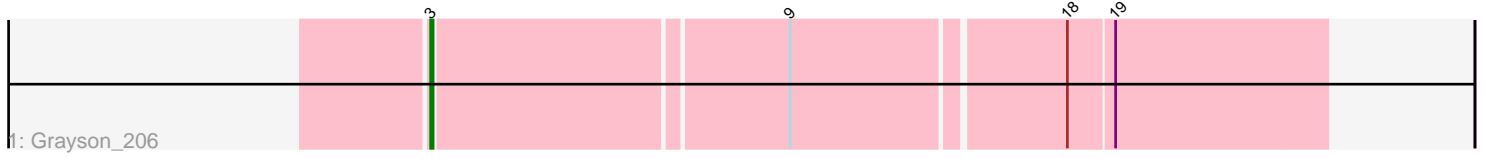


Pham 196373



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 196373 Report

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

Pham number 196373 has 124 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Grayson_206
- Track 2 : Peregrin_203
- Track 3 : Weasels2_210
- Track 4 : Trina_236
- Track 5 : OrionPax_67, Tuco_69, Quallification_69, NelitzaMV_66, Highbury_67, NoSleep_69, Lilac_70, Daikon_70, Czyszczon1_69, Marshmallow_66, Miniwave_63, TeardropMSU_64, RiverMonster_68, Dumbo_68, Manda_68, Phaux_70, Pumpkin_71, Sotrice96_69, Ukulele_63, Cactus_71, BigBubba_68, IHOP_66, xkcd_71, Elph10_68, Icee_69, Kostya_68, SophKB_65, Eureka_66, Thresher_70, Kanye_65, Murica_71, 244_69, Elite2014_67, Hopey_68, ChosenOne_68, Murphy_68, PhatBacter_72, Goku_66, Balomoji_68, Pharsalus_65, Dusk_65, BadStone_65, Gator_66, HufflyPuff_71, Phrux_65, Phaja_66, Stark_69, Cjw1_68, HanKaySha_68, BugsBunny_68, DrDrey_68, Tarkin_67, Rakim_69, Paperbeatsrock_67, Simpliphy_67, Palpatine_70, Policronamos_72, Saints25_67, StellaBean_66, Lilpickle_67, ABCat_65, Flypotenuse_64, Myrale_68, Xandras_67, Filch_69, ShereKhan_67
- Track 6 : Rimmer_69, YassJohnny_65, Glexan_67, SirDuracell_67, Tomaszewski_63, Sassay_63, Buck_69, Harella_68, DoctorDiddles_67, Bask21_68, Petra64142_72, Willez_63
- Track 7 : ShamWow_68, BilboSwaggins_67, Traaww1_64, Mindy_67, Easy2Say_69, Adnama_72, Barbarian_67, Toto_66, CrystalP_67, Asriel_67, Moldemort_71, Wiggin_70, Henry_66, Stank_71
- Track 8 : TBrady12_71, Hoonter_71, GoldenSpark_72, GooberAzure_71, Youngblood_71, Goldilocks_71, AmericanBeauty_72, MadamMonkfish_68, Lilizi_69, FairyPath_68, Bench_71, Command613_70, Gemini_73, BaboJay_65, Teaspoon_69, Inca_65, JeTaime_68, Gage_70, Porky_67, Kimchi_72, Emmina_68, Argent26_72, StolenFromERC_71, Holt_73
- Track 9 : Amao_68, Pat3_66, ChotaBhai_68
- Track 10 : Cookies_65

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

The start number called the most often in the published annotations is 4, it was called in 113 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_69, ABCat_65, Adnama_72, Amao_68, AmericanBeauty_72, Argent26_72, Asriel_67, BaboJay_65, BadStone_65, Balomoji_68, Barbarian_67, Bask21_68, Bench_71, BigBubba_68, BilboSwaggins_67, Buck_69, BugsBunny_68, Cactus_71, ChosenOne_68, ChotaBhai_68, Cjw1_68, Command613_70, Cookies_65, CrystalP_67, Czystzczon1_69, Daikon_70, DoctorDiddles_67, DrDrey_68, Dumbo_68, Dusk_65, Easy2Say_69, Elite2014_67, Elph10_68, Emmina_68, Eureka_66, FairyPath_68, Filch_69, Flypotenuse_64, Gage_70, Gator_66, Gemini_73, Glexan_67, Goku_66, GoldenSpark_72, Goldilocks_71, GooberAzure_71, HanKaySha_68, Harella_68, Henry_66, Highbury_67, Holt_73, Hoonter_71, Hopey_68, HufflyPuff_71, IHOP_66, Icee_69, Inca_65, JeTaime_68, Kanye_65, Kimchi_72, Kostya_68, Lilac_70, Lilizi_69, Lilpickle_67, MadamMonkfish_68, Manda_68, Marshmallow_66, Mindy_67, Miniwave_63, Moldemort_71, Murica_71, Murphy_68, Myrale_68, NelitzaMV_66, NoSleep_69, OrionPax_67, Palpatine_70, Paperbeatsrock_67, Pat3_66, Peregrin_203, Petra64142_72, Phaja_66, Pharsalus_65, PhatBacter_72, Phaux_70, Phrux_65, Policronamos_72, Porky_67, Pumpkin_71, Quallification_69, Rakim_69, Rimmer_69, RiverMonster_68, Saints25_67, Sassay_63, ShamWow_68, ShereKhan_67, Simpliphy_67, SirDuracell_67, SophKB_65, Sotrice96_69, Stank_71, Stark_69, StellaBean_66, StolenFromERC_71, TBrady12_71, Tarkin_67, TeardropMSU_64, Teaspoon_69, Thresher_70, Tomaszewski_63, Toto_66, Traaww1_64, Tuco_69, Ukulele_63, Wiggin_70, Willez_63, Xandras_67, YassJohnny_65, Youngblood_71, xkcd_71,

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

- Trina_236,

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

- Grayson_206, Weasels2_210,

Summary by start number:

Start 2:

- Found in 1 of 124 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trina_236 (CE),

Start 3:

- Found in 1 of 124 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson_206 (CB),

Start 4:

- Found in 122 of 124 (98.4%) of genes in pham
- Manual Annotations of this start: 113 of 116
- Called 99.2% of time when present
- Phage (with cluster) where this start called: 244_69 (E), ABCat_65 (E), Adnama_72 (E), Amao_68 (E), AmericanBeauty_72 (E), Argent26_72 (E), Asriel_67 (E), BaboJay_65 (E), BadStone_65 (E), Balomoji_68 (E), Barbarian_67 (E), Bask21_68 (E), Bench_71 (E), BigBubba_68 (E), BilboSwaggins_67 (E), Buck_69 (E),

BugsBunny_68 (E), Cactus_71 (E), ChosenOne_68 (E), ChotaBhai_68 (E), Cjw1_68 (E), Command613_70 (E), Cookies_65 (E), CrystalP_67 (E), Czyszczone1_69 (E), Daikon_70 (E), DoctorDiddles_67 (E), DrDrey_68 (E), Dumbo_68 (E), Dusk_65 (E), Easy2Say_69 (E), Elite2014_67 (E), Elph10_68 (E), Emmina_68 (E), Eureka_66 (E), FairyPath_68 (E), Filch_69 (E), Flypotenuse_64 (E), Gage_70 (E), Gator_66 (E), Gemini_73 (E), Glexan_67 (E), Goku_66 (E), GoldenSpark_72 (E), Goldilocks_71 (E), GooberAzure_71 (E), HanKaySha_68 (E), Harella_68 (E), Henry_66 (E), Highbury_67 (E), Holt_73 (E), Hoonter_71 (E), Hopey_68 (E), HufflyPuff_71 (E), IHOP_66 (E), Icee_69 (E), Inca_65 (E), JeTaime_68 (E), Kanye_65 (E), Kimchi_72 (E), Kostya_68 (E), Lilac_70 (E), Lilizi_69 (E), Lilpickle_67 (E), MadamMonkfish_68 (E), Manda_68 (E), Marshmallow_66 (E), Mindy_67 (E), Miniwave_63 (E), Moldemort_71 (E), Murica_71 (E), Murphy_68 (E), Myrale_68 (E), NelitzaMV_66 (E), NoSleep_69 (E), OrionPax_67 (E), Palpatine_70 (E), Paperbeatsrock_67 (E), Pat3_66 (E), Peregrin_203 (CB), Petra64142_72 (E), Phaja_66 (E), Pharsalus_65 (E), PhatBacter_72 (E), Phaux_70 (E), Phrux_65 (E), Policronamos_72 (E), Porky_67 (E), Pumpkin_71 (E), Qualification_69 (E), Rakim_69 (E), Rimmer_69 (E), RiverMonster_68 (E), Saints25_67 (E), Sassay_63 (E), ShamWow_68 (E), ShereKhan_67 (E), Simpliphy_67 (E), SirDuracell_67 (E), SophKB_65 (E), Sotrice96_69 (E), Stank_71 (E), Stark_69 (E), StellaBean_66 (E), StolenFromERC_71 (E), TBrady12_71 (E), Tarkin_67 (E), TeardropMSU_64 (E), Teaspoon_69 (E), Thresher_70 (E), Tomaszewski_63 (E), Toto_66 (E), Traaww1_64 (E), Tuco_69 (E), Ukulele_63 (E), Wiggin_70 (E), Willez_63 (E), Xandras_67 (E), YassJohnny_65 (E), Youngblood_71 (E), xkcd_71 (E),

Start 5:

- Found in 1 of 124 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Weasels2_210 (CB),

Summary by clusters:

There are 3 clusters represented in this pham: CB, E, CE,

Info for manual annotations of cluster CB:

- Start number 3 was manually annotated 1 time for cluster CB.
- Start number 4 was manually annotated 1 time for cluster CB.
- Start number 5 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CE:

- Start number 2 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster E:

- Start number 4 was manually annotated 112 times for cluster E.

Gene Information:

Gene: 244_69 Start: 45158, Stop: 45568, Start Num: 4

Candidate Starts for 244_69:

(Start: 4 @45158 has 113 MA's), (10, 45299), (13, 45347), (17, 45395), (22, 45488), (25, 45530),

Gene: ABCat_65 Start: 45505, Stop: 45915, Start Num: 4
Candidate Starts for ABCat_65:
(Start: 4 @45505 has 113 MA's), (10, 45646), (13, 45694), (17, 45742), (22, 45835), (25, 45877),

Gene: Adnama_72 Start: 45528, Stop: 45938, Start Num: 4
Candidate Starts for Adnama_72:
(1, 45354), (Start: 4 @45528 has 113 MA's), (8, 45624), (10, 45669), (13, 45717), (17, 45765), (22, 45858), (25, 45900),

Gene: Amao_68 Start: 44913, Stop: 45326, Start Num: 4
Candidate Starts for Amao_68:
(1, 44739), (Start: 4 @44913 has 113 MA's), (10, 45054), (12, 45096), (21, 45204), (22, 45243), (26, 45300),

Gene: AmericanBeauty_72 Start: 45671, Stop: 46081, Start Num: 4
Candidate Starts for AmericanBeauty_72:
(1, 45497), (Start: 4 @45671 has 113 MA's), (10, 45812), (13, 45860), (17, 45908), (22, 46001), (25, 46043),

Gene: Argent26_72 Start: 45309, Stop: 45719, Start Num: 4
Candidate Starts for Argent26_72:
(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: Asriel_67 Start: 43865, Stop: 44275, Start Num: 4
Candidate Starts for Asriel_67:
(1, 43691), (Start: 4 @43865 has 113 MA's), (8, 43961), (10, 44006), (13, 44054), (17, 44102), (22, 44195), (25, 44237),

Gene: BaboJay_65 Start: 44702, Stop: 45112, Start Num: 4
Candidate Starts for BaboJay_65:
(1, 44528), (Start: 4 @44702 has 113 MA's), (10, 44843), (13, 44891), (17, 44939), (22, 45032), (25, 45074),

Gene: BadStone_65 Start: 45074, Stop: 45484, Start Num: 4
Candidate Starts for BadStone_65:
(Start: 4 @45074 has 113 MA's), (10, 45215), (13, 45263), (17, 45311), (22, 45404), (25, 45446),

Gene: Balomoji_68 Start: 45635, Stop: 46045, Start Num: 4
Candidate Starts for Balomoji_68:
(Start: 4 @45635 has 113 MA's), (10, 45776), (13, 45824), (17, 45872), (22, 45965), (25, 46007),

Gene: Barbarian_67 Start: 43865, Stop: 44275, Start Num: 4
Candidate Starts for Barbarian_67:
(1, 43691), (Start: 4 @43865 has 113 MA's), (8, 43961), (10, 44006), (13, 44054), (17, 44102), (22, 44195), (25, 44237),

Gene: Bask21_68 Start: 44476, Stop: 44889, Start Num: 4
Candidate Starts for Bask21_68:
(1, 44302), (Start: 4 @44476 has 113 MA's), (10, 44617), (12, 44659), (21, 44767), (22, 44806), (27, 44869),

Gene: Bench_71 Start: 45175, Stop: 45585, Start Num: 4

Candidate Starts for Bench_71:

(1, 45001), (Start: 4 @45175 has 113 MA's), (10, 45316), (13, 45364), (17, 45412), (22, 45505), (25, 45547),

Gene: BigBubba_68 Start: 44884, Stop: 45294, Start Num: 4

Candidate Starts for BigBubba_68:

(Start: 4 @44884 has 113 MA's), (10, 45025), (13, 45073), (17, 45121), (22, 45214), (25, 45256),

Gene: BilboSwaggins_67 Start: 45513, Stop: 45923, Start Num: 4

Candidate Starts for BilboSwaggins_67:

(1, 45339), (Start: 4 @45513 has 113 MA's), (8, 45609), (10, 45654), (13, 45702), (17, 45750), (22, 45843), (25, 45885),

Gene: Buck_69 Start: 45756, Stop: 46169, Start Num: 4

Candidate Starts for Buck_69:

(1, 45582), (Start: 4 @45756 has 113 MA's), (10, 45897), (12, 45939), (21, 46047), (22, 46086), (27, 46149),

Gene: BugsBunny_68 Start: 45583, Stop: 45993, Start Num: 4

Candidate Starts for BugsBunny_68:

(Start: 4 @45583 has 113 MA's), (10, 45724), (13, 45772), (17, 45820), (22, 45913), (25, 45955),

Gene: Cactus_71 Start: 44529, Stop: 44939, Start Num: 4

Candidate Starts for Cactus_71:

(Start: 4 @44529 has 113 MA's), (10, 44670), (13, 44718), (17, 44766), (22, 44859), (25, 44901),

Gene: ChosenOne_68 Start: 44532, Stop: 44942, Start Num: 4

Candidate Starts for ChosenOne_68:

(Start: 4 @44532 has 113 MA's), (10, 44673), (13, 44721), (17, 44769), (22, 44862), (25, 44904),

Gene: ChotaBhai_68 Start: 44844, Stop: 45257, Start Num: 4

Candidate Starts for ChotaBhai_68:

(1, 44670), (Start: 4 @44844 has 113 MA's), (10, 44985), (12, 45027), (21, 45135), (22, 45174), (26, 45231),

Gene: Cjw1_68 Start: 46229, Stop: 46639, Start Num: 4

Candidate Starts for Cjw1_68:

(Start: 4 @46229 has 113 MA's), (10, 46370), (13, 46418), (17, 46466), (22, 46559), (25, 46601),

Gene: Command613_70 Start: 45568, Stop: 45978, Start Num: 4

Candidate Starts for Command613_70:

(1, 45394), (Start: 4 @45568 has 113 MA's), (10, 45709), (13, 45757), (17, 45805), (22, 45898), (25, 45940),

Gene: Cookies_65 Start: 44698, Stop: 45111, Start Num: 4

Candidate Starts for Cookies_65:

(1, 44524), (Start: 4 @44698 has 113 MA's), (10, 44839), (12, 44881), (21, 44989), (22, 45028),

Gene: CrystalP_67 Start: 45513, Stop: 45923, Start Num: 4

Candidate Starts for CrystalP_67:

(1, 45339), (Start: 4 @45513 has 113 MA's), (8, 45609), (10, 45654), (13, 45702), (17, 45750), (22, 45843), (25, 45885),

Gene: Czyszczone1_69 Start: 45038, Stop: 45448, Start Num: 4
Candidate Starts for Czyszczone1_69:
(Start: 4 @45038 has 113 MA's), (10, 45179), (13, 45227), (17, 45275), (22, 45368), (25, 45410),

Gene: Daikon_70 Start: 45656, Stop: 46066, Start Num: 4
Candidate Starts for Daikon_70:
(Start: 4 @45656 has 113 MA's), (10, 45797), (13, 45845), (17, 45893), (22, 45986), (25, 46028),

Gene: DoctorDiddles_67 Start: 44888, Stop: 45301, Start Num: 4
Candidate Starts for DoctorDiddles_67:
(1, 44714), (Start: 4 @44888 has 113 MA's), (10, 45029), (12, 45071), (21, 45179), (22, 45218), (27, 45281),

Gene: DrDrey_68 Start: 45954, Stop: 46364, Start Num: 4
Candidate Starts for DrDrey_68:
(Start: 4 @45954 has 113 MA's), (10, 46095), (13, 46143), (17, 46191), (22, 46284), (25, 46326),

Gene: Dumbo_68 Start: 44437, Stop: 44847, Start Num: 4
Candidate Starts for Dumbo_68:
(Start: 4 @44437 has 113 MA's), (10, 44578), (13, 44626), (17, 44674), (22, 44767), (25, 44809),

Gene: Dusk_65 Start: 44734, Stop: 45144, Start Num: 4
Candidate Starts for Dusk_65:
(Start: 4 @44734 has 113 MA's), (10, 44875), (13, 44923), (17, 44971), (22, 45064), (25, 45106),

Gene: Easy2Say_69 Start: 45975, Stop: 46385, Start Num: 4
Candidate Starts for Easy2Say_69:
(1, 45801), (Start: 4 @45975 has 113 MA's), (8, 46071), (10, 46116), (13, 46164), (17, 46212), (22, 46305), (25, 46347),

Gene: Elite2014_67 Start: 44531, Stop: 44941, Start Num: 4
Candidate Starts for Elite2014_67:
(Start: 4 @44531 has 113 MA's), (10, 44672), (13, 44720), (17, 44768), (22, 44861), (25, 44903),

Gene: Elph10_68 Start: 44536, Stop: 44946, Start Num: 4
Candidate Starts for Elph10_68:
(Start: 4 @44536 has 113 MA's), (10, 44677), (13, 44725), (17, 44773), (22, 44866), (25, 44908),

Gene: Emmina_68 Start: 44438, Stop: 44848, Start Num: 4
Candidate Starts for Emmina_68:
(1, 44264), (Start: 4 @44438 has 113 MA's), (10, 44579), (13, 44627), (17, 44675), (22, 44768), (25, 44810),

Gene: Eureka_66 Start: 45002, Stop: 45412, Start Num: 4
Candidate Starts for Eureka_66:
(Start: 4 @45002 has 113 MA's), (10, 45143), (13, 45191), (17, 45239), (22, 45332), (25, 45374),

Gene: FairyPath_68 Start: 45647, Stop: 46057, Start Num: 4
Candidate Starts for FairyPath_68:
(1, 45473), (Start: 4 @45647 has 113 MA's), (10, 45788), (13, 45836), (17, 45884), (22, 45977), (25, 46019),

Gene: Filch_69 Start: 44463, Stop: 44873, Start Num: 4

Candidate Starts for Filch_69:

(Start: 4 @44463 has 113 MA's), (10, 44604), (13, 44652), (17, 44700), (22, 44793), (25, 44835),

Gene: Flypotenuse_64 Start: 44519, Stop: 44929, Start Num: 4

Candidate Starts for Flypotenuse_64:

(Start: 4 @44519 has 113 MA's), (10, 44660), (13, 44708), (17, 44756), (22, 44849), (25, 44891),

Gene: Gage_70 Start: 45309, Stop: 45719, Start Num: 4

Candidate Starts for Gage_70:

(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: Gator_66 Start: 45365, Stop: 45775, Start Num: 4

Candidate Starts for Gator_66:

(Start: 4 @45365 has 113 MA's), (10, 45506), (13, 45554), (17, 45602), (22, 45695), (25, 45737),

Gene: Gemini_73 Start: 45826, Stop: 46236, Start Num: 4

Candidate Starts for Gemini_73:

(1, 45652), (Start: 4 @45826 has 113 MA's), (10, 45967), (13, 46015), (17, 46063), (22, 46156), (25, 46198),

Gene: Glexan_67 Start: 45646, Stop: 46059, Start Num: 4

Candidate Starts for Glexan_67:

(1, 45472), (Start: 4 @45646 has 113 MA's), (10, 45787), (12, 45829), (21, 45937), (22, 45976), (27, 46039),

Gene: Goku_66 Start: 44731, Stop: 45141, Start Num: 4

Candidate Starts for Goku_66:

(Start: 4 @44731 has 113 MA's), (10, 44872), (13, 44920), (17, 44968), (22, 45061), (25, 45103),

Gene: GoldenSpark_72 Start: 45309, Stop: 45719, Start Num: 4

Candidate Starts for GoldenSpark_72:

(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: Goldilocks_71 Start: 44810, Stop: 45220, Start Num: 4

Candidate Starts for Goldilocks_71:

(1, 44636), (Start: 4 @44810 has 113 MA's), (10, 44951), (13, 44999), (17, 45047), (22, 45140), (25, 45182),

Gene: GooberAzure_71 Start: 45309, Stop: 45719, Start Num: 4

Candidate Starts for GooberAzure_71:

(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: Grayson_206 Start: 104718, Stop: 105071, Start Num: 3

Candidate Starts for Grayson_206:

(Start: 3 @104718 has 1 MA's), (9, 104859), (18, 104967), (19, 104985),

Gene: HanKaySha_68 Start: 44616, Stop: 45026, Start Num: 4

Candidate Starts for HanKaySha_68:

(Start: 4 @44616 has 113 MA's), (10, 44757), (13, 44805), (17, 44853), (22, 44946), (25, 44988),

Gene: Harella_68 Start: 46162, Stop: 46575, Start Num: 4
Candidate Starts for Harella_68:
(1, 45988), (Start: 4 @46162 has 113 MA's), (10, 46303), (12, 46345), (21, 46453), (22, 46492), (27, 46555),

Gene: Henry_66 Start: 44953, Stop: 45363, Start Num: 4
Candidate Starts for Henry_66:
(1, 44779), (Start: 4 @44953 has 113 MA's), (8, 45049), (10, 45094), (13, 45142), (17, 45190), (22, 45283), (25, 45325),

Gene: Highbury_67 Start: 44604, Stop: 45014, Start Num: 4
Candidate Starts for Highbury_67:
(Start: 4 @44604 has 113 MA's), (10, 44745), (13, 44793), (17, 44841), (22, 44934), (25, 44976),

Gene: Holt_73 Start: 45723, Stop: 46133, Start Num: 4
Candidate Starts for Holt_73:
(1, 45549), (Start: 4 @45723 has 113 MA's), (10, 45864), (13, 45912), (17, 45960), (22, 46053), (25, 46095),

Gene: Hoonter_71 Start: 45309, Stop: 45719, Start Num: 4
Candidate Starts for Hoonter_71:
(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: Hokey_68 Start: 45148, Stop: 45558, Start Num: 4
Candidate Starts for Hokey_68:
(Start: 4 @45148 has 113 MA's), (10, 45289), (13, 45337), (17, 45385), (22, 45478), (25, 45520),

Gene: HufflyPuff_71 Start: 45981, Stop: 46391, Start Num: 4
Candidate Starts for HufflyPuff_71:
(Start: 4 @45981 has 113 MA's), (10, 46122), (13, 46170), (17, 46218), (22, 46311), (25, 46353),

Gene: IHOP_66 Start: 45077, Stop: 45487, Start Num: 4
Candidate Starts for IHOP_66:
(Start: 4 @45077 has 113 MA's), (10, 45218), (13, 45266), (17, 45314), (22, 45407), (25, 45449),

Gene: Icee_69 Start: 44976, Stop: 45386, Start Num: 4
Candidate Starts for Icee_69:
(Start: 4 @44976 has 113 MA's), (10, 45117), (13, 45165), (17, 45213), (22, 45306), (25, 45348),

Gene: Inca_65 Start: 43602, Stop: 44012, Start Num: 4
Candidate Starts for Inca_65:
(1, 43428), (Start: 4 @43602 has 113 MA's), (10, 43743), (13, 43791), (17, 43839), (22, 43932), (25, 43974),

Gene: JeTaime_68 Start: 45800, Stop: 46210, Start Num: 4
Candidate Starts for JeTaime_68:
(1, 45626), (Start: 4 @45800 has 113 MA's), (10, 45941), (13, 45989), (17, 46037), (22, 46130), (25, 46172),

Gene: Kanye_65 Start: 44658, Stop: 45068, Start Num: 4
Candidate Starts for Kanye_65:
(Start: 4 @44658 has 113 MA's), (10, 44799), (13, 44847), (17, 44895), (22, 44988), (25, 45030),

Gene: Kimchi_72 Start: 45312, Stop: 45722, Start Num: 4
Candidate Starts for Kimchi_72:
(1, 45138), (Start: 4 @45312 has 113 MA's), (10, 45453), (13, 45501), (17, 45549), (22, 45642), (25, 45684),

Gene: Kostya_68 Start: 45176, Stop: 45586, Start Num: 4
Candidate Starts for Kostya_68:
(Start: 4 @45176 has 113 MA's), (10, 45317), (13, 45365), (17, 45413), (22, 45506), (25, 45548),

Gene: Lilac_70 Start: 44933, Stop: 45343, Start Num: 4
Candidate Starts for Lilac_70:
(Start: 4 @44933 has 113 MA's), (10, 45074), (13, 45122), (17, 45170), (22, 45263), (25, 45305),

Gene: Lilizi_69 Start: 44646, Stop: 45056, Start Num: 4
Candidate Starts for Lilizi_69:
(1, 44472), (Start: 4 @44646 has 113 MA's), (10, 44787), (13, 44835), (17, 44883), (22, 44976), (25, 45018),

Gene: Lilpickle_67 Start: 44531, Stop: 44941, Start Num: 4
Candidate Starts for Lilpickle_67:
(Start: 4 @44531 has 113 MA's), (10, 44672), (13, 44720), (17, 44768), (22, 44861), (25, 44903),

Gene: MadamMonkfish_68 Start: 44255, Stop: 44665, Start Num: 4
Candidate Starts for MadamMonkfish_68:
(1, 44081), (Start: 4 @44255 has 113 MA's), (10, 44396), (13, 44444), (17, 44492), (22, 44585), (25, 44627),

Gene: Manda_68 Start: 45536, Stop: 45946, Start Num: 4
Candidate Starts for Manda_68:
(Start: 4 @45536 has 113 MA's), (10, 45677), (13, 45725), (17, 45773), (22, 45866), (25, 45908),

Gene: Marshmallow_66 Start: 45804, Stop: 46214, Start Num: 4
Candidate Starts for Marshmallow_66:
(Start: 4 @45804 has 113 MA's), (10, 45945), (13, 45993), (17, 46041), (22, 46134), (25, 46176),

Gene: Mindy_67 Start: 44119, Stop: 44529, Start Num: 4
Candidate Starts for Mindy_67:
(1, 43945), (Start: 4 @44119 has 113 MA's), (8, 44215), (10, 44260), (13, 44308), (17, 44356), (22, 44449), (25, 44491),

Gene: Miniwave_63 Start: 44572, Stop: 44982, Start Num: 4
Candidate Starts for Miniwave_63:
(Start: 4 @44572 has 113 MA's), (10, 44713), (13, 44761), (17, 44809), (22, 44902), (25, 44944),

Gene: Moldemort_71 Start: 45128, Stop: 45538, Start Num: 4
Candidate Starts for Moldemort_71:
(1, 44954), (Start: 4 @45128 has 113 MA's), (8, 45224), (10, 45269), (13, 45317), (17, 45365), (22, 45458), (25, 45500),

Gene: Murica_71 Start: 45981, Stop: 46391, Start Num: 4
Candidate Starts for Murica_71:
(Start: 4 @45981 has 113 MA's), (10, 46122), (13, 46170), (17, 46218), (22, 46311), (25, 46353),

Gene: Murphy_68 Start: 45418, Stop: 45828, Start Num: 4

Candidate Starts for Murphy_68:

(Start: 4 @45418 has 113 MA's), (10, 45559), (13, 45607), (17, 45655), (22, 45748), (25, 45790),

Gene: Myrale_68 Start: 45669, Stop: 46079, Start Num: 4

Candidate Starts for Myrale_68:

(Start: 4 @45669 has 113 MA's), (10, 45810), (13, 45858), (17, 45906), (22, 45999), (25, 46041),

Gene: NelitzaMV_66 Start: 44618, Stop: 45028, Start Num: 4

Candidate Starts for NelitzaMV_66:

(Start: 4 @44618 has 113 MA's), (10, 44759), (13, 44807), (17, 44855), (22, 44948), (25, 44990),

Gene: NoSleep_69 Start: 44876, Stop: 45286, Start Num: 4

Candidate Starts for NoSleep_69:

(Start: 4 @44876 has 113 MA's), (10, 45017), (13, 45065), (17, 45113), (22, 45206), (25, 45248),

Gene: OrionPax_67 Start: 44624, Stop: 45034, Start Num: 4

Candidate Starts for OrionPax_67:

(Start: 4 @44624 has 113 MA's), (10, 44765), (13, 44813), (17, 44861), (22, 44954), (25, 44996),

Gene: Palpatine_70 Start: 46008, Stop: 46418, Start Num: 4

Candidate Starts for Palpatine_70:

(Start: 4 @46008 has 113 MA's), (10, 46149), (13, 46197), (17, 46245), (22, 46338), (25, 46380),

Gene: Paperbeatsrock_67 Start: 45250, Stop: 45660, Start Num: 4

Candidate Starts for Paperbeatsrock_67:

(Start: 4 @45250 has 113 MA's), (10, 45391), (13, 45439), (17, 45487), (22, 45580), (25, 45622),

Gene: Pat3_66 Start: 43773, Stop: 44186, Start Num: 4

Candidate Starts for Pat3_66:

(1, 43599), (Start: 4 @43773 has 113 MA's), (10, 43914), (12, 43956), (21, 44064), (22, 44103), (26, 44160),

Gene: Peregrin_203 Start: 105124, Stop: 105477, Start Num: 4

Candidate Starts for Peregrin_203:

(Start: 4 @105124 has 113 MA's), (9, 105265), (18, 105373), (19, 105391),

Gene: Petra64142_72 Start: 46472, Stop: 46885, Start Num: 4

Candidate Starts for Petra64142_72:

(1, 46298), (Start: 4 @46472 has 113 MA's), (10, 46613), (12, 46655), (21, 46763), (22, 46802), (27, 46865),

Gene: Phaja_66 Start: 45076, Stop: 45486, Start Num: 4

Candidate Starts for Phaja_66:

(Start: 4 @45076 has 113 MA's), (10, 45217), (13, 45265), (17, 45313), (22, 45406), (25, 45448),

Gene: Pharsalus_65 Start: 45050, Stop: 45460, Start Num: 4

Candidate Starts for Pharsalus_65:

(Start: 4 @45050 has 113 MA's), (10, 45191), (13, 45239), (17, 45287), (22, 45380), (25, 45422),

Gene: PhatBacter_72 Start: 46025, Stop: 46435, Start Num: 4

Candidate Starts for PhatBacter_72:

(Start: 4 @46025 has 113 MA's), (10, 46166), (13, 46214), (17, 46262), (22, 46355), (25, 46397),

Gene: Phaux_70 Start: 46020, Stop: 46430, Start Num: 4

Candidate Starts for Phaux_70:

(Start: 4 @46020 has 113 MA's), (10, 46161), (13, 46209), (17, 46257), (22, 46350), (25, 46392),

Gene: Phrux_65 Start: 44616, Stop: 45026, Start Num: 4

Candidate Starts for Phrux_65:

(Start: 4 @44616 has 113 MA's), (10, 44757), (13, 44805), (17, 44853), (22, 44946), (25, 44988),

Gene: Policronamos_72 Start: 46020, Stop: 46430, Start Num: 4

Candidate Starts for Policronamos_72:

(Start: 4 @46020 has 113 MA's), (10, 46161), (13, 46209), (17, 46257), (22, 46350), (25, 46392),

Gene: Porky_67 Start: 44446, Stop: 44856, Start Num: 4

Candidate Starts for Porky_67:

(1, 44272), (Start: 4 @44446 has 113 MA's), (10, 44587), (13, 44635), (17, 44683), (22, 44776), (25, 44818),

Gene: Pumpkin_71 Start: 45674, Stop: 46084, Start Num: 4

Candidate Starts for Pumpkin_71:

(Start: 4 @45674 has 113 MA's), (10, 45815), (13, 45863), (17, 45911), (22, 46004), (25, 46046),

Gene: Quallification_69 Start: 45658, Stop: 46068, Start Num: 4

Candidate Starts for Quallification_69:

(Start: 4 @45658 has 113 MA's), (10, 45799), (13, 45847), (17, 45895), (22, 45988), (25, 46030),

Gene: Rakim_69 Start: 45127, Stop: 45537, Start Num: 4

Candidate Starts for Rakim_69:

(Start: 4 @45127 has 113 MA's), (10, 45268), (13, 45316), (17, 45364), (22, 45457), (25, 45499),

Gene: Rimmer_69 Start: 45366, Stop: 45779, Start Num: 4

Candidate Starts for Rimmer_69:

(1, 45192), (Start: 4 @45366 has 113 MA's), (10, 45507), (12, 45549), (21, 45657), (22, 45696), (27, 45759),

Gene: RiverMonster_68 Start: 45194, Stop: 45604, Start Num: 4

Candidate Starts for RiverMonster_68:

(Start: 4 @45194 has 113 MA's), (10, 45335), (13, 45383), (17, 45431), (22, 45524), (25, 45566),

Gene: Saints25_67 Start: 44604, Stop: 45014, Start Num: 4

Candidate Starts for Saints25_67:

(Start: 4 @44604 has 113 MA's), (10, 44745), (13, 44793), (17, 44841), (22, 44934), (25, 44976),

Gene: Sassay_63 Start: 43291, Stop: 43704, Start Num: 4

Candidate Starts for Sassay_63:

(1, 43117), (Start: 4 @43291 has 113 MA's), (10, 43432), (12, 43474), (21, 43582), (22, 43621), (27, 43684),

Gene: ShamWow_68 Start: 45513, Stop: 45923, Start Num: 4

Candidate Starts for ShamWow_68:

(1, 45339), (Start: 4 @45513 has 113 MA's), (8, 45609), (10, 45654), (13, 45702), (17, 45750), (22, 45843), (25, 45885),

Gene: ShereKhan_67 Start: 45582, Stop: 45992, Start Num: 4

Candidate Starts for ShereKhan_67:

(Start: 4 @45582 has 113 MA's), (10, 45723), (13, 45771), (17, 45819), (22, 45912), (25, 45954),

Gene: Simpliphy_67 Start: 44594, Stop: 45004, Start Num: 4

Candidate Starts for Simpliphy_67:

(Start: 4 @44594 has 113 MA's), (10, 44735), (13, 44783), (17, 44831), (22, 44924), (25, 44966),

Gene: SirDuracell_67 Start: 43865, Stop: 44278, Start Num: 4

Candidate Starts for SirDuracell_67:

(1, 43691), (Start: 4 @43865 has 113 MA's), (10, 44006), (12, 44048), (21, 44156), (22, 44195), (27, 44258),

Gene: SophKB_65 Start: 44269, Stop: 44679, Start Num: 4

Candidate Starts for SophKB_65:

(Start: 4 @44269 has 113 MA's), (10, 44410), (13, 44458), (17, 44506), (22, 44599), (25, 44641),

Gene: Sotrice96_69 Start: 45272, Stop: 45682, Start Num: 4

Candidate Starts for Sotrice96_69:

(Start: 4 @45272 has 113 MA's), (10, 45413), (13, 45461), (17, 45509), (22, 45602), (25, 45644),

Gene: Stank_71 Start: 45527, Stop: 45937, Start Num: 4

Candidate Starts for Stank_71:

(1, 45353), (Start: 4 @45527 has 113 MA's), (8, 45623), (10, 45668), (13, 45716), (17, 45764), (22, 45857), (25, 45899),

Gene: Stark_69 Start: 45077, Stop: 45487, Start Num: 4

Candidate Starts for Stark_69:

(Start: 4 @45077 has 113 MA's), (10, 45218), (13, 45266), (17, 45314), (22, 45407), (25, 45449),

Gene: StellaBean_66 Start: 44837, Stop: 45247, Start Num: 4

Candidate Starts for StellaBean_66:

(Start: 4 @44837 has 113 MA's), (10, 44978), (13, 45026), (17, 45074), (22, 45167), (25, 45209),

Gene: StolenFromERC_71 Start: 45309, Stop: 45719, Start Num: 4

Candidate Starts for StolenFromERC_71:

(1, 45135), (Start: 4 @45309 has 113 MA's), (10, 45450), (13, 45498), (17, 45546), (22, 45639), (25, 45681),

Gene: TBrady12_71 Start: 45011, Stop: 45421, Start Num: 4

Candidate Starts for TBrady12_71:

(1, 44837), (Start: 4 @45011 has 113 MA's), (10, 45152), (13, 45200), (17, 45248), (22, 45341), (25, 45383),

Gene: Tarkin_67 Start: 45259, Stop: 45669, Start Num: 4

Candidate Starts for Tarkin_67:

(Start: 4 @45259 has 113 MA's), (10, 45400), (13, 45448), (17, 45496), (22, 45589), (25, 45631),

Gene: TeardropMSU_64 Start: 44259, Stop: 44669, Start Num: 4

Candidate Starts for TeardropMSU_64:

(Start: 4 @44259 has 113 MA's), (10, 44400), (13, 44448), (17, 44496), (22, 44589), (25, 44631),

Gene: Teaspoon_69 Start: 45153, Stop: 45563, Start Num: 4
Candidate Starts for Teaspoon_69:
(1, 44979), (Start: 4 @45153 has 113 MA's), (10, 45294), (13, 45342), (17, 45390), (22, 45483), (25, 45525),

Gene: Thresher_70 Start: 46136, Stop: 46546, Start Num: 4
Candidate Starts for Thresher_70:
(Start: 4 @46136 has 113 MA's), (10, 46277), (13, 46325), (17, 46373), (22, 46466), (25, 46508),

Gene: Tomaszewski_63 Start: 44425, Stop: 44838, Start Num: 4
Candidate Starts for Tomaszewski_63:
(1, 44251), (Start: 4 @44425 has 113 MA's), (10, 44566), (12, 44608), (21, 44716), (22, 44755), (27, 44818),

Gene: Toto_66 Start: 45513, Stop: 45923, Start Num: 4
Candidate Starts for Toto_66:
(1, 45339), (Start: 4 @45513 has 113 MA's), (8, 45609), (10, 45654), (13, 45702), (17, 45750), (22, 45843), (25, 45885),

Gene: Traaww1_64 Start: 44694, Stop: 45104, Start Num: 4
Candidate Starts for Traaww1_64:
(1, 44520), (Start: 4 @44694 has 113 MA's), (8, 44790), (10, 44835), (13, 44883), (17, 44931), (22, 45024), (25, 45066),

Gene: Trina_236 Start: 121948, Stop: 122328, Start Num: 2
Candidate Starts for Trina_236:
(Start: 2 @121948 has 1 MA's), (Start: 4 @121969 has 113 MA's), (6, 121990), (8, 122074), (9, 122116), (11, 122131), (20, 122263), (24, 122323),

Gene: Tuco_69 Start: 46021, Stop: 46431, Start Num: 4
Candidate Starts for Tuco_69:
(Start: 4 @46021 has 113 MA's), (10, 46162), (13, 46210), (17, 46258), (22, 46351), (25, 46393),

Gene: Ukulele_63 Start: 44407, Stop: 44817, Start Num: 4
Candidate Starts for Ukulele_63:
(Start: 4 @44407 has 113 MA's), (10, 44548), (13, 44596), (17, 44644), (22, 44737), (25, 44779),

Gene: Weasels2_210 Start: 108355, Stop: 108705, Start Num: 5
Candidate Starts for Weasels2_210:
(Start: 5 @108355 has 1 MA's), (7, 108442), (9, 108496), (10, 108499), (14, 108562), (15, 108574), (16, 108580), (23, 108688),

Gene: Wiggin_70 Start: 45095, Stop: 45505, Start Num: 4
Candidate Starts for Wiggin_70:
(1, 44921), (Start: 4 @45095 has 113 MA's), (8, 45191), (10, 45236), (13, 45284), (17, 45332), (22, 45425), (25, 45467),

Gene: Willez_63 Start: 43291, Stop: 43704, Start Num: 4
Candidate Starts for Willez_63:
(1, 43117), (Start: 4 @43291 has 113 MA's), (10, 43432), (12, 43474), (21, 43582), (22, 43621), (27, 43684),

Gene: Xandras_67 Start: 44506, Stop: 44916, Start Num: 4

Candidate Starts for Xandras_67:

(Start: 4 @44506 has 113 MA's), (10, 44647), (13, 44695), (17, 44743), (22, 44836), (25, 44878),

Gene: YassJohnny_65 Start: 44464, Stop: 44877, Start Num: 4

Candidate Starts for YassJohnny_65:

(1, 44290), (Start: 4 @44464 has 113 MA's), (10, 44605), (12, 44647), (21, 44755), (22, 44794), (27, 44857),

Gene: Youngblood_71 Start: 45976, Stop: 46386, Start Num: 4

Candidate Starts for Youngblood_71:

(1, 45802), (Start: 4 @45976 has 113 MA's), (10, 46117), (13, 46165), (17, 46213), (22, 46306), (25, 46348),

Gene: xkcd_71 Start: 46166, Stop: 46576, Start Num: 4

Candidate Starts for xkcd_71:

(Start: 4 @46166 has 113 MA's), (10, 46307), (13, 46355), (17, 46403), (22, 46496), (25, 46538),