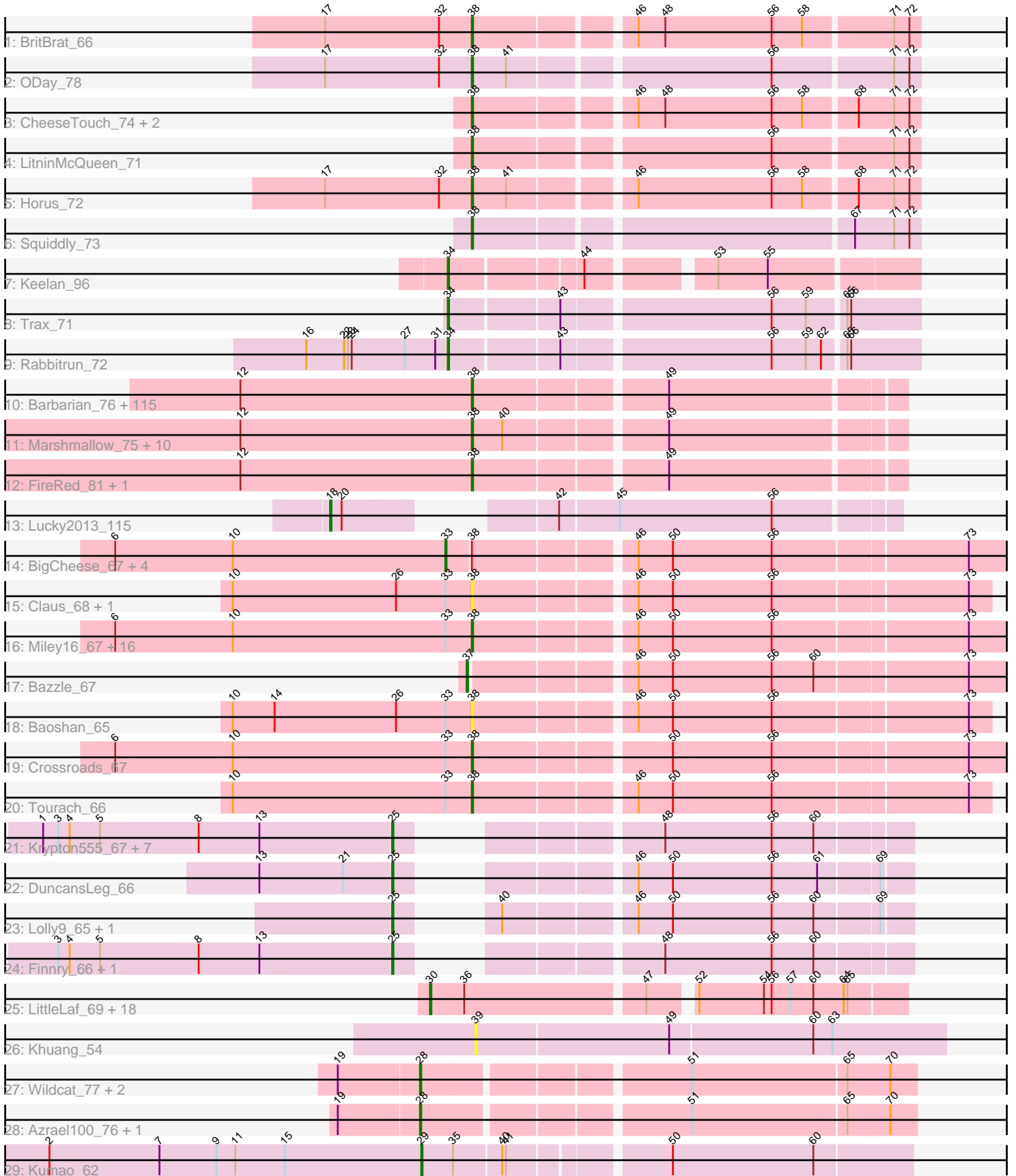


Pham 171199



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 171199 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171199 has 208 members, 17 are drafts.

Phages represented in each track:

- Track 1 : BritBrat_66
- Track 2 : ODay_78
- Track 3 : CheeseTouch_74, Kuwabara_72, Ecliptus_75
- Track 4 : LitninMcQueen_71
- Track 5 : Horus_72
- Track 6 : Squiddly_73
- Track 7 : Keelan_96
- Track 8 : Trax_71
- Track 9 : Rabbitrun_72
- Track 10 : Barbarian_76, Bench_80, Traaww1_73, HufflyPuff_80, Kostya_77, Mindy_76, Myrale_77, AmericanBeauty_84, Lilac_79, Daikon_79, Manda_78, Ukulele_72, Tarkin_76, Filch_78, Teaspoon_78, Rimmer_78, Porky_76, Buck_78, Petra64142_81, Phaux_79, NoSleep_78, Highbury_76, SophKB_74, NelitzaMV_75, Glexan_76, Czyszczon1_78, BadStone_74, Eureka_75, Miniwave_72, Pumpkin_80, TBrady12_80, TeardropMSU_73, Terminus_80, Lilizi_78, BigBubba_77, Sotrice96_78, IHOP_75, Hopey_77, Dumbo_77, Thresher_79, Harella_77, Elph10_77, Icee_78, Sassay_72, MPhalcon_78, Quallification_78, Toto_75, Murphy_77, Policronamos_81, Pharsalus_74, Inca_74, Balomoji_77, PhatBacter_81, Kimchi_81, Dusk_74, Command613_79, Gator_75, Flypotenuse_73, Kanye_74, Youngblood_80, Saints25_76, CrystalP_76, 244_78, ABCat_74, Stark_78, Phrux_74, Cactus_80, Elite2014_76, BugsBunny_77, Cjw1_77, Hoonter_80, Misfit_78, Maxxinista_79, Easy2Say_78, ChosenOne_77, Willez_72, BaboJay_74, Emmina_77, Nimrod_78, Stank_80, Simpliphy_76, Goku_75, Gage_79, Moldemort_80, RiverMonster_77, Asriel_76, Argent26_81, GooberAzure_80, JeTaime_77, Palpatine_79, xkcd_80, Phaja_75, Lilpickle_76, Holt_82, Bruin_74, Henry_75, Xandras_76, ShamWow_77, MISSy_78, Murica_80, DrDrey_77, Rakim_78, Mosby_73, Tuco_78, Paperbeatsrock_76, HanKaySha_77, Contagion_73, Goldilocks_80, StolenFromERC_80, Adnama_81, Gemini_82, MadamMonkfish_77, Wiggins_79, BilboSwaggins_76, StellaBean_75, GoldenSpark_81
- Track 11 : Marshmallow_75, Tomaszewski_72, OrionPax_76, YassJohnny_74, Amao_77, Cookies_74, ChotaBhai_77, SirDuracell_76, DoctorDiddles_76, Pat3_75, Bask21_77
- Track 12 : FireRed_81, Nala_79
- Track 13 : Lucky2013_115
- Track 14 : BigCheese_67, Lewan_68, BobsGarage_67, Nicholasp3_67, Vetrix_67
- Track 15 : Claus_68, ZhongYanYuan_66

- Track 16 : Miley16_67, LilDestine_67, Wigglewobble_67, Breezona_67, Zakai_68, Finemlucis_67, GuuelaD_66, Gardann_68, MkaliMitinis3_68, Kahlid_67, Itos_66, Rumpelstiltskin_66, Wilder_68, Loadrie_66, Gabriela_64, Hafay_69, Winky_67
- Track 17 : Bazzle_67
- Track 18 : Baoshan_65
- Track 19 : Crossroads_67
- Track 20 : Tourach_66
- Track 21 : Krypton555_67, Jubie_65, Clautastrophe_65, Jobypre_66, Whirlwind_66, Lumos_67, MsGreen_66, Snenia_65
- Track 22 : DuncansLeg_66
- Track 23 : Lolly9_65, MiniLon_69
- Track 24 : Finnry_66, Samty_66
- Track 25 : LittleLaf_69, Blackbeetle_69, Pringar_68, VasuNzinga_68, JoieB_70, FeliMaine_68, Corazon_67, Marvin_65, Beelzebub_73, MosMoris_66, Caprice_64, RedRaider77_68, Clarkson_70, Huphlepuuff_71, Poise_69, Lilbit_69, Gattaca_67, Raela_69, Tesla_66
- Track 26 : Khuang_54
- Track 27 : Wildcat_77, MaryV_77, EniyanLRS_168
- Track 28 : Azrael100_76, Cosmo_77
- Track 29 : Kumao_62

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

The start number called the most often in the published annotations is 38, it was called in 147 of the 191 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_78, ABCat_74, Adnama_81, Amao_77, AmericanBeauty_84, Argent26_81, Asriel_76, BaboJay_74, BadStone_74, Balomoji_77, Baoshan_65, Barbarian_76, Bask21_77, Bench_80, BigBubba_77, BilboSwaggins_76, Breezona_67, BritBrat_66, Bruin_74, Buck_78, BugsBunny_77, Cactus_80, CheeseTouch_74, ChosenOne_77, ChotaBhai_77, Cjw1_77, Claus_68, Command613_79, Contagion_73, Cookies_74, Crossroads_67, CrystalP_76, Czyszczonek_78, Daikon_79, DoctorDiddles_76, DrDrey_77, Dumbo_77, Dusk_74, Easy2Say_78, Ecliptus_75, Elite2014_76, Elph10_77, Emmina_77, Eureka_75, Filch_78, Finemlucis_67, FireRed_81, Flypotenuse_73, Gabriela_64, Gage_79, Gardann_68, Gator_75, Gemini_82, Glexan_76, Goku_75, GoldenSpark_81, Goldilocks_80, GooberAzure_80, GuuelaD_66, Hafay_69, HanKaySha_77, Harella_77, Henry_75, Highbury_76, Holt_82, Hoonter_80, Hopey_77, Horus_72, HuffyPuff_80, IHOP_75, Icee_78, Inca_74, Itos_66, JeTaime_77, Kahlid_67, Kanye_74, Kimchi_81, Kostya_77, Kuwabara_72, LilDestine_67, Lilac_79, Lilizi_78, Lilpickle_76, LitninMcQueen_71, Loadrie_66, MISSy_78, MPhalcon_78, MadamMonkfish_77, Manda_78, Marshmallow_75, Maxxinista_79, Miley16_67, Mindy_76, Miniwave_72, Misfit_78, MkaliMitinis3_68, Moldemort_80, Mosby_73, Murica_80, Murphy_77, Myrale_77, Nala_79, NelitzaMV_75, Nimrod_78, NoSleep_78, ODay_78, OrionPax_76, Palpatine_79, Paperbeatsrock_76, Pat3_75, Petra64142_81, Phaja_75, Pharsalus_74, PhatBacter_81, Phaux_79, Phrux_74, Policronamos_81, Porky_76, Pumpkin_80, Quallification_78, Rakim_78, Rimmer_78, RiverMonster_77, Rumpelstiltskin_66, Saints25_76, Sassay_72, ShamWow_77, Simpliphy_76, SirDuracell_76, SophKB_74, Sotrice96_78, Squiddly_73, Stank_80, Stark_78,

StellaBean_75, StolenFromERC_80, TBrady12_80, Tarkin_76, TeardropMSU_73, Teaspoon_78, Terminus_80, Thresher_79, Tomaszewski_72, Toto_75, Tourach_66, Traaww1_73, Tuco_78, Ukulele_72, Wiggin_79, Wigglewobble_67, Wilder_68, Willez_72, Winky_67, Xandras_76, YassJohnny_74, Youngblood_80, Zakai_68, ZhongYanYuan_66, xkcd_80,

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

- BigCheese_67, BobsGarage_67, Lewan_68, Nicholasp3_67, Vetric_67,

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

- Azrael100_76, Bazzle_67, Beelzebub_73, Blackbeetle_69, Caprice_64, Clarkson_70, Clautastrophe_65, Corazon_67, Cosmo_77, DuncansLeg_66, EniyanLRS_168, FeliMaine_68, Finnry_66, Gattaca_67, Huphlepuuff_71, Jobypre_66, JoieB_70, Jubie_65, Keelan_96, Khuang_54, Krypton555_67, Kumao_62, Lilbit_69, LittleLaf_69, Lolly9_65, Lucky2013_115, Lumos_67, Marvin_65, MaryV_77, MiniLon_69, MosMoris_66, MsGreen_66, Poise_69, Pringar_68, Rabbitrun_72, Raela_69, RedRaider77_68, Samty_66, Snenia_65, Tesla_66, Trax_71, VasuNzinga_68, Whirlwind_66, Wildcat_77,

Summary by start number:

Start 18:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lucky2013_115 (J),

Start 25:

- Found in 13 of 208 (6.2%) of genes in pham
- Manual Annotations of this start: 12 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clautastrophe_65 (L3), DuncansLeg_66 (L3), Finnry_66 (L3), Jobypre_66 (L3), Jubie_65 (L3), Krypton555_67 (L3), Lolly9_65 (L3), Lumos_67 (L3), MiniLon_69 (L3), MsGreen_66 (L3), Samty_66 (L3), Snenia_65 (L3), Whirlwind_66 (L3),

Start 28:

- Found in 5 of 208 (2.4%) of genes in pham
- Manual Annotations of this start: 5 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100_76 (V), Cosmo_77 (V), EniyanLRS_168 (V), MaryV_77 (V), Wildcat_77 (V),

Start 29:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao_62 (singleton),

Start 30:

- Found in 19 of 208 (9.1%) of genes in pham
- Manual Annotations of this start: 16 of 191
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Beelzebub_73 (S), Blackbeetle_69 (S), Caprice_64 (S), Clarkson_70 (S), Corazon_67 (S), FeliMaine_68 (S), Gattaca_67 (S), Huphlepuuff_71 (S), JoieB_70 (S), Lilbit_69 (S), LittleLaf_69 (S), Marvin_65 (S), MosMoris_66 (S), Poise_69 (S), Pringar_68 (S), Raela_69 (S), RedRaider77_68 (S), Tesla_66 (S), VasuNzinga_68 (S),

Start 33:

- Found in 27 of 208 (13.0%) of genes in pham
- Manual Annotations of this start: 5 of 191
- Called 18.5% of time when present
- Phage (with cluster) where this start called: BigCheese_67 (L2), BobsGarage_67 (L2), Lewan_68 (L2), Nicholasp3_67 (L2), Vetrix_67 (L2),

Start 34:

- Found in 3 of 208 (1.4%) of genes in pham
- Manual Annotations of this start: 3 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keelan_96 (DP), Rabbitrun_72 (DU2), Trax_71 (DU2),

Start 37:

- Found in 1 of 208 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bazzle_67 (L2),

Start 38:

- Found in 164 of 208 (78.8%) of genes in pham
- Manual Annotations of this start: 147 of 191
- Called 97.0% of time when present
- Phage (with cluster) where this start called: 244_78 (E), ABCat_74 (E), Adnama_81 (E), Amao_77 (E), AmericanBeauty_84 (E), Argent26_81 (E), Asriel_76 (E), BaboJay_74 (E), BadStone_74 (E), Balomoji_77 (E), Baoshan_65 (L2), Barbarian_76 (E), Bask21_77 (E), Bench_80 (E), BigBubba_77 (E), BilboSwaggins_76 (E), Breezona_67 (L2), BritBrat_66 (CY2), Bruin_74 (E), Buck_78 (E), BugsBunny_77 (E), Cactus_80 (E), CheeseTouch_74 (DN1), ChosenOne_77 (E), ChotaBhai_77 (E), Cjw1_77 (E), Claus_68 (L2), Command613_79 (E), Contagion_73 (E), Cookies_74 (E), Crossroads_67 (L2), CrystalP_76 (E), Czyszczonek1_78 (E), Daikon_79 (E), DoctorDiddles_76 (E), DrDrey_77 (E), Dumbo_77 (E), Dusk_74 (E), Easy2Say_78 (E), Ecliptus_75 (DN), Elite2014_76 (E), Elph10_77 (E), Emmina_77 (E), Eureka_75 (E), Filch_78 (E), Finemlucis_67 (L2), FireRed_81 (E), Flypotenuse_73 (E), Gabriela_64 (L2), Gage_79 (E), Gardann_68 (L2), Gator_75 (E), Gemini_82 (E), Glexan_76 (E), Goku_75 (E), GoldenSpark_81 (E), Goldilocks_80 (E), GooberAzure_80 (E), GuuelaD_66 (L2), Hafay_69 (L2), HanKaySha_77 (E), Harella_77 (E), Henry_75 (E), Highbury_76 (E), Holt_82 (E), Hoonter_80 (E), Hopey_77 (E), Horus_72 (DN1), HuffyPuff_80 (E), IHOP_75 (E), Icee_78 (E), Inca_74 (E), Itos_66 (L2), JeTaime_77 (E), Kahlid_67 (L2), Kanye_74 (E), Kimchi_81 (E), Kostya_77 (E), Kuwabara_72 (DN4), LilDestine_67 (L2), Lilac_79 (E), Lilizi_78 (E), Lilpickle_76 (E), LitninMcQueen_71 (DN1), Loadrie_66 (L2), MISSy_78 (E), MPhalcon_78 (E), MadamMonkfish_77 (E), Manda_78 (E), Marshmallow_75 (E), Maxxinista_79 (E), Miley16_67 (L2), Mindy_76 (E), Miniwave_72 (E), Misfit_78 (E), MkaliMitinis3_68 (L2), Moldemort_80 (E), Mosby_73 (E), Murica_80 (E), Murphy_77 (E), Myrale_77 (E), Nala_79 (E), NelitzaMV_75 (E), Nimrod_78 (E), NoSleep_78 (E),

ODay_78 (DN), OrionPax_76 (E), Palpatine_79 (E), Paperbeatsrock_76 (E), Pat3_75 (E), Petra64142_81 (E), Phaja_75 (E), Pharsalus_74 (E), PhatBacter_81 (E), Phaux_79 (E), Phrux_74 (E), Policronamos_81 (E), Porky_76 (E), Pumpkin_80 (E), Quallification_78 (E), Rakim_78 (E), Rimmer_78 (E), RiverMonster_77 (E), Rumpelstiltskin_66 (L2), Saints25_76 (E), Sassay_72 (E), ShamWow_77 (E), Simpliphy_76 (E), SirDuracell_76 (E), SophKB_74 (E), Sotrice96_78 (E), Squiddly_73 (DN2), Stank_80 (E), Stark_78 (E), StellaBean_75 (E), StolenFromERC_80 (E), TBrady12_80 (E), Tarkin_76 (E), TeardropMSU_73 (E), Teaspoon_78 (E), Terminus_80 (E), Thresher_79 (E), Tomaszewski_72 (E), Toto_75 (E), Tourach_66 (L2), Traaww1_73 (E), Tuco_78 (E), Ukulele_72 (E), Wiggin_79 (E), Wigglewiggles_67 (L2), Wilder_68 (L2), Willez_72 (E), Winky_67 (L2), Xandras_76 (E), YassJohnny_74 (E), Youngblood_80 (E), Zakai_68 (L2), ZhongYanYuan_66 (L2), xkcd_80 (E),

Start 39:

- Found in 1 of 208 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Khuang_54 (UNK),

Summary by clusters:

There are 15 clusters represented in this pham: DN, CY2, V, E, J, singleton, DN4, S, L2, L3, DN2, DN1, DU2, UNK, DP,

Info for manual annotations of cluster CY2:

- Start number 38 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DN:

- Start number 38 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 38 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 38 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster DN4:

- Start number 38 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 34 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster DU2:

- Start number 34 was manually annotated 2 times for cluster DU2.

Info for manual annotations of cluster E:

- Start number 38 was manually annotated 121 times for cluster E.

Info for manual annotations of cluster J:

- Start number 18 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster L2:

- Start number 33 was manually annotated 5 times for cluster L2.

- Start number 37 was manually annotated 1 time for cluster L2.
- Start number 38 was manually annotated 18 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 25 was manually annotated 12 times for cluster L3.

Info for manual annotations of cluster S:

- Start number 30 was manually annotated 16 times for cluster S.

Info for manual annotations of cluster V:

- Start number 28 was manually annotated 5 times for cluster V.

Gene Information:

Gene: 244_78 Start: 48609, Stop: 48926, Start Num: 38

Candidate Starts for 244_78:

(12, 48426), (Start: 38 @48609 has 147 MA's), (49, 48750),

Gene: ABCat_74 Start: 48962, Stop: 49279, Start Num: 38

Candidate Starts for ABCat_74:

(12, 48779), (Start: 38 @48962 has 147 MA's), (49, 49103),

Gene: Adnama_81 Start: 48988, Stop: 49305, Start Num: 38

Candidate Starts for Adnama_81:

(12, 48805), (Start: 38 @48988 has 147 MA's), (49, 49129),

Gene: Amao_77 Start: 48382, Stop: 48699, Start Num: 38

Candidate Starts for Amao_77:

(12, 48199), (Start: 38 @48382 has 147 MA's), (40, 48406), (49, 48523),

Gene: AmericanBeauty_84 Start: 49131, Stop: 49448, Start Num: 38

Candidate Starts for AmericanBeauty_84:

(12, 48948), (Start: 38 @49131 has 147 MA's), (49, 49272),

Gene: Argent26_81 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for Argent26_81:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: Asriel_76 Start: 47325, Stop: 47642, Start Num: 38

Candidate Starts for Asriel_76:

(12, 47142), (Start: 38 @47325 has 147 MA's), (49, 47466),

Gene: Azrael100_76 Start: 48787, Stop: 49152, Start Num: 28

Candidate Starts for Azrael100_76:

(19, 48724), (Start: 28 @48787 has 5 MA's), (51, 48979), (65, 49099), (70, 49132),

Gene: BaboJay_74 Start: 48162, Stop: 48479, Start Num: 38

Candidate Starts for BaboJay_74:

(12, 47979), (Start: 38 @48162 has 147 MA's), (49, 48303),

Gene: BadStone_74 Start: 48531, Stop: 48848, Start Num: 38

Candidate Starts for BadStone_74:

(12, 48348), (Start: 38 @48531 has 147 MA's), (49, 48672),

Gene: Balomoji_77 Start: 49092, Stop: 49409, Start Num: 38

Candidate Starts for Balomoji_77:

(12, 48909), (Start: 38 @49092 has 147 MA's), (49, 49233),

Gene: Baoshan_65 Start: 46306, Stop: 46692, Start Num: 38

Candidate Starts for Baoshan_65:

(10, 46120), (14, 46153), (26, 46249), (Start: 33 @46288 has 5 MA's), (Start: 38 @46306 has 147 MA's), (46, 46423), (50, 46450), (56, 46528), (73, 46675),

Gene: Barbarian_76 Start: 47325, Stop: 47642, Start Num: 38

Candidate Starts for Barbarian_76:

(12, 47142), (Start: 38 @47325 has 147 MA's), (49, 47466),

Gene: Bask21_77 Start: 47945, Stop: 48262, Start Num: 38

Candidate Starts for Bask21_77:

(12, 47762), (Start: 38 @47945 has 147 MA's), (40, 47969), (49, 48086),

Gene: Bazzle_67 Start: 46701, Stop: 47099, Start Num: 37

Candidate Starts for Bazzle_67:

(Start: 37 @46701 has 1 MA's), (46, 46818), (50, 46845), (56, 46923), (60, 46956), (73, 47070),

Gene: Beelzebub_73 Start: 40109, Stop: 40462, Start Num: 30

Candidate Starts for Beelzebub_73:

(Start: 30 @40109 has 16 MA's), (36, 40136), (47, 40271), (52, 40301), (54, 40352), (56, 40358), (57, 40373), (60, 40391), (64, 40415), (65, 40418),

Gene: Bench_80 Start: 48629, Stop: 48946, Start Num: 38

Candidate Starts for Bench_80:

(12, 48446), (Start: 38 @48629 has 147 MA's), (49, 48770),

Gene: BigBubba_77 Start: 48341, Stop: 48658, Start Num: 38

Candidate Starts for BigBubba_77:

(12, 48158), (Start: 38 @48341 has 147 MA's), (49, 48482),

Gene: BigCheese_67 Start: 46345, Stop: 46764, Start Num: 33

Candidate Starts for BigCheese_67:

(6, 46084), (10, 46177), (Start: 33 @46345 has 5 MA's), (Start: 38 @46363 has 147 MA's), (46, 46480), (50, 46507), (56, 46585), (73, 46732),

Gene: BilboSwaggins_76 Start: 48970, Stop: 49287, Start Num: 38

Candidate Starts for BilboSwaggins_76:

(12, 48787), (Start: 38 @48970 has 147 MA's), (49, 49111),

Gene: Blackbeetle_69 Start: 39121, Stop: 39474, Start Num: 30

Candidate Starts for Blackbeetle_69:

(Start: 30 @39121 has 16 MA's), (36, 39148), (47, 39283), (52, 39313), (54, 39364), (56, 39370), (57, 39385), (60, 39403), (64, 39427), (65, 39430),

Gene: BobsGarage_67 Start: 46345, Stop: 46764, Start Num: 33

Candidate Starts for BobsGarage_67:

(6, 46084), (10, 46177), (Start: 33 @46345 has 5 MA's), (Start: 38 @46363 has 147 MA's), (46, 46480), (50, 46507), (56, 46585), (73, 46732),

Gene: Breezona_67 Start: 46363, Stop: 46764, Start Num: 38

Candidate Starts for Breezona_67:

(6, 46084), (10, 46177), (Start: 33 @46345 has 5 MA's), (Start: 38 @46363 has 147 MA's), (46, 46480), (50, 46507), (56, 46585), (73, 46732),

Gene: BritBrat_66 Start: 43849, Stop: 44178, Start Num: 38

Candidate Starts for BritBrat_66:

(17, 43735), (32, 43825), (Start: 38 @43849 has 147 MA's), (46, 43963), (48, 43984), (56, 44068), (58, 44092), (71, 44158), (72, 44170),

Gene: Bruin_74 Start: 47505, Stop: 47822, Start Num: 38

Candidate Starts for Bruin_74:

(12, 47322), (Start: 38 @47505 has 147 MA's), (49, 47646),

Gene: Buck_78 Start: 49210, Stop: 49527, Start Num: 38

Candidate Starts for Buck_78:

(12, 49027), (Start: 38 @49210 has 147 MA's), (49, 49351),

Gene: BugsBunny_77 Start: 49037, Stop: 49354, Start Num: 38

Candidate Starts for BugsBunny_77:

(12, 48854), (Start: 38 @49037 has 147 MA's), (49, 49178),

Gene: Cactus_80 Start: 47986, Stop: 48303, Start Num: 38

Candidate Starts for Cactus_80:

(12, 47803), (Start: 38 @47986 has 147 MA's), (49, 48127),

Gene: Caprice_64 Start: 39435, Stop: 39788, Start Num: 30

Candidate Starts for Caprice_64:

(Start: 30 @39435 has 16 MA's), (36, 39462), (47, 39597), (52, 39627), (54, 39678), (56, 39684), (57, 39699), (60, 39717), (64, 39741), (65, 39744),

Gene: CheeseTouch_74 Start: 39429, Stop: 39758, Start Num: 38

Candidate Starts for CheeseTouch_74:

(Start: 38 @39429 has 147 MA's), (46, 39543), (48, 39564), (56, 39648), (58, 39672), (68, 39711), (71, 39738), (72, 39750),

Gene: ChosenOne_77 Start: 47986, Stop: 48303, Start Num: 38

Candidate Starts for ChosenOne_77:

(12, 47803), (Start: 38 @47986 has 147 MA's), (49, 48127),

Gene: ChotaBhai_77 Start: 48310, Stop: 48627, Start Num: 38

Candidate Starts for ChotaBhai_77:

(12, 48127), (Start: 38 @48310 has 147 MA's), (40, 48334), (49, 48451),

Gene: Cjw1_77 Start: 49683, Stop: 50000, Start Num: 38

Candidate Starts for Cjw1_77:

(12, 49500), (Start: 38 @49683 has 147 MA's), (49, 49824),

Gene: Clarkson_70 Start: 39837, Stop: 40190, Start Num: 30

Candidate Starts for Clarkson_70:

(Start: 30 @39837 has 16 MA's), (36, 39864), (47, 39999), (52, 40029), (54, 40080), (56, 40086), (57, 40101), (60, 40119), (64, 40143), (65, 40146),

Gene: Claus_68 Start: 46444, Stop: 46830, Start Num: 38

Candidate Starts for Claus_68:

(10, 46258), (26, 46387), (Start: 33 @46426 has 5 MA's), (Start: 38 @46444 has 147 MA's), (46, 46561), (50, 46588), (56, 46666), (73, 46813),

Gene: Clautastrophe_65 Start: 46467, Stop: 46799, Start Num: 25

Candidate Starts for Clautastrophe_65:

(1, 46191), (3, 46203), (4, 46212), (5, 46236), (8, 46314), (13, 46362), (Start: 25 @46467 has 12 MA's), (48, 46611), (56, 46695), (60, 46728),

Gene: Command613_79 Start: 49025, Stop: 49342, Start Num: 38

Candidate Starts for Command613_79:

(12, 48842), (Start: 38 @49025 has 147 MA's), (49, 49166),

Gene: Contagion_73 Start: 47786, Stop: 48103, Start Num: 38

Candidate Starts for Contagion_73:

(12, 47603), (Start: 38 @47786 has 147 MA's), (49, 47927),

Gene: Cookies_74 Start: 48167, Stop: 48484, Start Num: 38

Candidate Starts for Cookies_74:

(12, 47984), (Start: 38 @48167 has 147 MA's), (40, 48191), (49, 48308),

Gene: Corazon_67 Start: 40031, Stop: 40384, Start Num: 30

Candidate Starts for Corazon_67:

(Start: 30 @40031 has 16 MA's), (36, 40058), (47, 40193), (52, 40223), (54, 40274), (56, 40280), (57, 40295), (60, 40313), (64, 40337), (65, 40340),

Gene: Cosmo_77 Start: 48788, Stop: 49153, Start Num: 28

Candidate Starts for Cosmo_77:

(19, 48725), (Start: 28 @48788 has 5 MA's), (51, 48980), (65, 49100), (70, 49133),

Gene: Crossroads_67 Start: 46441, Stop: 46839, Start Num: 38

Candidate Starts for Crossroads_67:

(6, 46162), (10, 46255), (Start: 33 @46423 has 5 MA's), (Start: 38 @46441 has 147 MA's), (50, 46585), (56, 46663), (73, 46810),

Gene: CrystalP_76 Start: 48970, Stop: 49287, Start Num: 38

Candidate Starts for CrystalP_76:

(12, 48787), (Start: 38 @48970 has 147 MA's), (49, 49111),

Gene: Czyszczone1_78 Start: 48492, Stop: 48809, Start Num: 38

Candidate Starts for Czyszczone1_78:

(12, 48309), (Start: 38 @48492 has 147 MA's), (49, 48633),

Gene: Daikon_79 Start: 49113, Stop: 49430, Start Num: 38

Candidate Starts for Daikon_79:

(12, 48930), (Start: 38 @49113 has 147 MA's), (49, 49254),

Gene: DoctorDiddles_76 Start: 48354, Stop: 48671, Start Num: 38

Candidate Starts for DoctorDiddles_76:
(12, 48171), (Start: 38 @48354 has 147 MA's), (40, 48378), (49, 48495),

Gene: DrDrey_77 Start: 49411, Stop: 49728, Start Num: 38
Candidate Starts for DrDrey_77:
(12, 49228), (Start: 38 @49411 has 147 MA's), (49, 49552),

Gene: Dumbo_77 Start: 47891, Stop: 48208, Start Num: 38
Candidate Starts for Dumbo_77:
(12, 47708), (Start: 38 @47891 has 147 MA's), (49, 48032),

Gene: DuncansLeg_66 Start: 46503, Stop: 46835, Start Num: 25
Candidate Starts for DuncansLeg_66:
(13, 46398), (21, 46464), (Start: 25 @46503 has 12 MA's), (46, 46626), (50, 46653), (56, 46731), (61, 46767), (69, 46812),

Gene: Dusk_74 Start: 48191, Stop: 48508, Start Num: 38
Candidate Starts for Dusk_74:
(12, 48008), (Start: 38 @48191 has 147 MA's), (49, 48332),

Gene: Easy2Say_78 Start: 49435, Stop: 49752, Start Num: 38
Candidate Starts for Easy2Say_78:
(12, 49252), (Start: 38 @49435 has 147 MA's), (49, 49576),

Gene: Ecliptus_75 Start: 44750, Stop: 45079, Start Num: 38
Candidate Starts for Ecliptus_75:
(Start: 38 @44750 has 147 MA's), (46, 44864), (48, 44885), (56, 44969), (58, 44993), (68, 45032), (71, 45059), (72, 45071),

Gene: Elite2014_76 Start: 47985, Stop: 48302, Start Num: 38
Candidate Starts for Elite2014_76:
(12, 47802), (Start: 38 @47985 has 147 MA's), (49, 48126),

Gene: Elph10_77 Start: 47990, Stop: 48307, Start Num: 38
Candidate Starts for Elph10_77:
(12, 47807), (Start: 38 @47990 has 147 MA's), (49, 48131),

Gene: Emmina_77 Start: 47892, Stop: 48209, Start Num: 38
Candidate Starts for Emmina_77:
(12, 47709), (Start: 38 @47892 has 147 MA's), (49, 48033),

Gene: EniyanLRS_168 Start: 48527, Stop: 48892, Start Num: 28
Candidate Starts for EniyanLRS_168:
(19, 48464), (Start: 28 @48527 has 5 MA's), (51, 48719), (65, 48839), (70, 48872),

Gene: Eureka_75 Start: 48456, Stop: 48773, Start Num: 38
Candidate Starts for Eureka_75:
(12, 48273), (Start: 38 @48456 has 147 MA's), (49, 48597),

Gene: FeliMaine_68 Start: 40079, Stop: 40432, Start Num: 30
Candidate Starts for FeliMaine_68:
(Start: 30 @40079 has 16 MA's), (36, 40106), (47, 40241), (52, 40271), (54, 40322), (56, 40328), (57, 40343), (60, 40361), (64, 40385), (65, 40388),

Gene: Filch_78 Start: 47917, Stop: 48234, Start Num: 38

Candidate Starts for Filch_78:

(12, 47734), (Start: 38 @47917 has 147 MA's), (49, 48058),

Gene: Finemlucis_67 Start: 46684, Stop: 47085, Start Num: 38

Candidate Starts for Finemlucis_67:

(6, 46405), (10, 46498), (Start: 33 @46666 has 5 MA's), (Start: 38 @46684 has 147 MA's), (46, 46801), (50, 46828), (56, 46906), (73, 47053),

Gene: Finnry_66 Start: 46731, Stop: 47063, Start Num: 25

Candidate Starts for Finnry_66:

(3, 46467), (4, 46476), (5, 46500), (8, 46578), (13, 46626), (Start: 25 @46731 has 12 MA's), (48, 46875), (56, 46959), (60, 46992),

Gene: FireRed_81 Start: 49479, Stop: 49796, Start Num: 38

Candidate Starts for FireRed_81:

(12, 49296), (Start: 38 @49479 has 147 MA's), (49, 49620),

Gene: Flypotenuse_73 Start: 47976, Stop: 48293, Start Num: 38

Candidate Starts for Flypotenuse_73:

(12, 47793), (Start: 38 @47976 has 147 MA's), (49, 48117),

Gene: Gabriela_64 Start: 44813, Stop: 45211, Start Num: 38

Candidate Starts for Gabriela_64:

(6, 44534), (10, 44627), (Start: 33 @44795 has 5 MA's), (Start: 38 @44813 has 147 MA's), (46, 44930), (50, 44957), (56, 45035), (73, 45182),

Gene: Gage_79 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for Gage_79:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: Gardann_68 Start: 46399, Stop: 46797, Start Num: 38

Candidate Starts for Gardann_68:

(6, 46120), (10, 46213), (Start: 33 @46381 has 5 MA's), (Start: 38 @46399 has 147 MA's), (46, 46516), (50, 46543), (56, 46621), (73, 46768),

Gene: Gator_75 Start: 48822, Stop: 49139, Start Num: 38

Candidate Starts for Gator_75:

(12, 48639), (Start: 38 @48822 has 147 MA's), (49, 48963),

Gene: Gattaca_67 Start: 39225, Stop: 39578, Start Num: 30

Candidate Starts for Gattaca_67:

(Start: 30 @39225 has 16 MA's), (36, 39252), (47, 39387), (52, 39417), (54, 39468), (56, 39474), (57, 39489), (60, 39507), (64, 39531), (65, 39534),

Gene: Gemini_82 Start: 49286, Stop: 49603, Start Num: 38

Candidate Starts for Gemini_82:

(12, 49103), (Start: 38 @49286 has 147 MA's), (49, 49427),

Gene: Glexan_76 Start: 49106, Stop: 49423, Start Num: 38

Candidate Starts for Glexan_76:

(12, 48923), (Start: 38 @49106 has 147 MA's), (49, 49247),

Gene: Goku_75 Start: 48185, Stop: 48502, Start Num: 38

Candidate Starts for Goku_75:

(12, 48002), (Start: 38 @48185 has 147 MA's), (49, 48326),

Gene: GoldenSpark_81 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for GoldenSpark_81:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: Goldilocks_80 Start: 48267, Stop: 48584, Start Num: 38

Candidate Starts for Goldilocks_80:

(12, 48084), (Start: 38 @48267 has 147 MA's), (49, 48408),

Gene: GooberAzure_80 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for GooberAzure_80:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: GuuelaD_66 Start: 46478, Stop: 46879, Start Num: 38

Candidate Starts for GuuelaD_66:

(6, 46199), (10, 46292), (Start: 33 @46460 has 5 MA's), (Start: 38 @46478 has 147 MA's), (46, 46595), (50, 46622), (56, 46700), (73, 46847),

Gene: Hafay_69 Start: 46467, Stop: 46868, Start Num: 38

Candidate Starts for Hafay_69:

(6, 46188), (10, 46281), (Start: 33 @46449 has 5 MA's), (Start: 38 @46467 has 147 MA's), (46, 46584), (50, 46611), (56, 46689), (73, 46836),

Gene: HanKaySha_77 Start: 48070, Stop: 48387, Start Num: 38

Candidate Starts for HanKaySha_77:

(12, 47887), (Start: 38 @48070 has 147 MA's), (49, 48211),

Gene: Harella_77 Start: 49622, Stop: 49939, Start Num: 38

Candidate Starts for Harella_77:

(12, 49439), (Start: 38 @49622 has 147 MA's), (49, 49763),

Gene: Henry_75 Start: 48410, Stop: 48727, Start Num: 38

Candidate Starts for Henry_75:

(12, 48227), (Start: 38 @48410 has 147 MA's), (49, 48551),

Gene: Highbury_76 Start: 48058, Stop: 48375, Start Num: 38

Candidate Starts for Highbury_76:

(12, 47875), (Start: 38 @48058 has 147 MA's), (49, 48199),

Gene: Holt_82 Start: 49183, Stop: 49500, Start Num: 38

Candidate Starts for Holt_82:

(12, 49000), (Start: 38 @49183 has 147 MA's), (49, 49324),

Gene: Hoonter_80 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for Hoonter_80:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: Hopecy_77 Start: 48602, Stop: 48919, Start Num: 38

Candidate Starts for Hopecy_77:

(12, 48419), (Start: 38 @48602 has 147 MA's), (49, 48743),

Gene: Horus_72 Start: 44321, Stop: 44650, Start Num: 38

Candidate Starts for Horus_72:

(17, 44207), (32, 44297), (Start: 38 @44321 has 147 MA's), (41, 44348), (46, 44435), (56, 44540), (58, 44564), (68, 44603), (71, 44630), (72, 44642),

Gene: HufflyPuff_80 Start: 49435, Stop: 49752, Start Num: 38

Candidate Starts for HufflyPuff_80:

(12, 49252), (Start: 38 @49435 has 147 MA's), (49, 49576),

Gene: Huphlebuff_71 Start: 39642, Stop: 39995, Start Num: 30

Candidate Starts for Huphlebuff_71:

(Start: 30 @39642 has 16 MA's), (36, 39669), (47, 39804), (52, 39834), (54, 39885), (56, 39891), (57, 39906), (60, 39924), (64, 39948), (65, 39951),

Gene: IHOP_75 Start: 48534, Stop: 48851, Start Num: 38

Candidate Starts for IHOP_75:

(12, 48351), (Start: 38 @48534 has 147 MA's), (49, 48675),

Gene: Icee_78 Start: 48433, Stop: 48750, Start Num: 38

Candidate Starts for Icee_78:

(12, 48250), (Start: 38 @48433 has 147 MA's), (49, 48574),

Gene: Inca_74 Start: 47059, Stop: 47376, Start Num: 38

Candidate Starts for Inca_74:

(12, 46876), (Start: 38 @47059 has 147 MA's), (49, 47200),

Gene: Itos_66 Start: 45269, Stop: 45670, Start Num: 38

Candidate Starts for Itos_66:

(6, 44990), (10, 45083), (Start: 33 @45251 has 5 MA's), (Start: 38 @45269 has 147 MA's), (46, 45386), (50, 45413), (56, 45491), (73, 45638),

Gene: JeTaime_77 Start: 49251, Stop: 49568, Start Num: 38

Candidate Starts for JeTaime_77:

(12, 49068), (Start: 38 @49251 has 147 MA's), (49, 49392),

Gene: Jobypre_66 Start: 46467, Stop: 46799, Start Num: 25

Candidate Starts for Jobypre_66:

(1, 46191), (3, 46203), (4, 46212), (5, 46236), (8, 46314), (13, 46362), (Start: 25 @46467 has 12 MA's), (48, 46611), (56, 46695), (60, 46728),

Gene: JoieB_70 Start: 40075, Stop: 40428, Start Num: 30

Candidate Starts for JoieB_70:

(Start: 30 @40075 has 16 MA's), (36, 40102), (47, 40237), (52, 40267), (54, 40318), (56, 40324), (57, 40339), (60, 40357), (64, 40381), (65, 40384),

Gene: Jubie_65 Start: 46602, Stop: 46934, Start Num: 25

Candidate Starts for Jubie_65:

(1, 46326), (3, 46338), (4, 46347), (5, 46371), (8, 46449), (13, 46497), (Start: 25 @46602 has 12 MA's), (48, 46746), (56, 46830), (60, 46863),

Gene: Kahlid_67 Start: 46369, Stop: 46770, Start Num: 38

Candidate Starts for Kahlid_67:

(6, 46090), (10, 46183), (Start: 33 @46351 has 5 MA's), (Start: 38 @46369 has 147 MA's), (46, 46486), (50, 46513), (56, 46591), (73, 46738),

Gene: Kanye_74 Start: 48115, Stop: 48432, Start Num: 38

Candidate Starts for Kanye_74:

(12, 47932), (Start: 38 @48115 has 147 MA's), (49, 48256),

Gene: Keelan_96 Start: 49018, Stop: 49347, Start Num: 34

Candidate Starts for Keelan_96:

(Start: 34 @49018 has 3 MA's), (44, 49114), (53, 49198), (55, 49237),

Gene: Khuang_54 Start: 31611, Stop: 31976, Start Num: 39

Candidate Starts for Khuang_54:

(39, 31611), (49, 31761), (60, 31872), (63, 31887),

Gene: Kimchi_81 Start: 48772, Stop: 49089, Start Num: 38

Candidate Starts for Kimchi_81:

(12, 48589), (Start: 38 @48772 has 147 MA's), (49, 48913),

Gene: Kostya_77 Start: 48633, Stop: 48950, Start Num: 38

Candidate Starts for Kostya_77:

(12, 48450), (Start: 38 @48633 has 147 MA's), (49, 48774),

Gene: Krypton555_67 Start: 46693, Stop: 47025, Start Num: 25

Candidate Starts for Krypton555_67:

(1, 46417), (3, 46429), (4, 46438), (5, 46462), (8, 46540), (13, 46588), (Start: 25 @46693 has 12 MA's), (48, 46837), (56, 46921), (60, 46954),

Gene: Kumao_62 Start: 44058, Stop: 44420, Start Num: 29

Candidate Starts for Kumao_62:

(2, 43764), (7, 43851), (9, 43896), (11, 43911), (15, 43950), (Start: 29 @44058 has 1 MA's), (35, 44082), (40, 44118), (41, 44121), (50, 44235), (60, 44346),

Gene: Kuwabara_72 Start: 44078, Stop: 44407, Start Num: 38

Candidate Starts for Kuwabara_72:

(Start: 38 @44078 has 147 MA's), (46, 44192), (48, 44213), (56, 44297), (58, 44321), (68, 44360), (71, 44387), (72, 44399),

Gene: Lewan_68 Start: 46405, Stop: 46821, Start Num: 33

Candidate Starts for Lewan_68:

(6, 46144), (10, 46237), (Start: 33 @46405 has 5 MA's), (Start: 38 @46423 has 147 MA's), (46, 46540), (50, 46567), (56, 46645), (73, 46792),

Gene: LilDestine_67 Start: 46396, Stop: 46797, Start Num: 38

Candidate Starts for LilDestine_67:

(6, 46117), (10, 46210), (Start: 33 @46378 has 5 MA's), (Start: 38 @46396 has 147 MA's), (46, 46513), (50, 46540), (56, 46618), (73, 46765),

Gene: Lilac_79 Start: 48387, Stop: 48704, Start Num: 38

Candidate Starts for Lilac_79:

(12, 48204), (Start: 38 @48387 has 147 MA's), (49, 48528),

Gene: Lilbit_69 Start: 39805, Stop: 40158, Start Num: 30

Candidate Starts for Lilbit_69:

(Start: 30 @39805 has 16 MA's), (36, 39832), (47, 39967), (52, 39997), (54, 40048), (56, 40054), (57, 40069), (60, 40087), (64, 40111), (65, 40114),

Gene: Lilizi_78 Start: 48100, Stop: 48417, Start Num: 38

Candidate Starts for Lilizi_78:

(12, 47917), (Start: 38 @48100 has 147 MA's), (49, 48241),

Gene: Lilpickle_76 Start: 47985, Stop: 48302, Start Num: 38

Candidate Starts for Lilpickle_76:

(12, 47802), (Start: 38 @47985 has 147 MA's), (49, 48126),

Gene: LitninMcQueen_71 Start: 42944, Stop: 43273, Start Num: 38

Candidate Starts for LitninMcQueen_71:

(Start: 38 @42944 has 147 MA's), (56, 43163), (71, 43253), (72, 43265),

Gene: LittleLaf_69 Start: 39534, Stop: 39887, Start Num: 30

Candidate Starts for LittleLaf_69:

(Start: 30 @39534 has 16 MA's), (36, 39561), (47, 39696), (52, 39726), (54, 39777), (56, 39783), (57, 39798), (60, 39816), (64, 39840), (65, 39843),

Gene: Loadrie_66 Start: 46451, Stop: 46849, Start Num: 38

Candidate Starts for Loadrie_66:

(6, 46172), (10, 46265), (Start: 33 @46433 has 5 MA's), (Start: 38 @46451 has 147 MA's), (46, 46568), (50, 46595), (56, 46673), (73, 46820),

Gene: Lolly9_65 Start: 46290, Stop: 46622, Start Num: 25

Candidate Starts for Lolly9_65:

(Start: 25 @46290 has 12 MA's), (40, 46320), (46, 46413), (50, 46440), (56, 46518), (60, 46551), (69, 46599),

Gene: Lucky2013_115 Start: 64045, Stop: 64419, Start Num: 18

Candidate Starts for Lucky2013_115:

(Start: 18 @64045 has 1 MA's), (20, 64054), (42, 64162), (45, 64207), (56, 64327),

Gene: Lumos_67 Start: 46464, Stop: 46796, Start Num: 25

Candidate Starts for Lumos_67:

(1, 46188), (3, 46200), (4, 46209), (5, 46233), (8, 46311), (13, 46359), (Start: 25 @46464 has 12 MA's), (48, 46608), (56, 46692), (60, 46725),

Gene: MISSy_78 Start: 48491, Stop: 48808, Start Num: 38

Candidate Starts for MISSy_78:

(12, 48308), (Start: 38 @48491 has 147 MA's), (49, 48632),

Gene: MPhalcon_78 Start: 48484, Stop: 48801, Start Num: 38

Candidate Starts for MPhalcon_78:

(12, 48301), (Start: 38 @48484 has 147 MA's), (49, 48625),

Gene: MadamMonkfish_77 Start: 47709, Stop: 48026, Start Num: 38

Candidate Starts for MadamMonkfish_77:

(12, 47526), (Start: 38 @47709 has 147 MA's), (49, 47850),

Gene: Manda_78 Start: 49571, Stop: 49888, Start Num: 38

Candidate Starts for Manda_78:

(12, 49388), (Start: 38 @49571 has 147 MA's), (49, 49712),

Gene: Marshmallow_75 Start: 49264, Stop: 49581, Start Num: 38

Candidate Starts for Marshmallow_75:

(12, 49081), (Start: 38 @49264 has 147 MA's), (40, 49288), (49, 49405),

Gene: Marvin_65 Start: 39295, Stop: 39648, Start Num: 30

Candidate Starts for Marvin_65:

(Start: 30 @39295 has 16 MA's), (36, 39322), (47, 39457), (52, 39487), (54, 39538), (56, 39544), (57, 39559), (60, 39577), (64, 39601), (65, 39604),

Gene: MaryV_77 Start: 48609, Stop: 48974, Start Num: 28

Candidate Starts for MaryV_77:

(19, 48546), (Start: 28 @48609 has 5 MA's), (51, 48801), (65, 48921), (70, 48954),

Gene: Maxxinista_79 Start: 48360, Stop: 48677, Start Num: 38

Candidate Starts for Maxxinista_79:

(12, 48177), (Start: 38 @48360 has 147 MA's), (49, 48501),

Gene: Miley16_67 Start: 46363, Stop: 46764, Start Num: 38

Candidate Starts for Miley16_67:

(6, 46084), (10, 46177), (Start: 33 @46345 has 5 MA's), (Start: 38 @46363 has 147 MA's), (46, 46480), (50, 46507), (56, 46585), (73, 46732),

Gene: Mindy_76 Start: 47576, Stop: 47893, Start Num: 38

Candidate Starts for Mindy_76:

(12, 47393), (Start: 38 @47576 has 147 MA's), (49, 47717),

Gene: MiniLon_69 Start: 46291, Stop: 46623, Start Num: 25

Candidate Starts for MiniLon_69:

(Start: 25 @46291 has 12 MA's), (40, 46321), (46, 46414), (50, 46441), (56, 46519), (60, 46552), (69, 46600),

Gene: Miniwave_72 Start: 48029, Stop: 48346, Start Num: 38

Candidate Starts for Miniwave_72:

(12, 47846), (Start: 38 @48029 has 147 MA's), (49, 48170),

Gene: Misfit_78 Start: 49503, Stop: 49820, Start Num: 38

Candidate Starts for Misfit_78:

(12, 49320), (Start: 38 @49503 has 147 MA's), (49, 49644),

Gene: MkaliMitinis3_68 Start: 46435, Stop: 46833, Start Num: 38

Candidate Starts for MkaliMitinis3_68:

(6, 46156), (10, 46249), (Start: 33 @46417 has 5 MA's), (Start: 38 @46435 has 147 MA's), (46, 46552), (50, 46579), (56, 46657), (73, 46804),

Gene: Moldemort_80 Start: 48588, Stop: 48905, Start Num: 38

Candidate Starts for Moldemort_80:

(12, 48405), (Start: 38 @48588 has 147 MA's), (49, 48729),

Gene: MosMoris_66 Start: 39225, Stop: 39578, Start Num: 30

Candidate Starts for MosMoris_66:

(Start: 30 @39225 has 16 MA's), (36, 39252), (47, 39387), (52, 39417), (54, 39468), (56, 39474), (57, 39489), (60, 39507), (64, 39531), (65, 39534),

Gene: Mosby_73 Start: 47786, Stop: 48103, Start Num: 38

Candidate Starts for Mosby_73:

(12, 47603), (Start: 38 @47786 has 147 MA's), (49, 47927),

Gene: MsGreen_66 Start: 46467, Stop: 46799, Start Num: 25

Candidate Starts for MsGreen_66:

(1, 46191), (3, 46203), (4, 46212), (5, 46236), (8, 46314), (13, 46362), (Start: 25 @46467 has 12 MA's), (48, 46611), (56, 46695), (60, 46728),

Gene: Murica_80 Start: 49435, Stop: 49752, Start Num: 38

Candidate Starts for Murica_80:

(12, 49252), (Start: 38 @49435 has 147 MA's), (49, 49576),

Gene: Murphy_77 Start: 48872, Stop: 49189, Start Num: 38

Candidate Starts for Murphy_77:

(12, 48689), (Start: 38 @48872 has 147 MA's), (49, 49013),

Gene: Myrale_77 Start: 49129, Stop: 49446, Start Num: 38

Candidate Starts for Myrale_77:

(12, 48946), (Start: 38 @49129 has 147 MA's), (49, 49270),

Gene: Nala_79 Start: 48993, Stop: 49310, Start Num: 38

Candidate Starts for Nala_79:

(12, 48810), (Start: 38 @48993 has 147 MA's), (49, 49134),

Gene: NelitzaMV_75 Start: 48075, Stop: 48392, Start Num: 38

Candidate Starts for NelitzaMV_75:

(12, 47892), (Start: 38 @48075 has 147 MA's), (49, 48216),

Gene: Nicholasp3_67 Start: 46381, Stop: 46797, Start Num: 33

Candidate Starts for Nicholasp3_67:

(6, 46120), (10, 46213), (Start: 33 @46381 has 5 MA's), (Start: 38 @46399 has 147 MA's), (46, 46516), (50, 46543), (56, 46621), (73, 46768),

Gene: Nimrod_78 Start: 49696, Stop: 50013, Start Num: 38

Candidate Starts for Nimrod_78:

(12, 49513), (Start: 38 @49696 has 147 MA's), (49, 49837),

Gene: NoSleep_78 Start: 48330, Stop: 48647, Start Num: 38

Candidate Starts for NoSleep_78:

(12, 48147), (Start: 38 @48330 has 147 MA's), (49, 48471),

Gene: ODay_78 Start: 45557, Stop: 45886, Start Num: 38

Candidate Starts for ODay_78:

(17, 45443), (32, 45533), (Start: 38 @45557 has 147 MA's), (41, 45584), (56, 45776), (71, 45866), (72, 45878),

Gene: OrionPax_76 Start: 48081, Stop: 48398, Start Num: 38

Candidate Starts for OrionPax_76:

(12, 47898), (Start: 38 @48081 has 147 MA's), (40, 48105), (49, 48222),

Gene: Palpatine_79 Start: 49462, Stop: 49779, Start Num: 38

Candidate Starts for Palpatine_79:

(12, 49279), (Start: 38 @49462 has 147 MA's), (49, 49603),

Gene: Paperbeatsrock_76 Start: 48707, Stop: 49024, Start Num: 38

Candidate Starts for Paperbeatsrock_76:

(12, 48524), (Start: 38 @48707 has 147 MA's), (49, 48848),

Gene: Pat3_75 Start: 47239, Stop: 47556, Start Num: 38

Candidate Starts for Pat3_75:

(12, 47056), (Start: 38 @47239 has 147 MA's), (40, 47263), (49, 47380),

Gene: Petra64142_81 Start: 49926, Stop: 50243, Start Num: 38

Candidate Starts for Petra64142_81:

(12, 49743), (Start: 38 @49926 has 147 MA's), (49, 50067),

Gene: Phaja_75 Start: 48533, Stop: 48850, Start Num: 38

Candidate Starts for Phaja_75:

(12, 48350), (Start: 38 @48533 has 147 MA's), (49, 48674),

Gene: Pharsalus_74 Start: 48507, Stop: 48824, Start Num: 38

Candidate Starts for Pharsalus_74:

(12, 48324), (Start: 38 @48507 has 147 MA's), (49, 48648),

Gene: PhatBacter_81 Start: 49479, Stop: 49796, Start Num: 38

Candidate Starts for PhatBacter_81:

(12, 49296), (Start: 38 @49479 has 147 MA's), (49, 49620),

Gene: Phaux_79 Start: 49474, Stop: 49791, Start Num: 38

Candidate Starts for Phaux_79:

(12, 49291), (Start: 38 @49474 has 147 MA's), (49, 49615),

Gene: Phrux_74 Start: 48070, Stop: 48387, Start Num: 38

Candidate Starts for Phrux_74:

(12, 47887), (Start: 38 @48070 has 147 MA's), (49, 48211),

Gene: Poise_69 Start: 39121, Stop: 39474, Start Num: 30

Candidate Starts for Poise_69:

(Start: 30 @39121 has 16 MA's), (36, 39148), (47, 39283), (52, 39313), (54, 39364), (56, 39370), (57, 39385), (60, 39403), (64, 39427), (65, 39430),

Gene: Policronamos_81 Start: 49474, Stop: 49791, Start Num: 38

Candidate Starts for Policronamos_81:

(12, 49291), (Start: 38 @49474 has 147 MA's), (49, 49615),

Gene: Porky_76 Start: 47900, Stop: 48217, Start Num: 38

Candidate Starts for Porky_76:

(12, 47717), (Start: 38 @47900 has 147 MA's), (49, 48041),

Gene: Pringar_68 Start: 39443, Stop: 39796, Start Num: 30

Candidate Starts for Pringar_68:

(Start: 30 @39443 has 16 MA's), (36, 39470), (47, 39605), (52, 39635), (54, 39686), (56, 39692), (57, 39707), (60, 39725), (64, 39749), (65, 39752),

Gene: Pumpkin_80 Start: 49128, Stop: 49445, Start Num: 38

Candidate Starts for Pumpkin_80:

(12, 48945), (Start: 38 @49128 has 147 MA's), (49, 49269),

Gene: Quallification_78 Start: 49115, Stop: 49432, Start Num: 38

Candidate Starts for Quallification_78:

(12, 48932), (Start: 38 @49115 has 147 MA's), (49, 49256),

Gene: Rabbitrun_72 Start: 44571, Stop: 44918, Start Num: 34

Candidate Starts for Rabbitrun_72:

(16, 44460), (22, 44490), (23, 44493), (24, 44496), (27, 44538), (31, 44562), (Start: 34 @44571 has 3 MA's), (43, 44652), (56, 44808), (59, 44835), (62, 44847), (65, 44862), (66, 44865),

Gene: Raela_69 Start: 39678, Stop: 40031, Start Num: 30

Candidate Starts for Raela_69:

(Start: 30 @39678 has 16 MA's), (36, 39705), (47, 39840), (52, 39870), (54, 39921), (56, 39927), (57, 39942), (60, 39960), (64, 39984), (65, 39987),

Gene: Rakim_78 Start: 48584, Stop: 48901, Start Num: 38

Candidate Starts for Rakim_78:

(12, 48401), (Start: 38 @48584 has 147 MA's), (49, 48725),

Gene: RedRaider77_68 Start: 39066, Stop: 39419, Start Num: 30

Candidate Starts for RedRaider77_68:

(Start: 30 @39066 has 16 MA's), (36, 39093), (47, 39228), (52, 39258), (54, 39309), (56, 39315), (57, 39330), (60, 39348), (64, 39372), (65, 39375),

Gene: Rimmer_78 Start: 48820, Stop: 49137, Start Num: 38

Candidate Starts for Rimmer_78:

(12, 48637), (Start: 38 @48820 has 147 MA's), (49, 48961),

Gene: RiverMonster_77 Start: 48648, Stop: 48965, Start Num: 38

Candidate Starts for RiverMonster_77:

(12, 48465), (Start: 38 @48648 has 147 MA's), (49, 48789),

Gene: Rumpelstiltskin_66 Start: 45792, Stop: 46190, Start Num: 38

Candidate Starts for Rumpelstiltskin_66:

(6, 45513), (10, 45606), (Start: 33 @45774 has 5 MA's), (Start: 38 @45792 has 147 MA's), (46, 45909), (50, 45936), (56, 46014), (73, 46161),

Gene: Saints25_76 Start: 48058, Stop: 48375, Start Num: 38

Candidate Starts for Saints25_76:

(12, 47875), (Start: 38 @48058 has 147 MA's), (49, 48199),

Gene: Samty_66 Start: 46475, Stop: 46807, Start Num: 25

Candidate Starts for Samty_66:

(3, 46211), (4, 46220), (5, 46244), (8, 46322), (13, 46370), (Start: 25 @46475 has 12 MA's), (48, 46619), (56, 46703), (60, 46736),

Gene: Sassay_72 Start: 46748, Stop: 47065, Start Num: 38

Candidate Starts for Sassay_72:

(12, 46565), (Start: 38 @46748 has 147 MA's), (49, 46889),

Gene: ShamWow_77 Start: 48970, Stop: 49287, Start Num: 38

Candidate Starts for ShamWow_77:

(12, 48787), (Start: 38 @48970 has 147 MA's), (49, 49111),

Gene: Simpliphy_76 Start: 48048, Stop: 48365, Start Num: 38

Candidate Starts for Simpliphy_76:

(12, 47865), (Start: 38 @48048 has 147 MA's), (49, 48189),

Gene: SirDuracell_76 Start: 47334, Stop: 47651, Start Num: 38

Candidate Starts for SirDuracell_76:

(12, 47151), (Start: 38 @47334 has 147 MA's), (40, 47358), (49, 47475),

Gene: Snenia_65 Start: 46468, Stop: 46800, Start Num: 25

Candidate Starts for Snenia_65:

(1, 46192), (3, 46204), (4, 46213), (5, 46237), (8, 46315), (13, 46363), (Start: 25 @46468 has 12 MA's), (48, 46612), (56, 46696), (60, 46729),

Gene: SophKB_74 Start: 47726, Stop: 48043, Start Num: 38

Candidate Starts for SophKB_74:

(12, 47543), (Start: 38 @47726 has 147 MA's), (49, 47867),

Gene: Sotrice96_78 Start: 48729, Stop: 49046, Start Num: 38

Candidate Starts for Sotrice96_78:

(12, 48546), (Start: 38 @48729 has 147 MA's), (49, 48870),

Gene: Squiddly_73 Start: 46416, Stop: 46745, Start Num: 38

Candidate Starts for Squiddly_73:

(Start: 38 @46416 has 147 MA's), (67, 46695), (71, 46725), (72, 46737),

Gene: Stank_80 Start: 48987, Stop: 49304, Start Num: 38

Candidate Starts for Stank_80:

(12, 48804), (Start: 38 @48987 has 147 MA's), (49, 49128),

Gene: Stark_78 Start: 48531, Stop: 48848, Start Num: 38

Candidate Starts for Stark_78:

(12, 48348), (Start: 38 @48531 has 147 MA's), (49, 48672),

Gene: StellaBean_75 Start: 48294, Stop: 48611, Start Num: 38

Candidate Starts for StellaBean_75:

(12, 48111), (Start: 38 @48294 has 147 MA's), (49, 48435),

Gene: StolenFromERC_80 Start: 48769, Stop: 49086, Start Num: 38

Candidate Starts for StolenFromERC_80:

(12, 48586), (Start: 38 @48769 has 147 MA's), (49, 48910),

Gene: TBrady12_80 Start: 48468, Stop: 48785, Start Num: 38

Candidate Starts for TBrady12_80:

(12, 48285), (Start: 38 @48468 has 147 MA's), (49, 48609),

Gene: Tarkin_76 Start: 48716, Stop: 49033, Start Num: 38

Candidate Starts for Tarkin_76:

(12, 48533), (Start: 38 @48716 has 147 MA's), (49, 48857),

Gene: TeardropMSU_73 Start: 47716, Stop: 48033, Start Num: 38

Candidate Starts for TeardropMSU_73:

(12, 47533), (Start: 38 @47716 has 147 MA's), (49, 47857),

Gene: Teaspoon_78 Start: 48610, Stop: 48927, Start Num: 38

Candidate Starts for Teaspoon_78:

(12, 48427), (Start: 38 @48610 has 147 MA's), (49, 48751),

Gene: Terminus_80 Start: 49503, Stop: 49820, Start Num: 38

Candidate Starts for Terminus_80:

(12, 49320), (Start: 38 @49503 has 147 MA's), (49, 49644),

Gene: Tesla_66 Start: 38915, Stop: 39268, Start Num: 30

Candidate Starts for Tesla_66:

(Start: 30 @38915 has 16 MA's), (36, 38942), (47, 39077), (52, 39107), (54, 39158), (56, 39164), (57, 39179), (60, 39197), (64, 39221), (65, 39224),

Gene: Thresher_79 Start: 49590, Stop: 49907, Start Num: 38

Candidate Starts for Thresher_79:

(12, 49407), (Start: 38 @49590 has 147 MA's), (49, 49731),

Gene: Tomaszewski_72 Start: 47879, Stop: 48196, Start Num: 38

Candidate Starts for Tomaszewski_72:

(12, 47696), (Start: 38 @47879 has 147 MA's), (40, 47903), (49, 48020),

Gene: Toto_75 Start: 48970, Stop: 49287, Start Num: 38

Candidate Starts for Toto_75:

(12, 48787), (Start: 38 @48970 has 147 MA's), (49, 49111),

Gene: Tourach_66 Start: 46445, Stop: 46831, Start Num: 38

Candidate Starts for Tourach_66:

(10, 46259), (Start: 33 @46427 has 5 MA's), (Start: 38 @46445 has 147 MA's), (46, 46562), (50, 46589), (56, 46667), (73, 46814),

Gene: Traaww1_73 Start: 48154, Stop: 48471, Start Num: 38

Candidate Starts for Traaww1_73:

(12, 47971), (Start: 38 @48154 has 147 MA's), (49, 48295),

Gene: Trax_71 Start: 44944, Stop: 45291, Start Num: 34

Candidate Starts for Trax_71:

(Start: 34 @44944 has 3 MA's), (43, 45025), (56, 45181), (59, 45208), (65, 45235), (66, 45238),

Gene: Tuco_78 Start: 49478, Stop: 49795, Start Num: 38

Candidate Starts for Tuco_78:

(12, 49295), (Start: 38 @49478 has 147 MA's), (49, 49619),

Gene: Ukulele_72 Start: 47861, Stop: 48178, Start Num: 38

Candidate Starts for Ukulele_72:

(12, 47678), (Start: 38 @47861 has 147 MA's), (49, 48002),

Gene: VasuNzinga_68 Start: 39017, Stop: 39370, Start Num: 30

Candidate Starts for VasuNzinga_68:

(Start: 30 @39017 has 16 MA's), (36, 39044), (47, 39179), (52, 39209), (54, 39260), (56, 39266), (57, 39281), (60, 39299), (64, 39323), (65, 39326),

Gene: Vetrix_67 Start: 46385, Stop: 46804, Start Num: 33

Candidate Starts for Vetrix_67:

(6, 46124), (10, 46217), (Start: 33 @46385 has 5 MA's), (Start: 38 @46403 has 147 MA's), (46, 46520), (50, 46547), (56, 46625), (73, 46772),

Gene: Whirlwind_66 Start: 46283, Stop: 46615, Start Num: 25

Candidate Starts for Whirlwind_66:

(1, 46007), (3, 46019), (4, 46028), (5, 46052), (8, 46130), (13, 46178), (Start: 25 @46283 has 12 MA's), (48, 46427), (56, 46511), (60, 46544),

Gene: Wiggin_79 Start: 48555, Stop: 48872, Start Num: 38

Candidate Starts for Wiggin_79:

(12, 48372), (Start: 38 @48555 has 147 MA's), (49, 48696),

Gene: Wigglewigggle_67 Start: 46423, Stop: 46821, Start Num: 38

Candidate Starts for Wigglewigggle_67:

(6, 46144), (10, 46237), (Start: 33 @46405 has 5 MA's), (Start: 38 @46423 has 147 MA's), (46, 46540), (50, 46567), (56, 46645), (73, 46792),

Gene: Wildcat_77 Start: 48619, Stop: 48984, Start Num: 28

Candidate Starts for Wildcat_77:

(19, 48556), (Start: 28 @48619 has 5 MA's), (51, 48811), (65, 48931), (70, 48964),

Gene: Wilder_68 Start: 46369, Stop: 46770, Start Num: 38

Candidate Starts for Wilder_68:

(6, 46090), (10, 46183), (Start: 33 @46351 has 5 MA's), (Start: 38 @46369 has 147 MA's), (46, 46486), (50, 46513), (56, 46591), (73, 46738),

Gene: Willez_72 Start: 46748, Stop: 47065, Start Num: 38

Candidate Starts for Willez_72:

(12, 46565), (Start: 38 @46748 has 147 MA's), (49, 46889),

Gene: Winky_67 Start: 46363, Stop: 46764, Start Num: 38

Candidate Starts for Winky_67:

(6, 46084), (10, 46177), (Start: 33 @46345 has 5 MA's), (Start: 38 @46363 has 147 MA's), (46, 46480), (50, 46507), (56, 46585), (73, 46732),

Gene: Xandras_76 Start: 47963, Stop: 48280, Start Num: 38

Candidate Starts for Xandras_76:

(12, 47780), (Start: 38 @47963 has 147 MA's), (49, 48104),

Gene: YassJohnny_74 Start: 47918, Stop: 48235, Start Num: 38

Candidate Starts for YassJohnny_74:

(12, 47735), (Start: 38 @47918 has 147 MA's), (40, 47942), (49, 48059),

Gene: Youngblood_80 Start: 49430, Stop: 49747, Start Num: 38

Candidate Starts for Youngblood_80:

(12, 49247), (Start: 38 @49430 has 147 MA's), (49, 49571),

Gene: Zakai_68 Start: 46689, Stop: 47090, Start Num: 38

Candidate Starts for Zakai_68:

(6, 46410), (10, 46503), (Start: 33 @46671 has 5 MA's), (Start: 38 @46689 has 147 MA's), (46, 46806), (50, 46833), (56, 46911), (73, 47058),

Gene: ZhongYanYuan_66 Start: 46258, Stop: 46644, Start Num: 38

Candidate Starts for ZhongYanYuan_66:

(10, 46072), (26, 46201), (Start: 33 @46240 has 5 MA's), (Start: 38 @46258 has 147 MA's), (46, 46375), (50, 46402), (56, 46480), (73, 46627),

Gene: xkcd_80 Start: 49620, Stop: 49937, Start Num: 38

Candidate Starts for xkcd_80:

(12, 49437), (Start: 38 @49620 has 147 MA's), (49, 49761),