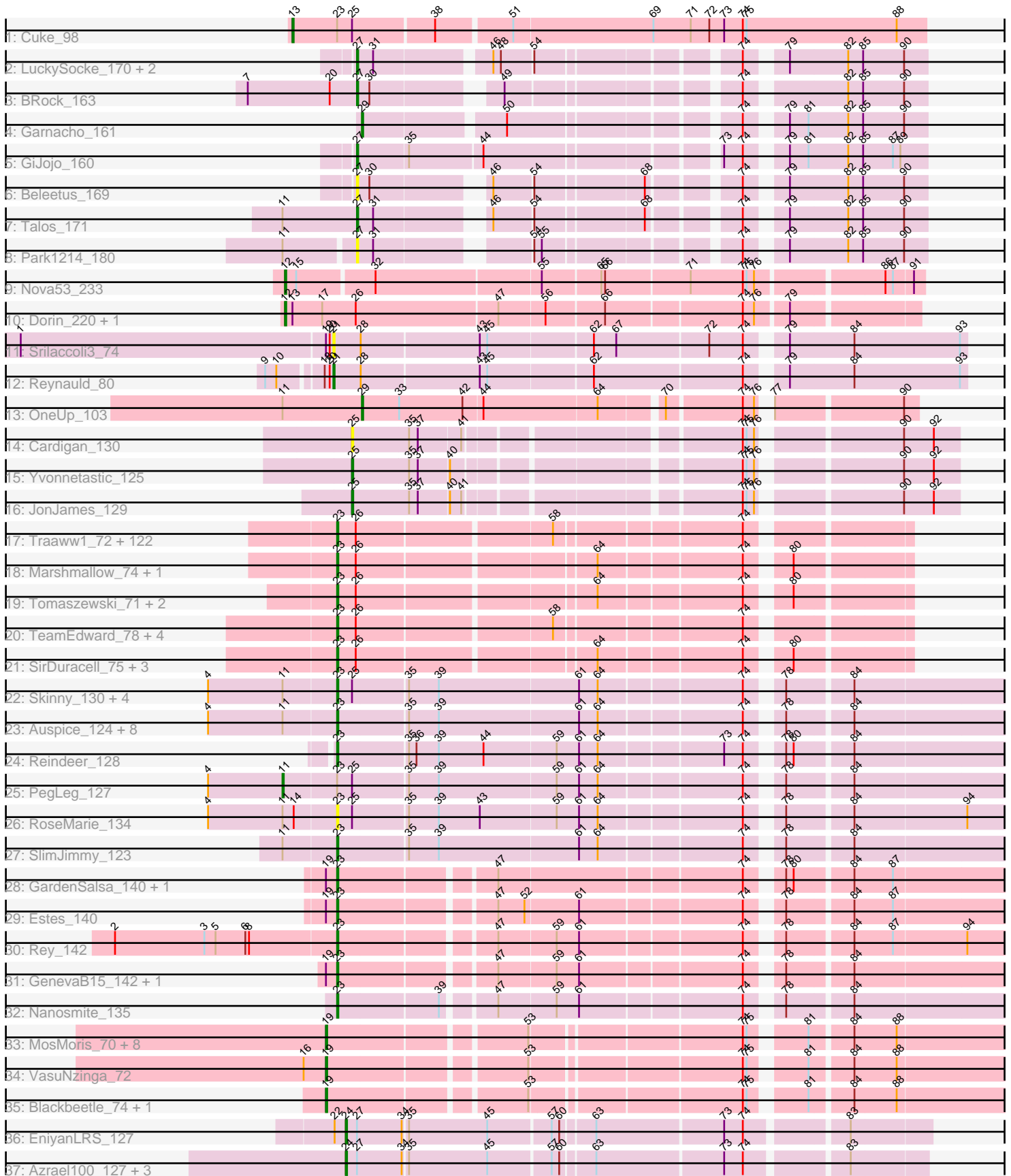


Pham 296261



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 296261 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296261 has 198 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Cuke_98
- Track 2 : LuckySocke_170, Fudan_172, Alone3_172
- Track 3 : BRock_163
- Track 4 : Garnacho_161
- Track 5 : GiJojo_160
- Track 6 : Beleetus_169
- Track 7 : Talos_171
- Track 8 : Park1214_180
- Track 9 : Nova53_233
- Track 10 : Dorin_220, Francesca_221
- Track 11 : Srilaccoli3_74
- Track 12 : Reynauld_80
- Track 13 : OneUp_103
- Track 14 : Cardigan_130
- Track 15 : Yvonnetastic_125
- Track 16 : JonJames_129
- Track 17 : Traaww1_72, Barbarian_75, Greep_80, PaddyBaddy_76, Hoonter_79, Mindy_75, Myrale_76, AmericanBeauty_80, Dumbo_76, Lilac_78, Manda_77, Daikon_78, TBrady12_79, Ukulele_71, IHOP_74, Easy2Say_77, Bogg_76, Rimmer_77, ShamWow_76, Teaspoon_77, Porky_75, Buck_77, Petra64142_80, Phaux_78, SophKB_73, Cactus_79, Highbury_75, NelitzaMV_74, Pumpkin_79, Glexan_75, FireRed_80, Nala_78, Czyszczon1_77, ABCat_73, Eureka_74, Miniwave_71, TeardropMSU_72, NoSleep_77, BigBubba_76, Becksu_75, Lilizi_77, Youngblood_79, Hopey_76, GooberAzure_79, Flypotenuse_72, Thresher_78, Harella_76, Elph10_76, MPhalcon_77, Icee_77, Mosby_72, Sassay_71, Goldilocks_79, Toto_74, Murphy_76, Terminus_79, Inca_73, Pharsalus_73, Kimchi_80, Bench_79, Dusk_73, Balomoji_76, Gator_74, Command613_78, Sotrice96_77, Kanye_73, Saints25_75, CrystalP_75, StormChicken_78, Stark_77, 244_77, Phrux_73, Elite2014_75, Murica_79, Maxxinista_78, JeTaime_76, ChosenOne_76, BaboJay_73, Filch_77, HufflyPuff_79, Tarkin_75, Simpliphy_75, Goku_74, Gage_78, Policronamos_79, BadStone_73, Henry_74, Misfit_77, Asriel_75, Argent26_80, PhatBacter_80, Nimrod_77, RiverMonster_76, Phaja_74, Lilpickle_75, Moldemort_79, Holt_81, Bruin_73, Wiggin_78, Willez_71, Xandras_75, Ptowny_73, HanKaySha_76, Tuco_77, Cjw1_76, Emmina_76, DrDrey_76, Rakim_77, StellaBean_74, StolenFromERC_79, MollyToe_71, Quallification_77, Paperbeatsrock_75, Contagion_72, NonchalantPear_74, Thimble_77, Adnama_80, MadamMonkfish_76, Gemini_81, BilboSwaggins_74, Stank_79, xkcd_79,

GoldenSpark_80

- Track 18 : Marshmallow_74, FairyPath_76
- Track 19 : Tomaszewski_71, YassJohnny_73, Budgie_84
- Track 20 : TeamEdward_78, OrionPax_75, Amao_76, Pat3_74, Bask21_76
- Track 21 : SirDuracell_75, Cookies_73, ChotaBhai_76, DoctorDiddles_75
- Track 22 : Skinny_130, Dulcita_125, Diminimus_125, Glaske16_127, Izel_125
- Track 23 : Auspice_124, Bongo_123, FreakyGoo_125, Bricole_126, KleverKiS_127, TpuDiCK_126, LilhomieP_124, TyDawg_119, IPhane7_122
- Track 24 : Reindeer_128
- Track 25 : PegLeg_127
- Track 26 : RoseMarie_134
- Track 27 : SlimJimmy_123
- Track 28 : GardenSalsa_140, MrMagoo_142
- Track 29 : Estes_140
- Track 30 : Rey_142
- Track 31 : GenevaB15_142, Aziz_139
- Track 32 : Nanosmite_135
- Track 33 : MosMoris_70, Marvin_69, RedRaider77_73, GoongGoong_73, Raela_74, Tesla_70, LittleLaf_73, Gattaca_71, Lilbit_71
- Track 34 : VasuNzinga_72
- Track 35 : Blackbeetle_74, Poise_74
- Track 36 : EniyanLRS_127
- Track 37 : Azrael100_127, MaryV_120, Wildcat_134, Cosmo_135

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

The start number called the most often in the published annotations is 23, it was called in 145 of the 177 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_77, ABCat_73, Adnama_80, Amao_76, AmericanBeauty_80, Argent26_80, Asriel_75, Auspice_124, Aziz_139, BaboJay_73, BadStone_73, Balomoji_76, Barbarian_75, Bask21_76, Becksu_75, Bench_79, BigBubba_76, BilboSwaggins_74, Bogg_76, Bongo_123, Bricole_126, Bruin_73, Buck_77, Budgie_84, Cactus_79, ChosenOne_76, ChotaBhai_76, Cjw1_76, Command613_78, Contagion_72, Cookies_73, CrystalP_75, Czyszczo1_77, Daikon_78, Diminimus_125, DoctorDiddles_75, DrDrey_76, Dulcita_125, Dumbo_76, Dusk_73, Easy2Say_77, Elite2014_75, Elph10_76, Emmina_76, Estes_140, Eureka_74, FairyPath_76, Filch_77, FireRed_80, Flypotenuse_72, FreakyGoo_125, Gage_78, GardenSalsa_140, Gator_74, Gemini_81, GenevaB15_142, Glaske16_127, Glexan_75, Goku_74, GoldenSpark_80, Goldilocks_79, GooberAzure_79, Greep_80, HanKaySha_76, Harella_76, Henry_74, Highbury_75, Holt_81, Hoonter_79, Hopey_76, HufflyPuff_79, IHOP_74, IPhane7_122, Icee_77, Inca_73, Izel_125, JeTaimie_76, Kanye_73, Kimchi_80, KleverKiS_127, Lilac_78, LilhomieP_124, Lilizi_77, Lilpickle_75, MPhalcon_77, MadamMonkfish_76, Manda_77, Marshmallow_74, Maxxinista_78, Mindy_75, Miniwave_71, Misfit_77, Moldemort_79, MollyToe_71, Mosby_72, MrMagoo_142, Murica_79, Murphy_76, Myrale_76, Nala_78, Nanosmite_135, NelitzaMV_74, Nimrod_77, NoSleep_77, NonchalantPear_74, OrionPax_75, PaddyBaddy_76, Paperbeatsrock_75, Pat3_74, Petra64142_80, Phaja_74, Pharsalus_73, PhatBacter_80, Phaux_78, Phrux_73,

Policronamos_79, Porky_75, Ptowny_73, Pumpkin_79, Quallification_77, Rakim_77, Reindeer_128, Rey_142, Rimmer_77, RiverMonster_76, RoseMarie_134, Saints25_75, Sassay_71, ShamWow_76, Simpliphy_75, SirDuracell_75, Skinny_130, SlimJimmy_123, SophKB_73, Sotrice96_77, Stank_79, Stark_77, StellaBean_74, StolenFromERC_79, StormChicken_78, TBrady12_79, Tarkin_75, TeamEdward_78, TeardropMSU_72, Teaspoon_77, Terminus_79, Thimble_77, Thresher_78, Tomaszewski_71, Toto_74, TpudiCK_126, Traaww1_72, Tuco_77, TyDawg_119, Ukulele_71, Wiggin_78, Willez_71, Xandras_75, YassJohnny_73, Youngblood_79, xkcd_79,

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

- Cuke_98, PegLeg_127,

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

- Alone3_172, Azrael100_127, BRock_163, Beleetus_169, Blackbeetle_74, Cardigan_130, Cosmo_135, Dorin_220, EniyanLRS_127, Francesca_221, Fudan_172, Garnacho_161, Gattaca_71, GiJojo_160, GoongGoong_73, JonJames_129, Lilbit_71, LittleLaf_73, LuckySocke_170, Marvin_69, MaryV_120, MosMoris_70, Nova53_233, OneUp_103, Park1214_180, Poise_74, Raela_74, RedRaider77_73, Reynauld_80, Srilaccoli3_74, Talos_171, Tesla_70, VasuNzinga_72, Wildcat_134, Yvonnetastic_125,

Summary by start number:

Start 11:

- Found in 20 of 198 (10.1%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 5.0% of time when present
- Phage (with cluster) where this start called: PegLeg_127 (M1),

Start 12:

- Found in 3 of 198 (1.5%) of genes in pham
- Manual Annotations of this start: 3 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorin_220 (CG), Francesca_221 (CG), Nova53_233 (CG),

Start 13:

- Found in 3 of 198 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Cuke_98 (AC),

Start 19:

- Found in 18 of 198 (9.1%) of genes in pham
- Manual Annotations of this start: 12 of 177
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Blackbeetle_74 (S), Gattaca_71 (S), GoongGoong_73 (S), Lilbit_71 (S), LittleLaf_73 (S), Marvin_69 (S), MosMoris_70 (S), Poise_74 (S), Raela_74 (S), RedRaider77_73 (S), Tesla_70 (S), VasuNzinga_72 (S),

Start 21:

- Found in 2 of 198 (1.0%) of genes in pham

- Manual Annotations of this start: 1 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reynauld_80 (CH), Srilaccoli3_74 (CH),

Start 23:

- Found in 163 of 198 (82.3%) of genes in pham
- Manual Annotations of this start: 145 of 177
- Called 98.8% of time when present
- Phage (with cluster) where this start called: 244_77 (E), ABCat_73 (E), Adnama_80 (E), Amao_76 (E), AmericanBeauty_80 (E), Argent26_80 (E), Asriel_75 (E), Auspice_124 (M1), Aziz_139 (M2), BaboJay_73 (E), BadStone_73 (E), Balomoji_76 (E), Barbarian_75 (E), Bask21_76 (E), Becksu_75 (E), Bench_79 (E), BigBubba_76 (E), BilboSwaggins_74 (E), Bogg_76 (E), Bongo_123 (M1), Bricole_126 (M1), Bruin_73 (E), Buck_77 (E), Budgie_84 (E), Cactus_79 (E), ChosenOne_76 (E), ChotaBhai_76 (E), Cjw1_76 (E), Command613_78 (E), Contagion_72 (E), Cookies_73 (E), CrystalP_75 (E), Czyszczonek_77 (E), Daikon_78 (E), Diminimus_125 (M1), DoctorDiddles_75 (E), DrDrey_76 (E), Dulcita_125 (M1), Dumbo_76 (E), Dusk_73 (E), Easy2Say_77 (E), Elite2014_75 (E), Elph10_76 (E), Emmina_76 (E), Estes_140 (M2), Eureka_74 (E), FairyPath_76 (E), Filch_77 (E), FireRed_80 (E), Flypotenuse_72 (E), FreakyGoo_125 (M1), Gage_78 (E), GardenSalsa_140 (M2), Gator_74 (E), Gemini_81 (E), GenevaB15_142 (M2), Glaske16_127 (M1), Glexan_75 (E), Goku_74 (E), GoldenSpark_80 (E), Goldilocks_79 (E), GooberAzure_79 (E), Greep_80 (E), HanKaySha_76 (E), Harella_76 (E), Henry_74 (E), Highbury_75 (E), Holt_81 (E), Hoonter_79 (E), Hopey_76 (E), HufflyPuff_79 (E), IHOP_74 (E), IPhone7_122 (M1), Icee_77 (E), Inca_73 (E), Izel_125 (M1), JeTaime_76 (E), Kanye_73 (E), Kimchi_80 (E), KleverKiS_127 (M1), Lilac_78 (E), LilhomieP_124 (M1), Lilizi_77 (E), Lilpickle_75 (E), MPhalcon_77 (E), MadamMonkfish_76 (E), Manda_77 (E), Marshmallow_74 (E), Maxxinista_78 (E), Mindy_75 (E), Miniwave_71 (E), Misfit_77 (E), Moldemort_79 (E), MollyToe_71 (E), Mosby_72 (E), MrMagoo_142 (M2), Murica_79 (E), Murphy_76 (E), Myrale_76 (E), Nala_78 (E), Nanosmite_135 (M3), NelitzaMV_74 (E), Nimrod_77 (E), NoSleep_77 (E), NonchalantPear_74 (E), OrionPax_75 (E), PaddyBaddy_76 (E), Paperbeatsrock_75 (E), Pat3_74 (E), Petra64142_80 (E), Phaja_74 (E), Pharsalus_73 (E), PhatBacter_80 (E), Phaux_78 (E), Phrux_73 (E), Policronamos_79 (E), Porky_75 (E), Ptowny_73 (E), Pumpkin_79 (E), Quallification_77 (E), Rakim_77 (E), Reindeer_128 (M1), Rey_142 (M2), Rimmer_77 (E), RiverMonster_76 (E), RoseMarie_134 (M1), Saints25_75 (E), Sassay_71 (E), ShamWow_76 (E), Simpliphy_75 (E), SirDuracell_75 (E), Skinny_130 (M1), SlimJimmy_123 (M1), SophKB_73 (E), Sotrice96_77 (E), Stank_79 (E), Stark_77 (E), StellaBean_74 (E), StolenFromERC_79 (E), StormChicken_78 (E), TBrady12_79 (E), Tarkin_75 (E), TeamEdward_78 (E), TeardropMSU_72 (E), Teaspoon_77 (E), Terminus_79 (E), Thimble_77 (E), Thresher_78 (E), Tomaszewski_71 (E), Toto_74 (E), TpudiCK_126 (M1), Traaww1_72 (E), Tuco_77 (E), TyDawg_119 (M1), Ukulele_71 (E), Wiggins_78 (E), Willez_71 (E), Xandras_75 (E), YassJohnny_73 (E), Youngblood_79 (E), xkcd_79 (E),

Start 24:

- Found in 5 of 198 (2.5%) of genes in pham
- Manual Annotations of this start: 5 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100_127 (V), Cosmo_135 (V), EniyanLRS_127 (V), MaryV_120 (V), Wildcat_134 (V),

Start 25:

- Found in 11 of 198 (5.6%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Cardigan_130 (DD), JonJames_129 (DD), Yvonnetastic_125 (DD),

Start 27:

- Found in 13 of 198 (6.6%) of genes in pham
- Manual Annotations of this start: 5 of 177
- Called 61.5% of time when present
- Phage (with cluster) where this start called: Alone3_172 (BS), BRock_163 (BS), Beleetus_169 (BS), Fudan_172 (BS), GiJojo_160 (BS), LuckySocke_170 (BS), Park1214_180 (BS), Talos_171 (BS),

Start 29:

- Found in 2 of 198 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Garnacho_161 (BS), OneUp_103 (CQ2),

Summary by clusters:

There are 12 clusters represented in this pham: V, CH, E, DD, BS, CG, AC, S, M1, M3, M2, CQ2,

Info for manual annotations of cluster AC:

- Start number 13 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster BS:

- Start number 27 was manually annotated 5 times for cluster BS.
- Start number 29 was manually annotated 1 time for cluster BS.

Info for manual annotations of cluster CG:

- Start number 12 was manually annotated 3 times for cluster CG.

Info for manual annotations of cluster CH:

- Start number 21 was manually annotated 1 time for cluster CH.

Info for manual annotations of cluster CQ2:

- Start number 29 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster DD:

- Start number 25 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster E:

- Start number 23 was manually annotated 124 times for cluster E.

Info for manual annotations of cluster M1:

- Start number 11 was manually annotated 1 time for cluster M1.
- Start number 23 was manually annotated 14 times for cluster M1.

Info for manual annotations of cluster M2:

•Start number 23 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

•Start number 23 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster S:

•Start number 19 was manually annotated 12 times for cluster S.

Info for manual annotations of cluster V:

•Start number 24 was manually annotated 5 times for cluster V.

Gene Information:

Gene: 244_77 Start: 48199, Stop: 48612, Start Num: 23

Candidate Starts for 244_77:

(Start: 23 @48199 has 145 MA's), (26, 48214), (58, 48361), (74, 48499),

Gene: ABCat_73 Start: 48552, Stop: 48965, Start Num: 23

Candidate Starts for ABCat_73:

(Start: 23 @48552 has 145 MA's), (26, 48567), (58, 48714), (74, 48852),

Gene: Adnama_80 Start: 48578, Stop: 48991, Start Num: 23

Candidate Starts for Adnama_80:

(Start: 23 @48578 has 145 MA's), (26, 48593), (58, 48740), (74, 48878),

Gene: Alone3_172 Start: 89660, Stop: 90058, Start Num: 27

Candidate Starts for Alone3_172:

(Start: 27 @89660 has 5 MA's), (31, 89672), (46, 89756), (48, 89762), (54, 89786), (74, 89927), (79, 89951), (82, 89996), (85, 90008), (90, 90041),

Gene: Amao_76 Start: 47972, Stop: 48385, Start Num: 23

Candidate Starts for Amao_76:

(Start: 23 @47972 has 145 MA's), (26, 47987), (58, 48134), (74, 48272),

Gene: AmericanBeauty_80 Start: 48721, Stop: 49134, Start Num: 23

Candidate Starts for AmericanBeauty_80:

(Start: 23 @48721 has 145 MA's), (26, 48736), (58, 48883), (74, 49021),

Gene: Argent26_80 Start: 48359, Stop: 48772, Start Num: 23

Candidate Starts for Argent26_80:

(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: Asriel_75 Start: 46915, Stop: 47328, Start Num: 23

Candidate Starts for Asriel_75:

(Start: 23 @46915 has 145 MA's), (26, 46930), (58, 47077), (74, 47215),

Gene: Auspice_124 Start: 65416, Stop: 65913, Start Num: 23

Candidate Starts for Auspice_124:

(4, 65314), (Start: 11 @65374 has 1 MA's), (Start: 23 @65416 has 145 MA's), (35, 65470), (39, 65494), (61, 65605), (64, 65620), (74, 65728), (78, 65749), (84, 65797),

Gene: Aziz_139 Start: 66655, Stop: 67140, Start Num: 23

Candidate Starts for Aziz_139:

(Start: 19 @66646 has 12 MA's), (Start: 23 @66655 has 145 MA's), (47, 66769), (59, 66814), (61, 66832), (74, 66955), (78, 66976), (84, 67024),

Gene: Azrael100_127 Start: 63905, Stop: 64339, Start Num: 24

Candidate Starts for Azrael100_127:

(Start: 24 @63905 has 5 MA's), (Start: 27 @63914 has 5 MA's), (34, 63950), (35, 63953), (45, 64016), (57, 64064), (60, 64070), (63, 64094), (73, 64193), (74, 64208), (83, 64280),

Gene: BRock_163 Start: 85073, Stop: 85462, Start Num: 27

Candidate Starts for BRock_163:

(7, 84986), (20, 85052), (Start: 27 @85073 has 5 MA's), (30, 85082), (49, 85169), (74, 85331), (82, 85400), (85, 85412), (90, 85445),

Gene: BaboJay_73 Start: 47752, Stop: 48165, Start Num: 23

Candidate Starts for BaboJay_73:

(Start: 23 @47752 has 145 MA's), (26, 47767), (58, 47914), (74, 48052),

Gene: BadStone_73 Start: 48121, Stop: 48534, Start Num: 23

Candidate Starts for BadStone_73:

(Start: 23 @48121 has 145 MA's), (26, 48136), (58, 48283), (74, 48421),

Gene: Balomoji_76 Start: 48682, Stop: 49095, Start Num: 23

Candidate Starts for Balomoji_76:

(Start: 23 @48682 has 145 MA's), (26, 48697), (58, 48844), (74, 48982),

Gene: Barbarian_75 Start: 46915, Stop: 47328, Start Num: 23

Candidate Starts for Barbarian_75:

(Start: 23 @46915 has 145 MA's), (26, 46930), (58, 47077), (74, 47215),

Gene: Bask21_76 Start: 47535, Stop: 47948, Start Num: 23

Candidate Starts for Bask21_76:

(Start: 23 @47535 has 145 MA's), (26, 47550), (58, 47697), (74, 47835),

Gene: Becksu_75 Start: 48751, Stop: 49164, Start Num: 23

Candidate Starts for Becksu_75:

(Start: 23 @48751 has 145 MA's), (26, 48766), (58, 48913), (74, 49051),

Gene: Beleetus_169 Start: 88129, Stop: 88518, Start Num: 27

Candidate Starts for Beleetus_169:

(Start: 27 @88129 has 5 MA's), (30, 88138), (46, 88216), (54, 88246), (68, 88327), (74, 88387), (79, 88411), (82, 88456), (85, 88468), (90, 88501),

Gene: Bench_79 Start: 48219, Stop: 48632, Start Num: 23

Candidate Starts for Bench_79:

(Start: 23 @48219 has 145 MA's), (26, 48234), (58, 48381), (74, 48519),

Gene: BigBubba_76 Start: 47931, Stop: 48344, Start Num: 23

Candidate Starts for BigBubba_76:

(Start: 23 @47931 has 145 MA's), (26, 47946), (58, 48093), (74, 48231),

Gene: BilboSwaggins_74 Start: 48560, Stop: 48973, Start Num: 23

Candidate Starts for BilboSwaggins_74:

(Start: 23 @48560 has 145 MA's), (26, 48575), (58, 48722), (74, 48860),

Gene: Blackbeetle_74 Start: 40595, Stop: 41086, Start Num: 19

Candidate Starts for Blackbeetle_74:

(Start: 19 @40595 has 12 MA's), (53, 40742), (74, 40898), (75, 40901), (81, 40937), (84, 40967), (88, 41000),

Gene: Bogg_76 Start: 47498, Stop: 47911, Start Num: 23

Candidate Starts for Bogg_76:

(Start: 23 @47498 has 145 MA's), (26, 47513), (58, 47660), (74, 47798),

Gene: Bongo_123 Start: 65032, Stop: 65529, Start Num: 23

Candidate Starts for Bongo_123:

(4, 64930), (Start: 11 @64990 has 1 MA's), (Start: 23 @65032 has 145 MA's), (35, 65086), (39, 65110), (61, 65221), (64, 65236), (74, 65344), (78, 65365), (84, 65413),

Gene: Bricole_126 Start: 65180, Stop: 65677, Start Num: 23

Candidate Starts for Bricole_126:

(4, 65078), (Start: 11 @65138 has 1 MA's), (Start: 23 @65180 has 145 MA's), (35, 65234), (39, 65258), (61, 65369), (64, 65384), (74, 65492), (78, 65513), (84, 65561),

Gene: Bruin_73 Start: 47095, Stop: 47508, Start Num: 23

Candidate Starts for Bruin_73:

(Start: 23 @47095 has 145 MA's), (26, 47110), (58, 47257), (74, 47395),

Gene: Buck_77 Start: 48800, Stop: 49213, Start Num: 23

Candidate Starts for Buck_77:

(Start: 23 @48800 has 145 MA's), (26, 48815), (58, 48962), (74, 49100),

Gene: Budgie_84 Start: 48590, Stop: 49003, Start Num: 23

Candidate Starts for Budgie_84:

(Start: 23 @48590 has 145 MA's), (26, 48605), (64, 48782), (74, 48890), (80, 48917),

Gene: Cactus_79 Start: 47576, Stop: 47989, Start Num: 23

Candidate Starts for Cactus_79:

(Start: 23 @47576 has 145 MA's), (26, 47591), (58, 47738), (74, 47876),

Gene: Cardigan_130 Start: 73527, Stop: 73958, Start Num: 25

Candidate Starts for Cardigan_130:

(Start: 25 @73527 has 2 MA's), (35, 73572), (37, 73578), (41, 73611), (74, 73806), (75, 73809), (76, 73815), (90, 73914), (92, 73938),

Gene: ChosenOne_76 Start: 47576, Stop: 47989, Start Num: 23

Candidate Starts for ChosenOne_76:

(Start: 23 @47576 has 145 MA's), (26, 47591), (58, 47738), (74, 47876),

Gene: ChotaBhai_76 Start: 47900, Stop: 48313, Start Num: 23

Candidate Starts for ChotaBhai_76:

(Start: 23 @47900 has 145 MA's), (26, 47915), (64, 48092), (74, 48200), (80, 48227),

Gene: Cjw1_76 Start: 49273, Stop: 49686, Start Num: 23

Candidate Starts for Cjw1_76:

(Start: 23 @49273 has 145 MA's), (26, 49288), (58, 49435), (74, 49573),

Gene: Command613_78 Start: 48615, Stop: 49028, Start Num: 23

Candidate Starts for Command613_78:

(Start: 23 @48615 has 145 MA's), (26, 48630), (58, 48777), (74, 48915),

Gene: Contagion_72 Start: 47376, Stop: 47789, Start Num: 23

Candidate Starts for Contagion_72:

(Start: 23 @47376 has 145 MA's), (26, 47391), (58, 47538), (74, 47676),

Gene: Cookies_73 Start: 47757, Stop: 48170, Start Num: 23

Candidate Starts for Cookies_73:

(Start: 23 @47757 has 145 MA's), (26, 47772), (64, 47949), (74, 48057), (80, 48084),

Gene: Cosmo_135 Start: 64335, Stop: 64769, Start Num: 24

Candidate Starts for Cosmo_135:

(Start: 24 @64335 has 5 MA's), (Start: 27 @64344 has 5 MA's), (34, 64380), (35, 64383), (45, 64446), (57, 64494), (60, 64500), (63, 64524), (73, 64623), (74, 64638), (83, 64710),

Gene: CrystalP_75 Start: 48560, Stop: 48973, Start Num: 23

Candidate Starts for CrystalP_75:

(Start: 23 @48560 has 145 MA's), (26, 48575), (58, 48722), (74, 48860),

Gene: Cuke_98 Start: 56091, Stop: 56588, Start Num: 13

Candidate Starts for Cuke_98:

(Start: 13 @56091 has 1 MA's), (Start: 23 @56127 has 145 MA's), (Start: 25 @56139 has 2 MA's), (38, 56202), (51, 56259), (69, 56370), (71, 56400), (72, 56415), (73, 56427), (74, 56442), (75, 56445), (88, 56565),

Gene: Czyszczone1_77 Start: 48082, Stop: 48495, Start Num: 23

Candidate Starts for Czyszczone1_77:

(Start: 23 @48082 has 145 MA's), (26, 48097), (58, 48244), (74, 48382),

Gene: Daikon_78 Start: 48703, Stop: 49116, Start Num: 23

Candidate Starts for Daikon_78:

(Start: 23 @48703 has 145 MA's), (26, 48718), (58, 48865), (74, 49003),

Gene: Diminimus_125 Start: 65027, Stop: 65524, Start Num: 23

Candidate Starts for Diminimus_125:

(4, 64925), (Start: 11 @64985 has 1 MA's), (Start: 23 @65027 has 145 MA's), (Start: 25 @65039 has 2 MA's), (35, 65081), (39, 65105), (61, 65216), (64, 65231), (74, 65339), (78, 65360), (84, 65408),

Gene: DoctorDiddles_75 Start: 47944, Stop: 48357, Start Num: 23

Candidate Starts for DoctorDiddles_75:

(Start: 23 @47944 has 145 MA's), (26, 47959), (64, 48136), (74, 48244), (80, 48271),

Gene: Dorin_220 Start: 115745, Stop: 116227, Start Num: 12

Candidate Starts for Dorin_220:

(Start: 12 @115745 has 3 MA's), (Start: 13 @115751 has 1 MA's), (17, 115775), (26, 115802), (47, 115913), (56, 115949), (66, 115994), (74, 116099), (76, 116108), (79, 116132),

Gene: DrDrey_76 Start: 49001, Stop: 49414, Start Num: 23

Candidate Starts for DrDrey_76:

(Start: 23 @49001 has 145 MA's), (26, 49016), (58, 49163), (74, 49301),

Gene: Dulcita_125 Start: 65028, Stop: 65525, Start Num: 23

Candidate Starts for Dulcita_125:

(4, 64926), (Start: 11 @64986 has 1 MA's), (Start: 23 @65028 has 145 MA's), (Start: 25 @65040 has 2 MA's), (35, 65082), (39, 65106), (61, 65217), (64, 65232), (74, 65340), (78, 65361), (84, 65409),

Gene: Dumbo_76 Start: 47481, Stop: 47894, Start Num: 23

Candidate Starts for Dumbo_76:

(Start: 23 @47481 has 145 MA's), (26, 47496), (58, 47643), (74, 47781),

Gene: Dusk_73 Start: 47781, Stop: 48194, Start Num: 23

Candidate Starts for Dusk_73:

(Start: 23 @47781 has 145 MA's), (26, 47796), (58, 47943), (74, 48081),

Gene: Easy2Say_77 Start: 49025, Stop: 49438, Start Num: 23

Candidate Starts for Easy2Say_77:

(Start: 23 @49025 has 145 MA's), (26, 49040), (58, 49187), (74, 49325),

Gene: Elite2014_75 Start: 47575, Stop: 47988, Start Num: 23

Candidate Starts for Elite2014_75:

(Start: 23 @47575 has 145 MA's), (26, 47590), (58, 47737), (74, 47875),

Gene: Elph10_76 Start: 47580, Stop: 47993, Start Num: 23

Candidate Starts for Elph10_76:

(Start: 23 @47580 has 145 MA's), (26, 47595), (58, 47742), (74, 47880),

Gene: Emmina_76 Start: 47482, Stop: 47895, Start Num: 23

Candidate Starts for Emmina_76:

(Start: 23 @47482 has 145 MA's), (26, 47497), (58, 47644), (74, 47782),

Gene: EniyanLRS_127 Start: 63903, Stop: 64340, Start Num: 24

Candidate Starts for EniyanLRS_127:

(22, 63894), (Start: 24 @63903 has 5 MA's), (Start: 27 @63912 has 5 MA's), (34, 63948), (35, 63951), (45, 64014), (57, 64062), (60, 64068), (63, 64092), (73, 64191), (74, 64206), (83, 64278),

Gene: Estes_140 Start: 66866, Stop: 67351, Start Num: 23

Candidate Starts for Estes_140:

(Start: 19 @66857 has 12 MA's), (Start: 23 @66866 has 145 MA's), (47, 66980), (52, 67001), (61, 67043), (74, 67166), (78, 67187), (84, 67235), (87, 67265),

Gene: Eureka_74 Start: 48046, Stop: 48459, Start Num: 23

Candidate Starts for Eureka_74:

(Start: 23 @48046 has 145 MA's), (26, 48061), (58, 48208), (74, 48346),

Gene: FairyPath_76 Start: 48694, Stop: 49107, Start Num: 23

Candidate Starts for FairyPath_76:

(Start: 23 @48694 has 145 MA's), (26, 48709), (64, 48886), (74, 48994), (80, 49021),

Gene: Filch_77 Start: 47507, Stop: 47920, Start Num: 23

Candidate Starts for Filch_77:

(Start: 23 @47507 has 145 MA's), (26, 47522), (58, 47669), (74, 47807),

Gene: FireRed_80 Start: 49069, Stop: 49482, Start Num: 23
Candidate Starts for FireRed_80:
(Start: 23 @49069 has 145 MA's), (26, 49084), (58, 49231), (74, 49369),

Gene: Flypotenuse_72 Start: 47566, Stop: 47979, Start Num: 23
Candidate Starts for Flypotenuse_72:
(Start: 23 @47566 has 145 MA's), (26, 47581), (58, 47728), (74, 47866),

Gene: Francesca_221 Start: 116394, Stop: 116876, Start Num: 12
Candidate Starts for Francesca_221:
(Start: 12 @116394 has 3 MA's), (Start: 13 @116400 has 1 MA's), (17, 116424), (26, 116451), (47, 116562), (56, 116598), (66, 116643), (74, 116748), (76, 116757), (79, 116781),

Gene: FreakyGoo_125 Start: 65512, Stop: 66009, Start Num: 23
Candidate Starts for FreakyGoo_125:
(4, 65410), (Start: 11 @65470 has 1 MA's), (Start: 23 @65512 has 145 MA's), (35, 65566), (39, 65590), (61, 65701), (64, 65716), (74, 65824), (78, 65845), (84, 65893),

Gene: Fudan_172 Start: 88216, Stop: 88614, Start Num: 27
Candidate Starts for Fudan_172:
(Start: 27 @88216 has 5 MA's), (31, 88228), (46, 88312), (48, 88318), (54, 88342), (74, 88483), (79, 88507), (82, 88552), (85, 88564), (90, 88597),

Gene: Gage_78 Start: 48359, Stop: 48772, Start Num: 23
Candidate Starts for Gage_78:
(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: GardenSalsa_140 Start: 66997, Stop: 67482, Start Num: 23
Candidate Starts for GardenSalsa_140:
(Start: 19 @66988 has 12 MA's), (Start: 23 @66997 has 145 MA's), (47, 67111), (74, 67297), (78, 67318), (80, 67324), (84, 67366), (87, 67396),

Gene: Garnacho_161 Start: 87772, Stop: 88170, Start Num: 29
Candidate Starts for Garnacho_161:
(Start: 29 @87772 has 2 MA's), (50, 87877), (74, 88039), (79, 88063), (81, 88078), (82, 88108), (85, 88120), (90, 88153),

Gene: Gator_74 Start: 48412, Stop: 48825, Start Num: 23
Candidate Starts for Gator_74:
(Start: 23 @48412 has 145 MA's), (26, 48427), (58, 48574), (74, 48712),

Gene: Gattaca_71 Start: 40699, Stop: 41190, Start Num: 19
Candidate Starts for Gattaca_71:
(Start: 19 @40699 has 12 MA's), (53, 40846), (74, 41002), (75, 41005), (81, 41041), (84, 41071), (88, 41104),

Gene: Gemini_81 Start: 48876, Stop: 49289, Start Num: 23
Candidate Starts for Gemini_81:
(Start: 23 @48876 has 145 MA's), (26, 48891), (58, 49038), (74, 49176),

Gene: GenevaB15_142 Start: 66655, Stop: 67140, Start Num: 23
Candidate Starts for GenevaB15_142:

(Start: 19 @66646 has 12 MA's), (Start: 23 @66655 has 145 MA's), (47, 66769), (59, 66814), (61, 66832), (74, 66955), (78, 66976), (84, 67024),

Gene: GiJojo_160 Start: 88793, Stop: 89200, Start Num: 27

Candidate Starts for GiJojo_160:

(Start: 27 @88793 has 5 MA's), (35, 88832), (44, 88889), (73, 89054), (74, 89069), (79, 89093), (81, 89108), (82, 89138), (85, 89150), (87, 89174), (89, 89180),

Gene: Glaske16_127 Start: 66146, Stop: 66643, Start Num: 23

Candidate Starts for Glaske16_127:

(4, 66044), (Start: 11 @66104 has 1 MA's), (Start: 23 @66146 has 145 MA's), (Start: 25 @66158 has 2 MA's), (35, 66200), (39, 66224), (61, 66335), (64, 66350), (74, 66458), (78, 66479), (84, 66527),

Gene: Glexan_75 Start: 48696, Stop: 49109, Start Num: 23

Candidate Starts for Glexan_75:

(Start: 23 @48696 has 145 MA's), (26, 48711), (58, 48858), (74, 48996),

Gene: Goku_74 Start: 47775, Stop: 48188, Start Num: 23

Candidate Starts for Goku_74:

(Start: 23 @47775 has 145 MA's), (26, 47790), (58, 47937), (74, 48075),

Gene: GoldenSpark_80 Start: 48359, Stop: 48772, Start Num: 23

Candidate Starts for GoldenSpark_80:

(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: Goldilocks_79 Start: 47857, Stop: 48270, Start Num: 23

Candidate Starts for Goldilocks_79:

(Start: 23 @47857 has 145 MA's), (26, 47872), (58, 48019), (74, 48157),

Gene: GooberAzure_79 Start: 48359, Stop: 48772, Start Num: 23

Candidate Starts for GooberAzure_79:

(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: GoongGoong_73 Start: 40498, Stop: 40989, Start Num: 19

Candidate Starts for GoongGoong_73:

(Start: 19 @40498 has 12 MA's), (53, 40645), (74, 40801), (75, 40804), (81, 40840), (84, 40870), (88, 40903),

Gene: Greep_80 Start: 49358, Stop: 49771, Start Num: 23

Candidate Starts for Greep_80:

(Start: 23 @49358 has 145 MA's), (26, 49373), (58, 49520), (74, 49658),

Gene: HanKaySha_76 Start: 47660, Stop: 48073, Start Num: 23

Candidate Starts for HanKaySha_76:

(Start: 23 @47660 has 145 MA's), (26, 47675), (58, 47822), (74, 47960),

Gene: Harella_76 Start: 49212, Stop: 49625, Start Num: 23

Candidate Starts for Harella_76:

(Start: 23 @49212 has 145 MA's), (26, 49227), (58, 49374), (74, 49512),

Gene: Henry_74 Start: 48000, Stop: 48413, Start Num: 23

Candidate Starts for Henry_74:

(Start: 23 @48000 has 145 MA's), (26, 48015), (58, 48162), (74, 48300),

Gene: Highbury_75 Start: 47648, Stop: 48061, Start Num: 23
Candidate Starts for Highbury_75:
(Start: 23 @47648 has 145 MA's), (26, 47663), (58, 47810), (74, 47948),

Gene: Holt_81 Start: 48773, Stop: 49186, Start Num: 23
Candidate Starts for Holt_81:
(Start: 23 @48773 has 145 MA's), (26, 48788), (58, 48935), (74, 49073),

Gene: Hoonter_79 Start: 48359, Stop: 48772, Start Num: 23
Candidate Starts for Hoonter_79:
(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: Hokey_76 Start: 48192, Stop: 48605, Start Num: 23
Candidate Starts for Hokey_76:
(Start: 23 @48192 has 145 MA's), (26, 48207), (58, 48354), (74, 48492),

Gene: HufflyPuff_79 Start: 49025, Stop: 49438, Start Num: 23
Candidate Starts for HufflyPuff_79:
(Start: 23 @49025 has 145 MA's), (26, 49040), (58, 49187), (74, 49325),

Gene: IHOP_74 Start: 48124, Stop: 48537, Start Num: 23
Candidate Starts for IHOP_74:
(Start: 23 @48124 has 145 MA's), (26, 48139), (58, 48286), (74, 48424),

Gene: IPhone7_122 Start: 65032, Stop: 65529, Start Num: 23
Candidate Starts for IPhone7_122:
(4, 64930), (Start: 11 @64990 has 1 MA's), (Start: 23 @65032 has 145 MA's), (35, 65086), (39, 65110),
(61, 65221), (64, 65236), (74, 65344), (78, 65365), (84, 65413),

Gene: Icee_77 Start: 48023, Stop: 48436, Start Num: 23
Candidate Starts for Icee_77:
(Start: 23 @48023 has 145 MA's), (26, 48038), (58, 48185), (74, 48323),

Gene: Inca_73 Start: 46649, Stop: 47062, Start Num: 23
Candidate Starts for Inca_73:
(Start: 23 @46649 has 145 MA's), (26, 46664), (58, 46811), (74, 46949),

Gene: Izel_125 Start: 65027, Stop: 65524, Start Num: 23
Candidate Starts for Izel_125:
(4, 64925), (Start: 11 @64985 has 1 MA's), (Start: 23 @65027 has 145 MA's), (Start: 25 @65039 has 2
MA's), (35, 65081), (39, 65105), (61, 65216), (64, 65231), (74, 65339), (78, 65360), (84, 65408),

Gene: JeTaime_76 Start: 48841, Stop: 49254, Start Num: 23
Candidate Starts for JeTaime_76:
(Start: 23 @48841 has 145 MA's), (26, 48856), (58, 49003), (74, 49141),

Gene: JonJames_129 Start: 74477, Stop: 74908, Start Num: 25
Candidate Starts for JonJames_129:
(Start: 25 @74477 has 2 MA's), (35, 74522), (37, 74528), (40, 74552), (41, 74561), (74, 74756), (75,
74759), (76, 74765), (90, 74864), (92, 74888),

Gene: Kanye_73 Start: 47705, Stop: 48118, Start Num: 23

Candidate Starts for Kanye_73:

(Start: 23 @47705 has 145 MA's), (26, 47720), (58, 47867), (74, 48005),

Gene: Kimchi_80 Start: 48362, Stop: 48775, Start Num: 23

Candidate Starts for Kimchi_80:

(Start: 23 @48362 has 145 MA's), (26, 48377), (58, 48524), (74, 48662),

Gene: KleverKiS_127 Start: 66517, Stop: 67014, Start Num: 23

Candidate Starts for KleverKiS_127:

(4, 66415), (Start: 11 @66475 has 1 MA's), (Start: 23 @66517 has 145 MA's), (35, 66571), (39, 66595), (61, 66706), (64, 66721), (74, 66829), (78, 66850), (84, 66898),

Gene: Lilac_78 Start: 47977, Stop: 48390, Start Num: 23

Candidate Starts for Lilac_78:

(Start: 23 @47977 has 145 MA's), (26, 47992), (58, 48139), (74, 48277),

Gene: Lilbit_71 Start: 41279, Stop: 41770, Start Num: 19

Candidate Starts for Lilbit_71:

(Start: 19 @41279 has 12 MA's), (53, 41426), (74, 41582), (75, 41585), (81, 41621), (84, 41651), (88, 41684),

Gene: LilhomieP_124 Start: 66310, Stop: 66807, Start Num: 23

Candidate Starts for LilhomieP_124:

(4, 66208), (Start: 11 @66268 has 1 MA's), (Start: 23 @66310 has 145 MA's), (35, 66364), (39, 66388), (61, 66499), (64, 66514), (74, 66622), (78, 66643), (84, 66691),

Gene: Lilizi_77 Start: 47690, Stop: 48103, Start Num: 23

Candidate Starts for Lilizi_77:

(Start: 23 @47690 has 145 MA's), (26, 47705), (58, 47852), (74, 47990),

Gene: Lilpickle_75 Start: 47575, Stop: 47988, Start Num: 23

Candidate Starts for Lilpickle_75:

(Start: 23 @47575 has 145 MA's), (26, 47590), (58, 47737), (74, 47875),

Gene: LittleLaf_73 Start: 41008, Stop: 41499, Start Num: 19

Candidate Starts for LittleLaf_73:

(Start: 19 @41008 has 12 MA's), (53, 41155), (74, 41311), (75, 41314), (81, 41350), (84, 41380), (88, 41413),

Gene: LuckySocke_170 Start: 88165, Stop: 88563, Start Num: 27

Candidate Starts for LuckySocke_170:

(Start: 27 @88165 has 5 MA's), (31, 88177), (46, 88261), (48, 88267), (54, 88291), (74, 88432), (79, 88456), (82, 88501), (85, 88513), (90, 88546),

Gene: MPhalcon_77 Start: 48074, Stop: 48487, Start Num: 23

Candidate Starts for MPhalcon_77:

(Start: 23 @48074 has 145 MA's), (26, 48089), (58, 48236), (74, 48374),

Gene: MadamMonkfish_76 Start: 47299, Stop: 47712, Start Num: 23

Candidate Starts for MadamMonkfish_76:

(Start: 23 @47299 has 145 MA's), (26, 47314), (58, 47461), (74, 47599),

Gene: Manda_77 Start: 49161, Stop: 49574, Start Num: 23

Candidate Starts for Manda_77:

(Start: 23 @49161 has 145 MA's), (26, 49176), (58, 49323), (74, 49461),

Gene: Marshmallow_74 Start: 48854, Stop: 49267, Start Num: 23

Candidate Starts for Marshmallow_74:

(Start: 23 @48854 has 145 MA's), (26, 48869), (64, 49046), (74, 49154), (80, 49181),

Gene: Marvin_69 Start: 40817, Stop: 41308, Start Num: 19

Candidate Starts for Marvin_69:

(Start: 19 @40817 has 12 MA's), (53, 40964), (74, 41120), (75, 41123), (81, 41159), (84, 41189), (88, 41222),

Gene: MaryV_120 Start: 62395, Stop: 62829, Start Num: 24

Candidate Starts for MaryV_120:

(Start: 24 @62395 has 5 MA's), (Start: 27 @62404 has 5 MA's), (34, 62440), (35, 62443), (45, 62506), (57, 62554), (60, 62560), (63, 62584), (73, 62683), (74, 62698), (83, 62770),

Gene: Maxxinsta_78 Start: 47950, Stop: 48363, Start Num: 23

Candidate Starts for Maxxinsta_78:

(Start: 23 @47950 has 145 MA's), (26, 47965), (58, 48112), (74, 48250),

Gene: Mindy_75 Start: 47166, Stop: 47579, Start Num: 23

Candidate Starts for Mindy_75:

(Start: 23 @47166 has 145 MA's), (26, 47181), (58, 47328), (74, 47466),

Gene: Miniwave_71 Start: 47619, Stop: 48032, Start Num: 23

Candidate Starts for Miniwave_71:

(Start: 23 @47619 has 145 MA's), (26, 47634), (58, 47781), (74, 47919),

Gene: Misfit_77 Start: 49093, Stop: 49506, Start Num: 23

Candidate Starts for Misfit_77:

(Start: 23 @49093 has 145 MA's), (26, 49108), (58, 49255), (74, 49393),

Gene: Moldemort_79 Start: 48178, Stop: 48591, Start Num: 23

Candidate Starts for Moldemort_79:

(Start: 23 @48178 has 145 MA's), (26, 48193), (58, 48340), (74, 48478),

Gene: MollyToe_71 Start: 46920, Stop: 47333, Start Num: 23

Candidate Starts for MollyToe_71:

(Start: 23 @46920 has 145 MA's), (26, 46935), (58, 47082), (74, 47220),

Gene: MosMoris_70 Start: 40699, Stop: 41190, Start Num: 19

Candidate Starts for MosMoris_70:

(Start: 19 @40699 has 12 MA's), (53, 40846), (74, 41002), (75, 41005), (81, 41041), (84, 41071), (88, 41104),

Gene: Mosby_72 Start: 47376, Stop: 47789, Start Num: 23

Candidate Starts for Mosby_72:

(Start: 23 @47376 has 145 MA's), (26, 47391), (58, 47538), (74, 47676),

Gene: MrMagoo_142 Start: 66998, Stop: 67483, Start Num: 23

Candidate Starts for MrMagoo_142:

(Start: 19 @66989 has 12 MA's), (Start: 23 @66998 has 145 MA's), (47, 67112), (74, 67298), (78, 67319), (80, 67325), (84, 67367), (87, 67397),

Gene: Murica_79 Start: 49025, Stop: 49438, Start Num: 23

Candidate Starts for Murica_79:

(Start: 23 @49025 has 145 MA's), (26, 49040), (58, 49187), (74, 49325),

Gene: Murphy_76 Start: 48462, Stop: 48875, Start Num: 23

Candidate Starts for Murphy_76:

(Start: 23 @48462 has 145 MA's), (26, 48477), (58, 48624), (74, 48762),

Gene: Myrale_76 Start: 48719, Stop: 49132, Start Num: 23

Candidate Starts for Myrale_76:

(Start: 23 @48719 has 145 MA's), (26, 48734), (58, 48881), (74, 49019),

Gene: Nala_78 Start: 48583, Stop: 48996, Start Num: 23

Candidate Starts for Nala_78:

(Start: 23 @48583 has 145 MA's), (26, 48598), (58, 48745), (74, 48883),

Gene: Nanosmite_135 Start: 66876, Stop: 67361, Start Num: 23

Candidate Starts for Nanosmite_135:

(Start: 23 @66876 has 145 MA's), (39, 66954), (47, 66990), (59, 67035), (61, 67053), (74, 67176), (78, 67197), (84, 67245),

Gene: NelitzaMV_74 Start: 47665, Stop: 48078, Start Num: 23

Candidate Starts for NelitzaMV_74:

(Start: 23 @47665 has 145 MA's), (26, 47680), (58, 47827), (74, 47965),

Gene: Nimrod_77 Start: 49286, Stop: 49699, Start Num: 23

Candidate Starts for Nimrod_77:

(Start: 23 @49286 has 145 MA's), (26, 49301), (58, 49448), (74, 49586),

Gene: NoSleep_77 Start: 47920, Stop: 48333, Start Num: 23

Candidate Starts for NoSleep_77:

(Start: 23 @47920 has 145 MA's), (26, 47935), (58, 48082), (74, 48220),

Gene: NonchalantPear_74 Start: 47773, Stop: 48186, Start Num: 23

Candidate Starts for NonchalantPear_74:

(Start: 23 @47773 has 145 MA's), (26, 47788), (58, 47935), (74, 48073),

Gene: Nova53_233 Start: 121074, Stop: 121556, Start Num: 12

Candidate Starts for Nova53_233:

(Start: 12 @121074 has 3 MA's), (15, 121083), (32, 121140), (55, 121269), (65, 121314), (66, 121317), (71, 121383), (74, 121425), (75, 121428), (76, 121434), (86, 121527), (87, 121533), (91, 121548),

Gene: OneUp_103 Start: 65646, Stop: 66053, Start Num: 29

Candidate Starts for OneUp_103:

(Start: 11 @65583 has 1 MA's), (Start: 29 @65646 has 2 MA's), (33, 65676), (42, 65727), (44, 65742), (64, 65832), (70, 65877), (74, 65934), (76, 65943), (77, 65946), (90, 66042),

Gene: OrionPax_75 Start: 47671, Stop: 48084, Start Num: 23

Candidate Starts for OrionPax_75:

(Start: 23 @47671 has 145 MA's), (26, 47686), (58, 47833), (74, 47971),

Gene: PaddyBaddy_76 Start: 47674, Stop: 48087, Start Num: 23
Candidate Starts for PaddyBaddy_76:
(Start: 23 @47674 has 145 MA's), (26, 47689), (58, 47836), (74, 47974),

Gene: Paperbeatsrock_75 Start: 48297, Stop: 48710, Start Num: 23
Candidate Starts for Paperbeatsrock_75:
(Start: 23 @48297 has 145 MA's), (26, 48312), (58, 48459), (74, 48597),

Gene: Park1214_180 Start: 89343, Stop: 89732, Start Num: 27
Candidate Starts for Park1214_180:
(Start: 11 @89289 has 1 MA's), (Start: 27 @89343 has 5 MA's), (31, 89355), (54, 89460), (55, 89466),
(74, 89601), (79, 89625), (82, 89670), (85, 89682), (90, 89715),

Gene: Pat3_74 Start: 46829, Stop: 47242, Start Num: 23
Candidate Starts for Pat3_74:
(Start: 23 @46829 has 145 MA's), (26, 46844), (58, 46991), (74, 47129),

Gene: PegLeg_127 Start: 66152, Stop: 66691, Start Num: 11
Candidate Starts for PegLeg_127:
(4, 66092), (Start: 11 @66152 has 1 MA's), (Start: 23 @66194 has 145 MA's), (Start: 25 @66206 has 2
MA's), (35, 66248), (39, 66272), (59, 66365), (61, 66383), (64, 66398), (74, 66506), (78, 66527), (84,
66575),

Gene: Petra64142_80 Start: 49516, Stop: 49929, Start Num: 23
Candidate Starts for Petra64142_80:
(Start: 23 @49516 has 145 MA's), (26, 49531), (58, 49678), (74, 49816),

Gene: Phaja_74 Start: 48123, Stop: 48536, Start Num: 23
Candidate Starts for Phaja_74:
(Start: 23 @48123 has 145 MA's), (26, 48138), (58, 48285), (74, 48423),

Gene: Pharsalus_73 Start: 48097, Stop: 48510, Start Num: 23
Candidate Starts for Pharsalus_73:
(Start: 23 @48097 has 145 MA's), (26, 48112), (58, 48259), (74, 48397),

Gene: PhatBacter_80 Start: 49069, Stop: 49482, Start Num: 23
Candidate Starts for PhatBacter_80:
(Start: 23 @49069 has 145 MA's), (26, 49084), (58, 49231), (74, 49369),

Gene: Phaux_78 Start: 49064, Stop: 49477, Start Num: 23
Candidate Starts for Phaux_78:
(Start: 23 @49064 has 145 MA's), (26, 49079), (58, 49226), (74, 49364),

Gene: Phrux_73 Start: 47660, Stop: 48073, Start Num: 23
Candidate Starts for Phrux_73:
(Start: 23 @47660 has 145 MA's), (26, 47675), (58, 47822), (74, 47960),

Gene: Poise_74 Start: 40595, Stop: 41086, Start Num: 19
Candidate Starts for Poise_74:
(Start: 19 @40595 has 12 MA's), (53, 40742), (74, 40898), (75, 40901), (81, 40937), (84, 40967), (88,
41000),

Gene: Policronamos_79 Start: 49064, Stop: 49477, Start Num: 23
Candidate Starts for Policronamos_79:
(Start: 23 @49064 has 145 MA's), (26, 49079), (58, 49226), (74, 49364),

Gene: Porky_75 Start: 47490, Stop: 47903, Start Num: 23
Candidate Starts for Porky_75:
(Start: 23 @47490 has 145 MA's), (26, 47505), (58, 47652), (74, 47790),

Gene: Ptowny_73 Start: 46959, Stop: 47372, Start Num: 23
Candidate Starts for Ptowny_73:
(Start: 23 @46959 has 145 MA's), (26, 46974), (58, 47121), (74, 47259),

Gene: Pumpkin_79 Start: 48718, Stop: 49131, Start Num: 23
Candidate Starts for Pumpkin_79:
(Start: 23 @48718 has 145 MA's), (26, 48733), (58, 48880), (74, 49018),

Gene: Quallification_77 Start: 48705, Stop: 49118, Start Num: 23
Candidate Starts for Quallification_77:
(Start: 23 @48705 has 145 MA's), (26, 48720), (58, 48867), (74, 49005),

Gene: Raela_74 Start: 41152, Stop: 41643, Start Num: 19
Candidate Starts for Raela_74:
(Start: 19 @41152 has 12 MA's), (53, 41299), (74, 41455), (75, 41458), (81, 41494), (84, 41524), (88, 41557),

Gene: Rakim_77 Start: 48174, Stop: 48587, Start Num: 23
Candidate Starts for Rakim_77:
(Start: 23 @48174 has 145 MA's), (26, 48189), (58, 48336), (74, 48474),

Gene: RedRaider77_73 Start: 40540, Stop: 41031, Start Num: 19
Candidate Starts for RedRaider77_73:
(Start: 19 @40540 has 12 MA's), (53, 40687), (74, 40843), (75, 40846), (81, 40882), (84, 40912), (88, 40945),

Gene: Reindeer_128 Start: 67626, Stop: 68123, Start Num: 23
Candidate Starts for Reindeer_128:
(Start: 23 @67626 has 145 MA's), (35, 67680), (36, 67686), (39, 67704), (44, 67740), (59, 67797), (61, 67815), (64, 67830), (73, 67923), (74, 67938), (78, 67959), (80, 67965), (84, 68007),

Gene: Rey_142 Start: 66571, Stop: 67056, Start Num: 23
Candidate Starts for Rey_142:
(2, 66394), (3, 66466), (5, 66475), (6, 66499), (8, 66502), (Start: 23 @66571 has 145 MA's), (47, 66685), (59, 66730), (61, 66748), (74, 66871), (78, 66892), (84, 66940), (87, 66970), (94, 67027),

Gene: Reynauld_80 Start: 64338, Stop: 63856, Start Num: 21
Candidate Starts for Reynauld_80:
(9, 64383), (10, 64374), (18, 64344), (20, 64341), (Start: 21 @64338 has 1 MA's), (28, 64317), (43, 64224), (45, 64218), (62, 64137), (74, 64020), (79, 63996), (84, 63945), (93, 63861),

Gene: Rimmer_77 Start: 48410, Stop: 48823, Start Num: 23
Candidate Starts for Rimmer_77:
(Start: 23 @48410 has 145 MA's), (26, 48425), (58, 48572), (74, 48710),

Gene: RiverMonster_76 Start: 48238, Stop: 48651, Start Num: 23
Candidate Starts for RiverMonster_76:
(Start: 23 @48238 has 145 MA's), (26, 48253), (58, 48400), (74, 48538),

Gene: RoseMarie_134 Start: 69165, Stop: 69662, Start Num: 23
Candidate Starts for RoseMarie_134:
(4, 69063), (Start: 11 @69123 has 1 MA's), (14, 69132), (Start: 23 @69165 has 145 MA's), (Start: 25 @69177 has 2 MA's), (35, 69219), (39, 69243), (43, 69276), (59, 69336), (61, 69354), (64, 69369), (74, 69477), (78, 69498), (84, 69546), (94, 69633),

Gene: Saints25_75 Start: 47648, Stop: 48061, Start Num: 23
Candidate Starts for Saints25_75:
(Start: 23 @47648 has 145 MA's), (26, 47663), (58, 47810), (74, 47948),

Gene: Sassay_71 Start: 46338, Stop: 46751, Start Num: 23
Candidate Starts for Sassay_71:
(Start: 23 @46338 has 145 MA's), (26, 46353), (58, 46500), (74, 46638),

Gene: ShamWow_76 Start: 48560, Stop: 48973, Start Num: 23
Candidate Starts for ShamWow_76:
(Start: 23 @48560 has 145 MA's), (26, 48575), (58, 48722), (74, 48860),

Gene: Simpliphy_75 Start: 47638, Stop: 48051, Start Num: 23
Candidate Starts for Simpliphy_75:
(Start: 23 @47638 has 145 MA's), (26, 47653), (58, 47800), (74, 47938),

Gene: SirDuracell_75 Start: 46924, Stop: 47337, Start Num: 23
Candidate Starts for SirDuracell_75:
(Start: 23 @46924 has 145 MA's), (26, 46939), (64, 47116), (74, 47224), (80, 47251),

Gene: Skinny_130 Start: 67311, Stop: 67808, Start Num: 23
Candidate Starts for Skinny_130:
(4, 67209), (Start: 11 @67269 has 1 MA's), (Start: 23 @67311 has 145 MA's), (Start: 25 @67323 has 2 MA's), (35, 67365), (39, 67389), (61, 67500), (64, 67515), (74, 67623), (78, 67644), (84, 67692),

Gene: SlimJimmy_123 Start: 66020, Stop: 66517, Start Num: 23
Candidate Starts for SlimJimmy_123:
(Start: 11 @65978 has 1 MA's), (Start: 23 @66020 has 145 MA's), (35, 66074), (39, 66098), (61, 66209), (64, 66224), (74, 66332), (78, 66353), (84, 66401),

Gene: SophKB_73 Start: 47316, Stop: 47729, Start Num: 23
Candidate Starts for SophKB_73:
(Start: 23 @47316 has 145 MA's), (26, 47331), (58, 47478), (74, 47616),

Gene: Sotrice96_77 Start: 48319, Stop: 48732, Start Num: 23
Candidate Starts for Sotrice96_77:
(Start: 23 @48319 has 145 MA's), (26, 48334), (58, 48481), (74, 48619),

Gene: Srilaccoli3_74 Start: 63194, Stop: 62712, Start Num: 21
Candidate Starts for Srilaccoli3_74:
(1, 63443), (Start: 19 @63200 has 12 MA's), (20, 63197), (Start: 21 @63194 has 1 MA's), (28, 63173), (43, 63080), (45, 63074), (62, 62993), (67, 62975), (72, 62903), (74, 62876), (79, 62852), (84, 62801), (93, 62717),

Gene: Stank_79 Start: 48577, Stop: 48990, Start Num: 23
Candidate Starts for Stank_79:
(Start: 23 @48577 has 145 MA's), (26, 48592), (58, 48739), (74, 48877),

Gene: Stark_77 Start: 48121, Stop: 48534, Start Num: 23
Candidate Starts for Stark_77:
(Start: 23 @48121 has 145 MA's), (26, 48136), (58, 48283), (74, 48421),

Gene: StellaBean_74 Start: 47884, Stop: 48297, Start Num: 23
Candidate Starts for StellaBean_74:
(Start: 23 @47884 has 145 MA's), (26, 47899), (58, 48046), (74, 48184),

Gene: StolenFromERC_79 Start: 48359, Stop: 48772, Start Num: 23
Candidate Starts for StolenFromERC_79:
(Start: 23 @48359 has 145 MA's), (26, 48374), (58, 48521), (74, 48659),

Gene: StormChicken_78 Start: 49017, Stop: 49430, Start Num: 23
Candidate Starts for StormChicken_78:
(Start: 23 @49017 has 145 MA's), (26, 49032), (58, 49179), (74, 49317),

Gene: TBrady12_79 Start: 48058, Stop: 48471, Start Num: 23
Candidate Starts for TBrady12_79:
(Start: 23 @48058 has 145 MA's), (26, 48073), (58, 48220), (74, 48358),

Gene: Talos_171 Start: 87963, Stop: 88352, Start Num: 27
Candidate Starts for Talos_171:
(Start: 11 @87903 has 1 MA's), (Start: 27 @87963 has 5 MA's), (31, 87975), (46, 88050), (54, 88080),
(68, 88161), (74, 88221), (79, 88245), (82, 88290), (85, 88302), (90, 88335),

Gene: Tarkin_75 Start: 48306, Stop: 48719, Start Num: 23
Candidate Starts for Tarkin_75:
(Start: 23 @48306 has 145 MA's), (26, 48321), (58, 48468), (74, 48606),

Gene: TeamEdward_78 Start: 49011, Stop: 49424, Start Num: 23
Candidate Starts for TeamEdward_78:
(Start: 23 @49011 has 145 MA's), (26, 49026), (58, 49173), (74, 49311),

Gene: TeardropMSU_72 Start: 47306, Stop: 47719, Start Num: 23
Candidate Starts for TeardropMSU_72:
(Start: 23 @47306 has 145 MA's), (26, 47321), (58, 47468), (74, 47606),

Gene: Teaspoon_77 Start: 48200, Stop: 48613, Start Num: 23
Candidate Starts for Teaspoon_77:
(Start: 23 @48200 has 145 MA's), (26, 48215), (58, 48362), (74, 48500),

Gene: Terminus_79 Start: 49093, Stop: 49506, Start Num: 23
Candidate Starts for Terminus_79:
(Start: 23 @49093 has 145 MA's), (26, 49108), (58, 49255), (74, 49393),

Gene: Tesla_70 Start: 40389, Stop: 40880, Start Num: 19
Candidate Starts for Tesla_70:

(Start: 19 @40389 has 12 MA's), (53, 40536), (74, 40692), (75, 40695), (81, 40731), (84, 40761), (88, 40794),

Gene: Thimble_77 Start: 47541, Stop: 47954, Start Num: 23

Candidate Starts for Thimble_77:

(Start: 23 @47541 has 145 MA's), (26, 47556), (58, 47703), (74, 47841),

Gene: Thresher_78 Start: 49180, Stop: 49593, Start Num: 23

Candidate Starts for Thresher_78:

(Start: 23 @49180 has 145 MA's), (26, 49195), (58, 49342), (74, 49480),

Gene: Tomaszewski_71 Start: 47469, Stop: 47882, Start Num: 23

Candidate Starts for Tomaszewski_71:

(Start: 23 @47469 has 145 MA's), (26, 47484), (64, 47661), (74, 47769), (80, 47796),

Gene: Toto_74 Start: 48560, Stop: 48973, Start Num: 23

Candidate Starts for Toto_74:

(Start: 23 @48560 has 145 MA's), (26, 48575), (58, 48722), (74, 48860),

Gene: TpudiCK_126 Start: 65032, Stop: 65529, Start Num: 23

Candidate Starts for TpudiCK_126:

(4, 64930), (Start: 11 @64990 has 1 MA's), (Start: 23 @65032 has 145 MA's), (35, 65086), (39, 65110), (61, 65221), (64, 65236), (74, 65344), (78, 65365), (84, 65413),

Gene: Traaww1_72 Start: 47744, Stop: 48157, Start Num: 23

Candidate Starts for Traaww1_72:

(Start: 23 @47744 has 145 MA's), (26, 47759), (58, 47906), (74, 48044),

Gene: Tuco_77 Start: 49068, Stop: 49481, Start Num: 23

Candidate Starts for Tuco_77:

(Start: 23 @49068 has 145 MA's), (26, 49083), (58, 49230), (74, 49368),

Gene: TyDawg_119 Start: 65035, Stop: 65532, Start Num: 23

Candidate Starts for TyDawg_119:

(4, 64933), (Start: 11 @64993 has 1 MA's), (Start: 23 @65035 has 145 MA's), (35, 65089), (39, 65113), (61, 65224), (64, 65239), (74, 65347), (78, 65368), (84, 65416),

Gene: Ukulele_71 Start: 47451, Stop: 47864, Start Num: 23

Candidate Starts for Ukulele_71:

(Start: 23 @47451 has 145 MA's), (26, 47466), (58, 47613), (74, 47751),

Gene: VasuNzinga_72 Start: 40491, Stop: 40982, Start Num: 19

Candidate Starts for VasuNzinga_72:

(16, 40473), (Start: 19 @40491 has 12 MA's), (53, 40638), (74, 40794), (75, 40797), (81, 40833), (84, 40863), (88, 40896),

Gene: Wiggin_78 Start: 48145, Stop: 48558, Start Num: 23

Candidate Starts for Wiggin_78:

(Start: 23 @48145 has 145 MA's), (26, 48160), (58, 48307), (74, 48445),

Gene: Wildcat_134 Start: 64288, Stop: 64722, Start Num: 24

Candidate Starts for Wildcat_134:

(Start: 24 @64288 has 5 MA's), (Start: 27 @64297 has 5 MA's), (34, 64333), (35, 64336), (45, 64399), (57, 64447), (60, 64453), (63, 64477), (73, 64576), (74, 64591), (83, 64663),

Gene: Willez_71 Start: 46338, Stop: 46751, Start Num: 23

Candidate Starts for Willez_71:

(Start: 23 @46338 has 145 MA's), (26, 46353), (58, 46500), (74, 46638),

Gene: Xandras_75 Start: 47553, Stop: 47966, Start Num: 23

Candidate Starts for Xandras_75:

(Start: 23 @47553 has 145 MA's), (26, 47568), (58, 47715), (74, 47853),

Gene: YassJohnny_73 Start: 47508, Stop: 47921, Start Num: 23

Candidate Starts for YassJohnny_73:

(Start: 23 @47508 has 145 MA's), (26, 47523), (64, 47700), (74, 47808), (80, 47835),

Gene: Youngblood_79 Start: 49020, Stop: 49433, Start Num: 23

Candidate Starts for Youngblood_79:

(Start: 23 @49020 has 145 MA's), (26, 49035), (58, 49182), (74, 49320),

Gene: Yvonnetastic_125 Start: 70757, Stop: 71188, Start Num: 25

Candidate Starts for Yvonnetastic_125:

(Start: 25 @70757 has 2 MA's), (35, 70802), (37, 70808), (40, 70832), (74, 71036), (75, 71039), (76, 71045), (90, 71144), (92, 71168),

Gene: xkcd_79 Start: 49210, Stop: 49623, Start Num: 23

Candidate Starts for xkcd_79:

(Start: 23 @49210 has 145 MA's), (26, 49225), (58, 49372), (74, 49510),