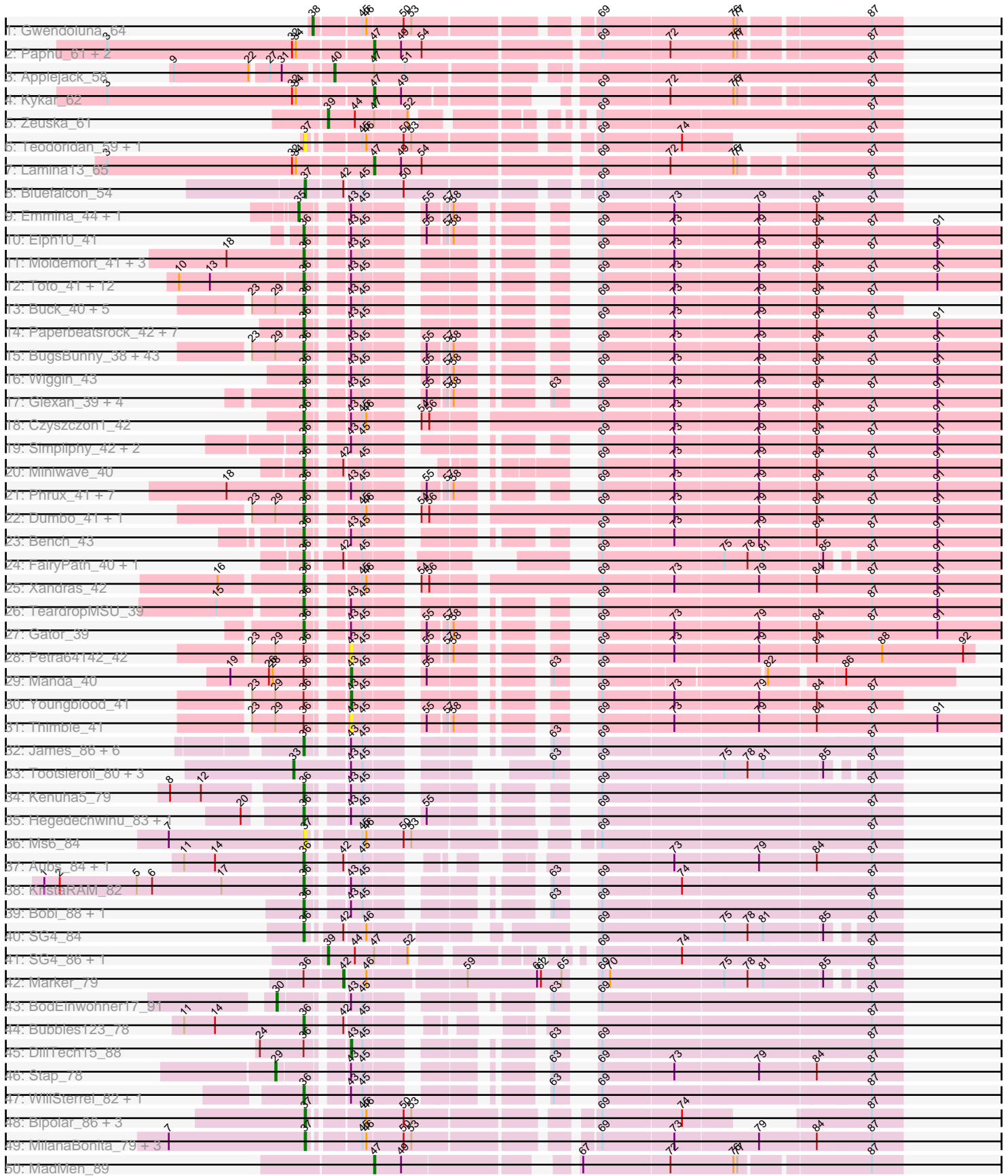
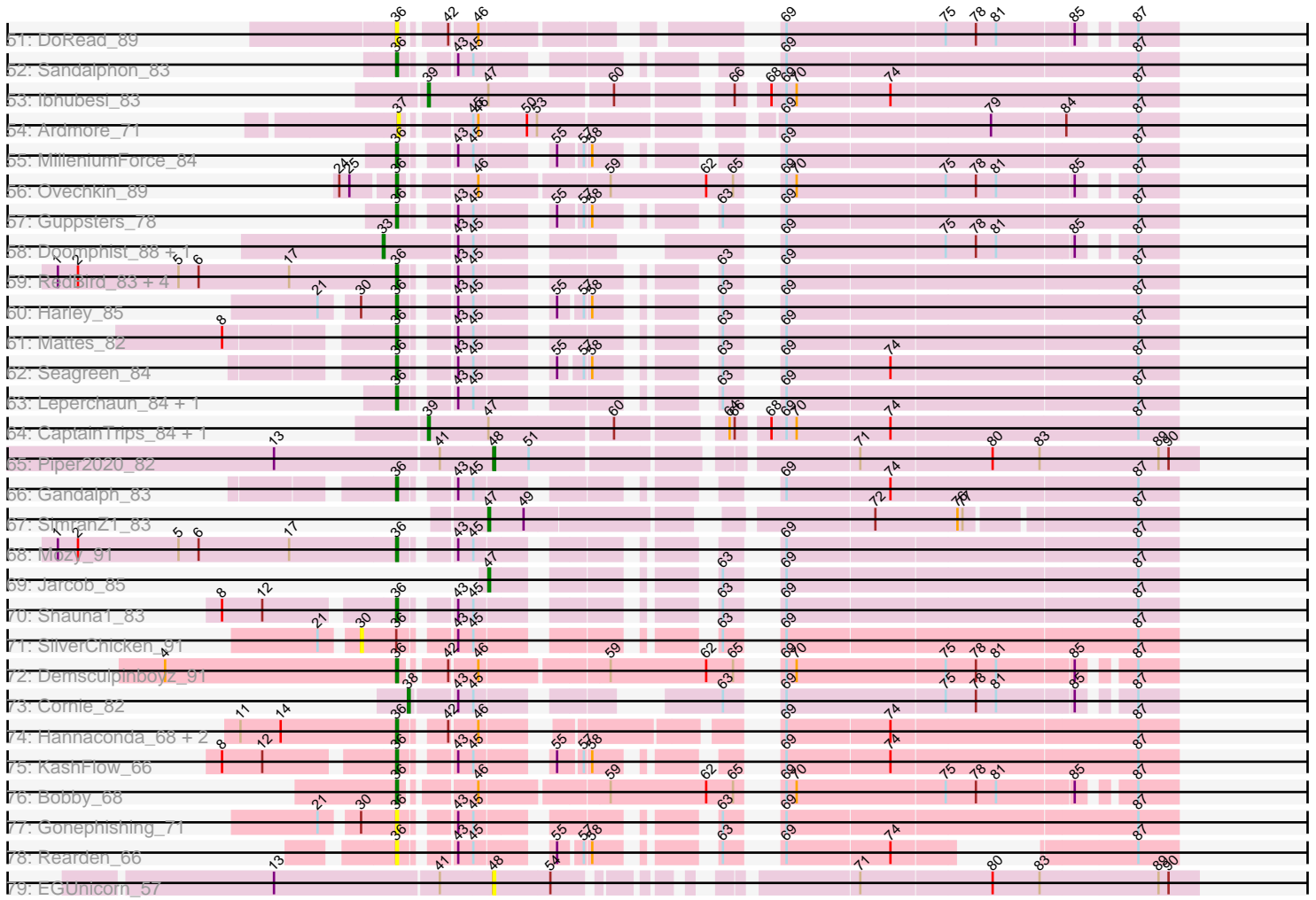


Pham 224308



Pham 224308



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 224308 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224308 has 197 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Gwendoluna_64
- Track 2 : Paphu_61, Tasp14_65, Parliament_63
- Track 3 : Applejack_58
- Track 4 : Kykar_62
- Track 5 : Zeuska_61
- Track 6 : Teodoridan_59, BarrowTuph_61
- Track 7 : Lamina13_65
- Track 8 : Bluefalcon_54
- Track 9 : Emmina_44, Teaspoon_45
- Track 10 : Elph10_41
- Track 11 : Moldemort_41, MadamMonkfish_41, OrionPax_42, AmericanBeauty_42
- Track 12 : Toto_41, StellaBean_40, ABCat_40, BilboSwaggins_41, BaboJay_40, IHOP_40, Tuco_43, Inca_39, CrystalP_42, Myrale_42, ShamWow_42, Phaja_40, Marshmallow_41
- Track 13 : Buck_40, Elite2014_40, ChosenOne_41, Lilpickle_40, Rimmer_40, StormChicken_41
- Track 14 : Paperbeatsrock_42, SophKB_40, BadStone_41, Tarkin_42, NelitzaMV_40, Dusk_41, Pharsalus_41, Henry_42
- Track 15 : BugsBunny_38, MPhalcon_39, Cactus_41, Argent26_42, xkcd_41, GooberAzure_42, Asriel_39, Nimrod_40, HufflyPuff_39, Goldilocks_41, StolenFromERC_42, Misfit_40, Gage_42, Murphy_41, NoSleep_41, Nala_40, Stank_43, MISSy_39, Adnama_43, Gemini_43, Palpatine_40, Lilac_42, Rakim_41, Policronamos_40, Kimchi_42, Barbarian_39, Phaux_39, FireRed_40, Thresher_42, Maxxinista_41, Murica_39, Command613_41, Becksu_40, Terminus_40, Sotrice96_40, GoldenSpark_42, PhatBacter_40, Stark_41, RiverMonster_40, Bask21_40, Icee_39, Hoonter_42, TBrady12_42, Cjw1_41
- Track 16 : Wiggin_43
- Track 17 : Glexan_39, Daikon_41, Traaww1_38, Balomoji_40, Harella_41
- Track 18 : Czyszczonek_42
- Track 19 : Simpliphy_42, Saints25_42, Highbury_42
- Track 20 : Miniwave_40
- Track 21 : Phrux_41, DrDrey_43, HanKaySha_42, JeTaime_43, 244_44, Hopey_43, Filch_43, Pumpkin_44
- Track 22 : Dumbo_41, Easy2Say_42
- Track 23 : Bench_43
- Track 24 : FairyPath_40, Quallification_41
- Track 25 : Xandras_42

- Track 26 : TeardropMSU_39
- Track 27 : Gator_39
- Track 28 : Petra64142_42
- Track 29 : Manda_40
- Track 30 : Youngblood_41
- Track 31 : Thimble_41
- Track 32 : James_86, Flathead_85, ShiLan_85, OlympiaSaint_85, Moonbeam_83, Phanphagia_84, Spoonbill_81
- Track 33 : Tootsieroll_80, Polka14_89, KingMidas_84, Scottish_83
- Track 34 : Kenuha5_79
- Track 35 : Hegedechwinu_83, JalFarm20_90
- Track 36 : Ms6_84
- Track 37 : Aubs_84, Donkeykong_90
- Track 38 : KristaRAM_82
- Track 39 : Bobi_88, DaWorst_83
- Track 40 : SG4_84
- Track 41 : SG4_86, Whatsapiecost_76
- Track 42 : Marker_79
- Track 43 : BodEinwohner17_91
- Track 44 : Bubbles123_78
- Track 45 : DillTech15_88
- Track 46 : Stap_78
- Track 47 : WillSterrel_82, IrishSherpFalk_83
- Track 48 : Bipolar_86, Doug_82, Ogopogo_89, Tchotchke_78
- Track 49 : MilanaBonita_79, Kumao_61, Akhila_80, Fruitloop_85
- Track 50 : MadMen_89
- Track 51 : DoRead_89
- Track 52 : Sandalphon_83
- Track 53 : lbhubesi_83
- Track 54 : Ardmore_71
- Track 55 : MilleniumForce_84
- Track 56 : Ovechkin_89
- Track 57 : Guppsters_78
- Track 58 : Doomphist_88, Poenanya_88
- Track 59 : RedBird_83, Ramsey_86, Dorothy_83, Sassafras_83, Inventum_80
- Track 60 : Harley_85
- Track 61 : Mattes_82
- Track 62 : Seagreen_84
- Track 63 : Leperchaun_84, JoeyJr_86
- Track 64 : CaptainTrips_84, MinionDave_80
- Track 65 : Piper2020_82
- Track 66 : Gandalph_83
- Track 67 : SimranZ1_83
- Track 68 : Mozy_91
- Track 69 : Jarcob_85
- Track 70 : Shauna1_83
- Track 71 : SilverChicken_91
- Track 72 : Demsculpinboyz_91
- Track 73 : Cornie_82
- Track 74 : Hannaconda_68, Shaboozey_64, SuperGrey_84
- Track 75 : KashFlow_66
- Track 76 : Bobby_68
- Track 77 : Gonephishing_71

- Track 78 : Rearden_66
- Track 79 : EGUnicorn_57

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

The start number called the most often in the published annotations is 36, it was called in 138 of the 178 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_44, ABCat_40, Adnama_43, AmericanBeauty_42, Argent26_42, Asriel_39, Aubs_84, BaboJay_40, BadStone_41, Balomoji_40, Barbarian_39, Bask21_40, Becksu_40, Bench_43, BilboSwaggins_41, Bobby_68, Bobi_88, Bubbles123_78, Buck_40, BugsBunny_38, Cactus_41, ChosenOne_41, Cjw1_41, Command613_41, CrystalP_42, Czystoczon1_42, DaWorst_83, Daikon_41, Demsculpinboyz_91, DoRead_89, Donkeykong_90, Dorothy_83, DrDrey_43, Dumbo_41, Dusk_41, Easy2Say_42, Elite2014_40, Elph10_41, FairyPath_40, Filch_43, FireRed_40, Flathead_85, Gage_42, Gandolph_83, Gator_39, Gemini_43, Glexan_39, GoldenSpark_42, Goldilocks_41, Gonephishing_71, GooberAzure_42, Guppsters_78, HanKaySha_42, Hannaconda_68, Harella_41, Harley_85, Hegedechwinu_83, Henry_42, Highbury_42, Hoonter_42, Hopey_43, HuffyPuff_39, IHOP_40, Icee_39, Inca_39, Inventum_80, IrishSherpFalk_83, JalFarm20_90, James_86, JeTaime_43, JoeyJr_86, KashFlow_66, Kenuha5_79, Kimchi_42, KristaRAM_82, Leperchaun_84, Lilac_42, Lilpickle_40, MISSy_39, MPhalcon_39, MadamMonkfish_41, Marshmallow_41, Mattes_82, Maxxinista_41, MilleniumForce_84, Miniwave_40, Misfit_40, Moldemort_41, Moonbeam_83, Mozy_91, Murica_39, Murphy_41, Myrale_42, Nala_40, NelitzaMV_40, Nimrod_40, NoSleep_41, OlympiaSaint_85, OrionPax_42, Ovechkin_89, Palpatine_40, Paperbeatsrock_42, Phaja_40, Phanphagia_84, Pharsalus_41, PhatBacter_40, Phaux_39, Phrux_41, Policronamos_40, Pumpkin_44, Quallification_41, Rakim_41, Ramsey_86, Rearden_66, RedBird_83, Rimmer_40, RiverMonster_40, SG4_84, Saints25_42, Sandalphon_83, Sassafras_83, Seagreen_84, Shaboozey_64, ShamWow_42, Shauna1_83, ShiLan_85, Simpliphy_42, SophKB_40, Sotrice96_40, Spoonbill_81, Stank_43, Stark_41, StellaBean_40, StolenFromERC_42, StormChicken_41, SuperGrey_84, TBrady12_42, Tarkin_42, TeardropMSU_39, Terminus_40, Thresher_42, Toto_41, Traaww1_38, Tuco_43, Wiggin_43, WillSterrel_82, Xandras_42, xkcd_41,

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

- DillTech15_88, Manda_40, Marker_79, Petra64142_42, SilverChicken_91, Thimble_41, Youngblood_41,

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

- Akhila_80, Applejack_58, Ardmore_71, BarrowTuph_61, Bipolar_86, Bluefalcon_54, BodEinwohner17_91, CaptainTrips_84, Cornie_82, Doomphist_88, Doug_82, EGUnicorn_57, Emmina_44, Fruitloop_85, Gwendoluna_64, Ibhubesi_83, Jarcob_85, KingMidas_84, Kumao_61, Kykar_62, Lamina13_65, MadMen_89, MilanaBonita_79, MinionDave_80, Ms6_84, Ogopogo_89, Paphu_61, Parliament_63, Piper2020_82, Poenanya_88, Polka14_89, SG4_86, Scottish_83, SimranZ1_83, Stap_78, Tasp14_65, Tchotchke_78, Teaspoon_45, Teodoridan_59, Tootsieroll_80, Whatsapiecost_76, Zeuska_61,

Summary by start number:

Start 29:

- Found in 56 of 197 (28.4%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Stap_78 (F1),

Start 30:

- Found in 4 of 197 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_91 (F1), SilverChicken_91 (F2),

Start 33:

- Found in 6 of 197 (3.0%) of genes in pham
- Manual Annotations of this start: 6 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Doomphist_88 (F1), KingMidas_84 (F1), Poenanya_88 (F1), Polka14_89 (F1), Scottish_83 (F1), Tootsieroll_80 (F1),

Start 35:

- Found in 2 of 197 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emmina_44 (E), Teaspoon_45 (E),

Start 36:

- Found in 155 of 197 (78.7%) of genes in pham
- Manual Annotations of this start: 138 of 178
- Called 95.5% of time when present
- Phage (with cluster) where this start called: 244_44 (E), ABCat_40 (E), Adnama_43 (E), AmericanBeauty_42 (E), Argent26_42 (E), Asriel_39 (E), Aubs_84 (F1), BaboJay_40 (E), BadStone_41 (E), Balomoji_40 (E), Barbarian_39 (E), Bask21_40 (E), Becksu_40 (E), Bench_43 (E), BilboSwaggins_41 (E), Bobby_68 (J), Bobi_88 (F1), Bubbles123_78 (F1), Buck_40 (E), BugsBunny_38 (E), Cactus_41 (E), ChosenOne_41 (E), Cjw1_41 (E), Command613_41 (E), CrystalP_42 (E), Czyszczonek_42 (E), DaWorst_83 (F1), Daikon_41 (E), Demsculpinboyz_91 (F2), DoRead_89 (F1), Donkeykong_90 (F1), Dorothy_83 (F1), DrDrey_43 (E), Dumbo_41 (E), Dusk_41 (E), Easy2Say_42 (E), Elite2014_40 (E), Elph10_41 (E), FairyPath_40 (E), Filch_43 (E), FireRed_40 (E), Flathead_85 (F1), Gage_42 (E), Gandolph_83 (F1), Gator_39 (E), Gemini_43 (E), Glexan_39 (E), GoldenSpark_42 (E), Goldilocks_41 (E), Gonephishing_71 (J), GooberAzure_42 (E), Guppsters_78 (F1), HanKaySha_42 (E), Hannaconda_68 (J), Harella_41 (E), Harley_85 (F1), Hegedechwinu_83 (F1), Henry_42 (E), Highbury_42 (E), Hoonter_42 (E), Hopey_43 (E), HuffyPuff_39 (E), IHOP_40 (E), Icee_39 (E), Inca_39 (E), Inventum_80 (F1), IrishSherpFalk_83 (F1), JalFarm20_90 (F1), James_86 (F1), JeTaimie_43 (E), JoeyJr_86 (F1), KashFlow_66 (J), Kenuha5_79 (F1), Kimchi_42 (E), KristaRAM_82 (F1), Leperchaun_84 (F1), Lilac_42 (E), Lilpickle_40 (E), MISSy_39 (E), MPhalcon_39 (E), MadamMonkfish_41 (E), Marshmallow_41 (E), Mattes_82 (F1), Maxxinista_41 (E), MilleniumForce_84 (F1), Miniwave_40 (E), Misfit_40 (E),

Moldemort_41 (E), Moonbeam_83 (F1), Mozy_91 (F1), Murica_39 (E), Murphy_41 (E), Myrale_42 (E), Nala_40 (E), NelitzaMV_40 (E), Nimrod_40 (E), NoSleep_41 (E), OlympiaSaint_85 (F1), OrionPax_42 (E), Ovechkin_89 (F1), Palpatine_40 (E), Paperbeatsrock_42 (E), Phaja_40 (E), Phanphagia_84 (F1), Pharsalus_41 (E), PhatBacter_40 (E), Phaux_39 (E), Phrux_41 (E), Policronamos_40 (E), Pumpkin_44 (E), Quallification_41 (E), Rakim_41 (E), Ramsey_86 (F1), Rearden_66 (J), RedBird_83 (F1), Rimmer_40 (E), RiverMonster_40 (E), SG4_84 (F1), Saints25_42 (E), Sandalphon_83 (F1), Sassafras_83 (F1), Seagreen_84 (F1), Shaboozey_64 (J), ShamWow_42 (E), Shauna1_83 (F1), ShiLan_85 (F1), Simpliphy_42 (E), SophKB_40 (E), Sotrice96_40 (E), Spoonbill_81 (F1), Stank_43 (E), Stark_41 (E), StellaBean_40 (E), StolenFromERC_42 (E), StormChicken_41 (E), SuperGrey_84 (F1), TBrady12_42 (E), Tarkin_42 (E), TeardropMSU_39 (E), Terminus_40 (E), Thresher_42 (E), Toto_41 (E), Traaww1_38 (E), Tuco_43 (E), Wiggin_43 (E), WillSterrel_82 (F1), Xandras_42 (E), xkcd_41 (E),

Start 37:

- Found in 13 of 197 (6.6%) of genes in pham
- Manual Annotations of this start: 8 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akhila_80 (F1), Ardmore_71 (F1), BarrowTuph_61 (A1), Bipolar_86 (F1), Bluefalcon_54 (A5), Doug_82 (F1), Fruitloop_85 (F1), Kumao_61 (singleton), MilanaBonita_79 (F1), Ms6_84 (F1), Ogopogo_89 (F1), Tchotchke_78 (F1), Teodoridan_59 (A1),

Start 38:

- Found in 2 of 197 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie_82 (F5), Gwendoluna_64 (A1),

Start 39:

- Found in 6 of 197 (3.0%) of genes in pham
- Manual Annotations of this start: 6 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CaptainTrips_84 (F1), Ibhubesi_83 (F1), MinionDave_80 (F1), SG4_86 (F1), Whatsapiecost_76 (F1), Zeuska_61 (A1),

Start 40:

- Found in 1 of 197 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejack_58 (A1),

Start 42:

- Found in 14 of 197 (7.1%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Marker_79 (F1),

Start 43:

- Found in 148 of 197 (75.1%) of genes in pham
- Manual Annotations of this start: 3 of 178
- Called 3.4% of time when present

- Phage (with cluster) where this start called: DillTech15_88 (F1), Manda_40 (E), Petra64142_42 (E), Thimble_41 (E), Youngblood_41 (E),

Start 47:

- Found in 15 of 197 (7.6%) of genes in pham
- Manual Annotations of this start: 8 of 178
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Jacob_85 (F1), Kykar_62 (A1), Lamina13_65 (A1), MadMen_89 (F1), Paphu_61 (A1), Parliament_63 (A1), SimranZ1_83 (F1), Tasp14_65 (A1),

Start 48:

- Found in 2 of 197 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EGUunicorn_57 (N), Piper2020_82 (F1),

Summary by clusters:

There are 9 clusters represented in this pham: F1, F2, E, F5, J, singleton, N, A1, A5,

Info for manual annotations of cluster A1:

- Start number 38 was manually annotated 1 time for cluster A1.
- Start number 39 was manually annotated 1 time for cluster A1.
- Start number 40 was manually annotated 1 time for cluster A1.
- Start number 47 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster A5:

- Start number 37 was manually annotated 1 time for cluster A5.

Info for manual annotations of cluster E:

- Start number 35 was manually annotated 2 times for cluster E.
- Start number 36 was manually annotated 97 times for cluster E.
- Start number 43 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 29 was manually annotated 1 time for cluster F1.
- Start number 30 was manually annotated 1 time for cluster F1.
- Start number 33 was manually annotated 6 times for cluster F1.
- Start number 36 was manually annotated 37 times for cluster F1.
- Start number 37 was manually annotated 6 times for cluster F1.
- Start number 39 was manually annotated 5 times for cluster F1.
- Start number 42 was manually annotated 1 time for cluster F1.
- Start number 43 was manually annotated 1 time for cluster F1.
- Start number 47 was manually annotated 3 times for cluster F1.
- Start number 48 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 36 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F5:

- Start number 38 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

•Start number 36 was manually annotated 3 times for cluster J.

Gene Information:

Gene: 244_44 Start: 35171, Stop: 34707, Start Num: 36

Candidate Starts for 244_44:

(18, 35231), (Start: 36 @35171 has 138 MA's), (Start: 43 @35147 has 3 MA's), (45, 35138), (55, 35105), (57, 35093), (58, 35090), (69, 35027), (73, 34973), (79, 34910), (84, 34868), (87, 34826), (91, 34775),

Gene: ABCat_40 Start: 35339, Stop: 34872, Start Num: 36

Candidate Starts for ABCat_40:

(10, 35432), (13, 35408), (Start: 36 @35339 has 138 MA's), (Start: 43 @35315 has 3 MA's), (45, 35306), (69, 35192), (73, 35138), (79, 35075), (84, 35033), (87, 34991), (91, 34940),

Gene: Adnama_43 Start: 35176, Stop: 34712, Start Num: 36

Candidate Starts for Adnama_43:

(23, 35215), (Start: 29 @35197 has 1 MA's), (Start: 36 @35176 has 138 MA's), (Start: 43 @35152 has 3 MA's), (45, 35143), (55, 35110), (57, 35098), (58, 35095), (69, 35032), (73, 34978), (79, 34915), (84, 34873), (87, 34831), (91, 34780),

Gene: Akhila_80 Start: 48623, Stop: 49036, Start Num: 37

Candidate Starts for Akhila_80:

(7, 48518), (Start: 37 @48623 has 8 MA's), (45, 48656), (46, 48659), (50, 48686), (53, 48692), (69, 48812), (73, 48866), (79, 48929), (84, 48971), (87, 49013),

Gene: AmericanBeauty_42 Start: 34659, Stop: 34192, Start Num: 36

Candidate Starts for AmericanBeauty_42:

(18, 34719), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (69, 34512), (73, 34458), (79, 34395), (84, 34353), (87, 34311), (91, 34260),

Gene: Applejack_58 Start: 39182, Stop: 38778, Start Num: 40

Candidate Starts for Applejack_58:

(9, 39293), (22, 39236), (27, 39224), (31, 39215), (Start: 40 @39182 has 1 MA's), (Start: 47 @39152 has 8 MA's), (51, 39128), (87, 38801),

Gene: Ardmore_71 Start: 44747, Stop: 45160, Start Num: 37

Candidate Starts for Ardmore_71:

(Start: 37 @44747 has 8 MA's), (45, 44780), (46, 44783), (50, 44810), (53, 44816), (69, 44936), (79, 45053), (84, 45095), (87, 45137),

Gene: Argent26_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for Argent26_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Asriel_39 Start: 33513, Stop: 33049, Start Num: 36

Candidate Starts for Asriel_39:

(23, 33552), (Start: 29 @33534 has 1 MA's), (Start: 36 @33513 has 138 MA's), (Start: 43 @33489 has 3 MA's), (45, 33480), (55, 33447), (57, 33435), (58, 33432), (69, 33369), (73, 33315), (79, 33252), (84, 33210), (87, 33168), (91, 33117),

Gene: Aubs_84 Start: 50517, Stop: 50876, Start Num: 36

Candidate Starts for Aubs_84:

(11, 50424), (14, 50448), (Start: 36 @50517 has 138 MA's), (Start: 42 @50538 has 1 MA's), (45, 50550), (73, 50706), (79, 50769), (84, 50811), (87, 50853),

Gene: BaboJay_40 Start: 34740, Stop: 34270, Start Num: 36

Candidate Starts for BaboJay_40:

(10, 34833), (13, 34809), (Start: 36 @34740 has 138 MA's), (Start: 43 @34713 has 3 MA's), (45, 34704), (69, 34590), (73, 34536), (79, 34473), (84, 34431), (87, 34389), (91, 34338),

Gene: BadStone_41 Start: 35477, Stop: 35010, Start Num: 36

Candidate Starts for BadStone_41:

(Start: 36 @35477 has 138 MA's), (Start: 43 @35453 has 3 MA's), (45, 35444), (69, 35330), (73, 35276), (79, 35213), (84, 35171), (87, 35129), (91, 35078),

Gene: Balomoji_40 Start: 35070, Stop: 34606, Start Num: 36

Candidate Starts for Balomoji_40:

(Start: 36 @35070 has 138 MA's), (Start: 43 @35046 has 3 MA's), (45, 35037), (55, 35004), (57, 34992), (58, 34989), (63, 34941), (69, 34926), (73, 34872), (79, 34809), (84, 34767), (87, 34725), (91, 34674),

Gene: Barbarian_39 Start: 33513, Stop: 33049, Start Num: 36

Candidate Starts for Barbarian_39:

(23, 33552), (Start: 29 @33534 has 1 MA's), (Start: 36 @33513 has 138 MA's), (Start: 43 @33489 has 3 MA's), (45, 33480), (55, 33447), (57, 33435), (58, 33432), (69, 33369), (73, 33315), (79, 33252), (84, 33210), (87, 33168), (91, 33117),

Gene: BarrowTuph_61 Start: 40812, Stop: 40450, Start Num: 37

Candidate Starts for BarrowTuph_61:

(Start: 37 @40812 has 8 MA's), (45, 40779), (46, 40776), (50, 40749), (53, 40743), (69, 40623), (74, 40563), (87, 40473),

Gene: Bask21_40 Start: 33847, Stop: 33383, Start Num: 36

Candidate Starts for Bask21_40:

(23, 33886), (Start: 29 @33868 has 1 MA's), (Start: 36 @33847 has 138 MA's), (Start: 43 @33823 has 3 MA's), (45, 33814), (55, 33781), (57, 33769), (58, 33766), (69, 33703), (73, 33649), (79, 33586), (84, 33544), (87, 33502), (91, 33451),

Gene: Becksu_40 Start: 34835, Stop: 34371, Start Num: 36

Candidate Starts for Becksu_40:

(23, 34874), (Start: 29 @34856 has 1 MA's), (Start: 36 @34835 has 138 MA's), (Start: 43 @34811 has 3 MA's), (45, 34802), (55, 34769), (57, 34757), (58, 34754), (69, 34691), (73, 34637), (79, 34574), (84, 34532), (87, 34490), (91, 34439),

Gene: Bench_43 Start: 34755, Stop: 34288, Start Num: 36

Candidate Starts for Bench_43:

(Start: 36 @34755 has 138 MA's), (Start: 43 @34731 has 3 MA's), (45, 34722), (69, 34608), (73, 34554), (79, 34491), (84, 34449), (87, 34407), (91, 34356),

Gene: BilboSwaggins_41 Start: 35347, Stop: 34880, Start Num: 36

Candidate Starts for BilboSwaggins_41:

(10, 35440), (13, 35416), (Start: 36 @35347 has 138 MA's), (Start: 43 @35323 has 3 MA's), (45, 35314), (69, 35200), (73, 35146), (79, 35083), (84, 35041), (87, 34999), (91, 34948),

Gene: Bipolar_86 Start: 51239, Stop: 51601, Start Num: 37

Candidate Starts for Bipolar_86:

(Start: 37 @51239 has 8 MA's), (45, 51272), (46, 51275), (50, 51302), (53, 51308), (69, 51428), (74, 51488), (87, 51578),

Gene: Bluefalcon_54 Start: 39442, Stop: 39023, Start Num: 37

Candidate Starts for Bluefalcon_54:

(Start: 37 @39442 has 8 MA's), (Start: 42 @39415 has 1 MA's), (45, 39403), (50, 39373), (69, 39247), (87, 39046),

Gene: Bobby_68 Start: 49135, Stop: 48737, Start Num: 36

Candidate Starts for Bobby_68:

(Start: 36 @49135 has 138 MA's), (46, 49099), (59, 49030), (62, 48973), (65, 48958), (69, 48949), (70, 48943), (75, 48856), (78, 48838), (81, 48826), (85, 48784), (87, 48760),

Gene: Bobi_88 Start: 51408, Stop: 51779, Start Num: 36

Candidate Starts for Bobi_88:

(Start: 36 @51408 has 138 MA's), (Start: 43 @51432 has 3 MA's), (45, 51441), (63, 51540), (69, 51555), (87, 51756),

Gene: BodEinwohner17_91 Start: 52011, Stop: 52400, Start Num: 30

Candidate Starts for BodEinwohner17_91:

(Start: 30 @52011 has 1 MA's), (Start: 43 @52053 has 3 MA's), (45, 52062), (63, 52161), (69, 52176), (87, 52377),

Gene: Bubbles123_78 Start: 49394, Stop: 49753, Start Num: 36

Candidate Starts for Bubbles123_78:

(11, 49301), (14, 49325), (Start: 36 @49394 has 138 MA's), (Start: 42 @49415 has 1 MA's), (45, 49427), (87, 49730),

Gene: Buck_40 Start: 34705, Stop: 34334, Start Num: 36

Candidate Starts for Buck_40:

(23, 34744), (Start: 29 @34726 has 1 MA's), (Start: 36 @34705 has 138 MA's), (Start: 43 @34681 has 3 MA's), (45, 34672), (69, 34558), (73, 34504), (79, 34441), (84, 34399), (87, 34357),

Gene: BugsBunny_38 Start: 34241, Stop: 33777, Start Num: 36

Candidate Starts for BugsBunny_38:

(23, 34280), (Start: 29 @34262 has 1 MA's), (Start: 36 @34241 has 138 MA's), (Start: 43 @34217 has 3 MA's), (45, 34208), (55, 34175), (57, 34163), (58, 34160), (69, 34097), (73, 34043), (79, 33980), (84, 33938), (87, 33896), (91, 33845),

Gene: Cactus_41 Start: 33880, Stop: 33416, Start Num: 36

Candidate Starts for Cactus_41:

(23, 33919), (Start: 29 @33901 has 1 MA's), (Start: 36 @33880 has 138 MA's), (Start: 43 @33856 has 3 MA's), (45, 33847), (55, 33814), (57, 33802), (58, 33799), (69, 33736), (73, 33682), (79, 33619), (84, 33577), (87, 33535), (91, 33484),

Gene: CaptainTrips_84 Start: 49276, Stop: 49686, Start Num: 39

Candidate Starts for CaptainTrips_84:

(Start: 39 @49276 has 6 MA's), (Start: 47 @49312 has 8 MA's), (60, 49381), (64, 49435), (66, 49438), (68, 49453), (69, 49462), (70, 49468), (74, 49522), (87, 49663),

Gene: ChosenOne_41 Start: 33974, Stop: 33603, Start Num: 36

Candidate Starts for ChosenOne_41:

(23, 34013), (Start: 29 @33995 has 1 MA's), (Start: 36 @33974 has 138 MA's), (Start: 43 @33950 has 3 MA's), (45, 33941), (69, 33827), (73, 33773), (79, 33710), (84, 33668), (87, 33626),

Gene: Cjw1_41 Start: 35651, Stop: 35187, Start Num: 36

Candidate Starts for Cjw1_41:

(23, 35690), (Start: 29 @35672 has 1 MA's), (Start: 36 @35651 has 138 MA's), (Start: 43 @35627 has 3 MA's), (45, 35618), (55, 35585), (57, 35573), (58, 35570), (69, 35507), (73, 35453), (79, 35390), (84, 35348), (87, 35306), (91, 35255),

Gene: Command613_41 Start: 34919, Stop: 34455, Start Num: 36

Candidate Starts for Command613_41:

(23, 34958), (Start: 29 @34940 has 1 MA's), (Start: 36 @34919 has 138 MA's), (Start: 43 @34895 has 3 MA's), (45, 34886), (55, 34853), (57, 34841), (58, 34838), (69, 34775), (73, 34721), (79, 34658), (84, 34616), (87, 34574), (91, 34523),

Gene: Cornie_82 Start: 48423, Stop: 48782, Start Num: 38

Candidate Starts for Cornie_82:

(Start: 38 @48423 has 2 MA's), (Start: 43 @48447 has 3 MA's), (45, 48456), (63, 48555), (69, 48570), (75, 48663), (78, 48681), (81, 48693), (85, 48735), (87, 48759),

Gene: CrystalP_42 Start: 35347, Stop: 34880, Start Num: 36

Candidate Starts for CrystalP_42:

(10, 35440), (13, 35416), (Start: 36 @35347 has 138 MA's), (Start: 43 @35323 has 3 MA's), (45, 35314), (69, 35200), (73, 35146), (79, 35083), (84, 35041), (87, 34999), (91, 34948),

Gene: Czyszczone1_42 Start: 34681, Stop: 34172, Start Num: 36

Candidate Starts for Czyszczone1_42:

(Start: 36 @34681 has 138 MA's), (Start: 43 @34657 has 3 MA's), (45, 34648), (46, 34645), (54, 34618), (56, 34612), (69, 34492), (73, 34438), (79, 34375), (84, 34333), (87, 34291), (91, 34240),

Gene: DaWorst_83 Start: 48921, Stop: 49292, Start Num: 36

Candidate Starts for DaWorst_83:

(Start: 36 @48921 has 138 MA's), (Start: 43 @48945 has 3 MA's), (45, 48954), (63, 49053), (69, 49068), (87, 49269),

Gene: Daikon_41 Start: 35091, Stop: 34627, Start Num: 36

Candidate Starts for Daikon_41:

(Start: 36 @35091 has 138 MA's), (Start: 43 @35067 has 3 MA's), (45, 35058), (55, 35025), (57, 35013), (58, 35010), (63, 34962), (69, 34947), (73, 34893), (79, 34830), (84, 34788), (87, 34746), (91, 34695),

Gene: Demsculpinboyz_91 Start: 47365, Stop: 47763, Start Num: 36

Candidate Starts for Demsculpinboyz_91:

(4, 47227), (Start: 36 @47365 has 138 MA's), (Start: 42 @47386 has 1 MA's), (46, 47401), (59, 47470), (62, 47527), (65, 47542), (69, 47551), (70, 47557), (75, 47644), (78, 47662), (81, 47674), (85, 47716), (87, 47740),

Gene: DillTech15_88 Start: 49164, Stop: 49511, Start Num: 43

Candidate Starts for DillTech15_88:

(24, 49107), (Start: 36 @49140 has 138 MA's), (Start: 43 @49164 has 3 MA's), (45, 49173), (63, 49272), (69, 49287), (87, 49488),

Gene: DoRead_89 Start: 48009, Stop: 48383, Start Num: 36

Candidate Starts for DoRead_89:

(Start: 36 @48009 has 138 MA's), (Start: 42 @48030 has 1 MA's), (46, 48045), (69, 48171), (75, 48264), (78, 48282), (81, 48294), (85, 48336), (87, 48360),

Gene: Donkeykong_90 Start: 52122, Stop: 52481, Start Num: 36

Candidate Starts for Donkeykong_90:

(11, 52029), (14, 52053), (Start: 36 @52122 has 138 MA's), (Start: 42 @52143 has 1 MA's), (45, 52155), (73, 52311), (79, 52374), (84, 52416), (87, 52458),

Gene: Doomphist_88 Start: 50710, Stop: 51087, Start Num: 33

Candidate Starts for Doomphist_88:

(Start: 33 @50710 has 6 MA's), (Start: 43 @50752 has 3 MA's), (45, 50761), (69, 50875), (75, 50968), (78, 50986), (81, 50998), (85, 51040), (87, 51064),

Gene: Dorothy_83 Start: 51040, Stop: 51411, Start Num: 36

Candidate Starts for Dorothy_83:

(1, 50839), (2, 50851), (5, 50911), (6, 50923), (17, 50977), (Start: 36 @51040 has 138 MA's), (Start: 43 @51064 has 3 MA's), (45, 51073), (63, 51172), (69, 51187), (87, 51388),

Gene: Doug_82 Start: 50547, Stop: 50909, Start Num: 37

Candidate Starts for Doug_82:

(Start: 37 @50547 has 8 MA's), (45, 50580), (46, 50583), (50, 50610), (53, 50616), (69, 50736), (74, 50796), (87, 50886),

Gene: DrDrey_43 Start: 35973, Stop: 35509, Start Num: 36

Candidate Starts for DrDrey_43:

(18, 36033), (Start: 36 @35973 has 138 MA's), (Start: 43 @35949 has 3 MA's), (45, 35940), (55, 35907), (57, 35895), (58, 35892), (69, 35829), (73, 35775), (79, 35712), (84, 35670), (87, 35628), (91, 35577),

Gene: Dumbo_41 Start: 34403, Stop: 33894, Start Num: 36

Candidate Starts for Dumbo_41:

(23, 34442), (Start: 29 @34424 has 1 MA's), (Start: 36 @34403 has 138 MA's), (45, 34370), (46, 34367), (54, 34340), (56, 34334), (69, 34214), (73, 34160), (79, 34097), (84, 34055), (87, 34013), (91, 33962),

Gene: Dusk_41 Start: 35137, Stop: 34670, Start Num: 36

Candidate Starts for Dusk_41:

(Start: 36 @35137 has 138 MA's), (Start: 43 @35113 has 3 MA's), (45, 35104), (69, 34990), (73, 34936), (79, 34873), (84, 34831), (87, 34789), (91, 34738),

Gene: EGUunicorn_57 Start: 36355, Stop: 36714, Start Num: 48

Candidate Starts for EGUunicorn_57:

(13, 36229), (41, 36325), (Start: 48 @36355 has 1 MA's), (54, 36388), (71, 36520), (80, 36595), (83, 36622), (89, 36691), (90, 36697),

Gene: Easy2Say_42 Start: 35947, Stop: 35438, Start Num: 36

Candidate Starts for Easy2Say_42:

(23, 35986), (Start: 29 @35968 has 1 MA's), (Start: 36 @35947 has 138 MA's), (45, 35914), (46, 35911), (54, 35884), (56, 35878), (69, 35758), (73, 35704), (79, 35641), (84, 35599), (87, 35557), (91, 35506),

Gene: Elite2014_40 Start: 33973, Stop: 33602, Start Num: 36

Candidate Starts for Elite2014_40:

(23, 34012), (Start: 29 @33994 has 1 MA's), (Start: 36 @33973 has 138 MA's), (Start: 43 @33949 has 3 MA's), (45, 33940), (69, 33826), (73, 33772), (79, 33709), (84, 33667), (87, 33625),

Gene: Elph10_41 Start: 34122, Stop: 33658, Start Num: 36

Candidate Starts for Elph10_41:

(Start: 36 @34122 has 138 MA's), (Start: 43 @34098 has 3 MA's), (45, 34089), (55, 34056), (57, 34044), (58, 34041), (69, 33978), (73, 33924), (79, 33861), (84, 33819), (87, 33777), (91, 33726),

Gene: Emmina_44 Start: 34912, Stop: 34541, Start Num: 35

Candidate Starts for Emmina_44:

(Start: 35 @34912 has 2 MA's), (Start: 43 @34885 has 3 MA's), (45, 34876), (55, 34843), (57, 34831), (58, 34828), (69, 34765), (73, 34711), (79, 34648), (84, 34606), (87, 34564),

Gene: FairyPath_40 Start: 34849, Stop: 34400, Start Num: 36

Candidate Starts for FairyPath_40:

(Start: 36 @34849 has 138 MA's), (Start: 42 @34828 has 1 MA's), (45, 34816), (69, 34708), (75, 34615), (78, 34597), (81, 34585), (85, 34543), (87, 34519), (91, 34468),

Gene: Filch_43 Start: 34650, Stop: 34186, Start Num: 36

Candidate Starts for Filch_43:

(18, 34710), (Start: 36 @34650 has 138 MA's), (Start: 43 @34626 has 3 MA's), (45, 34617), (55, 34584), (57, 34572), (58, 34569), (69, 34506), (73, 34452), (79, 34389), (84, 34347), (87, 34305), (91, 34254),

Gene: FireRed_40 Start: 34680, Stop: 34216, Start Num: 36

Candidate Starts for FireRed_40:

(23, 34719), (Start: 29 @34701 has 1 MA's), (Start: 36 @34680 has 138 MA's), (Start: 43 @34656 has 3 MA's), (45, 34647), (55, 34614), (57, 34602), (58, 34599), (69, 34536), (73, 34482), (79, 34419), (84, 34377), (87, 34335), (91, 34284),

Gene: Flathead_85 Start: 49803, Stop: 50174, Start Num: 36

Candidate Starts for Flathead_85:

(Start: 36 @49803 has 138 MA's), (Start: 43 @49827 has 3 MA's), (45, 49836), (63, 49935), (69, 49950), (87, 50151),

Gene: Fruitloop_85 Start: 51126, Stop: 51539, Start Num: 37

Candidate Starts for Fruitloop_85:

(7, 51021), (Start: 37 @51126 has 8 MA's), (45, 51159), (46, 51162), (50, 51189), (53, 51195), (69, 51315), (73, 51369), (79, 51432), (84, 51474), (87, 51516),

Gene: Gage_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for Gage_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Gandolph_83 Start: 47074, Stop: 47445, Start Num: 36

Candidate Starts for Gandolph_83:

(Start: 36 @47074 has 138 MA's), (Start: 43 @47098 has 3 MA's), (45, 47107), (69, 47221), (74, 47281), (87, 47422),

Gene: Gator_39 Start: 34961, Stop: 34497, Start Num: 36

Candidate Starts for Gator_39:

(Start: 36 @34961 has 138 MA's), (Start: 43 @34937 has 3 MA's), (45, 34928), (55, 34895), (57, 34883), (58, 34880), (69, 34817), (73, 34763), (79, 34700), (84, 34658), (87, 34616), (91, 34565),

Gene: Gemini_43 Start: 35176, Stop: 34712, Start Num: 36

Candidate Starts for Gemini_43:

(23, 35215), (Start: 29 @35197 has 1 MA's), (Start: 36 @35176 has 138 MA's), (Start: 43 @35152 has 3 MA's), (45, 35143), (55, 35110), (57, 35098), (58, 35095), (69, 35032), (73, 34978), (79, 34915), (84, 34873), (87, 34831), (91, 34780),

Gene: Glexan_39 Start: 34949, Stop: 34485, Start Num: 36

Candidate Starts for Glexan_39:

(Start: 36 @34949 has 138 MA's), (Start: 43 @34925 has 3 MA's), (45, 34916), (55, 34883), (57, 34871), (58, 34868), (63, 34820), (69, 34805), (73, 34751), (79, 34688), (84, 34646), (87, 34604), (91, 34553),

Gene: GoldenSpark_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for GoldenSpark_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Goldilocks_41 Start: 34161, Stop: 33697, Start Num: 36

Candidate Starts for Goldilocks_41:

(23, 34200), (Start: 29 @34182 has 1 MA's), (Start: 36 @34161 has 138 MA's), (Start: 43 @34137 has 3 MA's), (45, 34128), (55, 34095), (57, 34083), (58, 34080), (69, 34017), (73, 33963), (79, 33900), (84, 33858), (87, 33816), (91, 33765),

Gene: Gonephishing_71 Start: 47256, Stop: 46885, Start Num: 36

Candidate Starts for Gonephishing_71:

(21, 47295), (Start: 30 @47277 has 1 MA's), (Start: 36 @47256 has 138 MA's), (Start: 43 @47232 has 3 MA's), (45, 47223), (63, 47124), (69, 47109), (87, 46908),

Gene: GooberAzure_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for GooberAzure_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Guppsters_78 Start: 47339, Stop: 47707, Start Num: 36

Candidate Starts for Guppsters_78:

(Start: 36 @47339 has 138 MA's), (Start: 43 @47363 has 3 MA's), (45, 47372), (55, 47405), (57, 47417), (58, 47420), (63, 47468), (69, 47483), (87, 47684),

Gene: Gwendoluna_64 Start: 42781, Stop: 42374, Start Num: 38

Candidate Starts for Gwendoluna_64:

(Start: 38 @42781 has 2 MA's), (45, 42748), (46, 42745), (50, 42718), (53, 42712), (69, 42592), (76, 42493), (77, 42490), (87, 42397),

Gene: HanKaySha_42 Start: 34633, Stop: 34169, Start Num: 36

Candidate Starts for HanKaySha_42:

(18, 34693), (Start: 36 @34633 has 138 MA's), (Start: 43 @34609 has 3 MA's), (45, 34600), (55, 34567), (57, 34555), (58, 34552), (69, 34489), (73, 34435), (79, 34372), (84, 34330), (87, 34288), (91, 34237),

Gene: Hannaconda_68 Start: 45250, Stop: 44864, Start Num: 36

Candidate Starts for Hannaconda_68:

(11, 45343), (14, 45319), (Start: 36 @45250 has 138 MA's), (Start: 42 @45229 has 1 MA's), (46, 45214), (69, 45088), (74, 45028), (87, 44887),

Gene: Harella_41 Start: 35465, Stop: 35001, Start Num: 36

Candidate Starts for Harella_41:

(Start: 36 @35465 has 138 MA's), (Start: 43 @35441 has 3 MA's), (45, 35432), (55, 35399), (57, 35387), (58, 35384), (63, 35336), (69, 35321), (73, 35267), (79, 35204), (84, 35162), (87, 35120), (91, 35069),

Gene: Harley_85 Start: 49675, Stop: 50043, Start Num: 36

Candidate Starts for Harley_85:

(21, 49636), (Start: 30 @49654 has 1 MA's), (Start: 36 @49675 has 138 MA's), (Start: 43 @49699 has 3 MA's), (45, 49708), (55, 49741), (57, 49753), (58, 49756), (63, 49804), (69, 49819), (87, 50020),

Gene: Hegedechwinu_83 Start: 48330, Stop: 48701, Start Num: 36

Candidate Starts for Hegedechwinu_83:

(20, 48294), (Start: 36 @48330 has 138 MA's), (Start: 43 @48354 has 3 MA's), (45, 48363), (55, 48396), (69, 48477), (87, 48678),

Gene: Henry_42 Start: 35356, Stop: 34889, Start Num: 36

Candidate Starts for Henry_42:

(Start: 36 @35356 has 138 MA's), (Start: 43 @35332 has 3 MA's), (45, 35323), (69, 35209), (73, 35155), (79, 35092), (84, 35050), (87, 35008), (91, 34957),

Gene: Highbury_42 Start: 34424, Stop: 33957, Start Num: 36

Candidate Starts for Highbury_42:

(Start: 36 @34424 has 138 MA's), (Start: 43 @34400 has 3 MA's), (45, 34391), (69, 34277), (73, 34223), (79, 34160), (84, 34118), (87, 34076), (91, 34025),

Gene: Hoonter_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for Hoonter_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Hokey_43 Start: 35168, Stop: 34704, Start Num: 36

Candidate Starts for Hokey_43:

(18, 35228), (Start: 36 @35168 has 138 MA's), (Start: 43 @35144 has 3 MA's), (45, 35135), (55, 35102), (57, 35090), (58, 35087), (69, 35024), (73, 34970), (79, 34907), (84, 34865), (87, 34823), (91, 34772),

Gene: HufflyPuff_39 Start: 34636, Stop: 34172, Start Num: 36

Candidate Starts for HufflyPuff_39:

(23, 34675), (Start: 29 @34657 has 1 MA's), (Start: 36 @34636 has 138 MA's), (Start: 43 @34612 has 3 MA's), (45, 34603), (55, 34570), (57, 34558), (58, 34555), (69, 34492), (73, 34438), (79, 34375), (84, 34333), (87, 34291), (91, 34240),

Gene: IHOP_40 Start: 34911, Stop: 34444, Start Num: 36

Candidate Starts for IHOP_40:

(10, 35004), (13, 34980), (Start: 36 @34911 has 138 MA's), (Start: 43 @34887 has 3 MA's), (45, 34878), (69, 34764), (73, 34710), (79, 34647), (84, 34605), (87, 34563), (91, 34512),

Gene: lbhubesi_83 Start: 48014, Stop: 48424, Start Num: 39

Candidate Starts for lbhubesi_83:

(Start: 39 @48014 has 6 MA's), (Start: 47 @48050 has 8 MA's), (60, 48119), (66, 48176), (68, 48191), (69, 48200), (70, 48206), (74, 48260), (87, 48401),

Gene: Icee_39 Start: 34327, Stop: 33863, Start Num: 36

Candidate Starts for Icee_39:

(23, 34366), (Start: 29 @34348 has 1 MA's), (Start: 36 @34327 has 138 MA's), (Start: 43 @34303 has 3 MA's), (45, 34294), (55, 34261), (57, 34249), (58, 34246), (69, 34183), (73, 34129), (79, 34066), (84, 34024), (87, 33982), (91, 33931),

Gene: Inca_39 Start: 33436, Stop: 32969, Start Num: 36

Candidate Starts for Inca_39:

(10, 33529), (13, 33505), (Start: 36 @33436 has 138 MA's), (Start: 43 @33412 has 3 MA's), (45, 33403), (69, 33289), (73, 33235), (79, 33172), (84, 33130), (87, 33088), (91, 33037),

Gene: Inventum_80 Start: 49225, Stop: 49596, Start Num: 36

Candidate Starts for Inventum_80:

(1, 49024), (2, 49036), (5, 49096), (6, 49108), (17, 49162), (Start: 36 @49225 has 138 MA's), (Start: 43 @49249 has 3 MA's), (45, 49258), (63, 49357), (69, 49372), (87, 49573),

Gene: IrishSherpFalk_83 Start: 50030, Stop: 50401, Start Num: 36

Candidate Starts for IrishSherpFalk_83:

(Start: 36 @50030 has 138 MA's), (Start: 43 @50054 has 3 MA's), (45, 50063), (63, 50162), (69, 50177), (87, 50378),

Gene: JalFarm20_90 Start: 50347, Stop: 50718, Start Num: 36

Candidate Starts for JalFarm20_90:

(20, 50311), (Start: 36 @50347 has 138 MA's), (Start: 43 @50371 has 3 MA's), (45, 50380), (55, 50413), (69, 50494), (87, 50695),

Gene: James_86 Start: 51529, Stop: 51900, Start Num: 36

Candidate Starts for James_86:

(Start: 36 @51529 has 138 MA's), (Start: 43 @51553 has 3 MA's), (45, 51562), (63, 51661), (69, 51676), (87, 51877),

Gene: Jarcob_85 Start: 51167, Stop: 51499, Start Num: 47

Candidate Starts for Jarcob_85:

(Start: 47 @51167 has 8 MA's), (63, 51260), (69, 51275), (87, 51476),

Gene: JeTaime_43 Start: 35692, Stop: 35228, Start Num: 36

Candidate Starts for JeTaime_43:

(18, 35752), (Start: 36 @35692 has 138 MA's), (Start: 43 @35668 has 3 MA's), (45, 35659), (55, 35626), (57, 35614), (58, 35611), (69, 35548), (73, 35494), (79, 35431), (84, 35389), (87, 35347), (91, 35296),

Gene: JoeyJr_86 Start: 51134, Stop: 51505, Start Num: 36

Candidate Starts for JoeyJr_86:

(Start: 36 @51134 has 138 MA's), (Start: 43 @51158 has 3 MA's), (45, 51167), (63, 51266), (69, 51281), (87, 51482),

Gene: KashFlow_66 Start: 45121, Stop: 44753, Start Num: 36

Candidate Starts for KashFlow_66:

(8, 45214), (12, 45190), (Start: 36 @45121 has 138 MA's), (Start: 43 @45097 has 3 MA's), (45, 45088), (55, 45055), (57, 45043), (58, 45040), (69, 44977), (74, 44917), (87, 44776),

Gene: Kenuha5_79 Start: 50155, Stop: 50526, Start Num: 36

Candidate Starts for Kenuha5_79:

(8, 50062), (12, 50086), (Start: 36 @50155 has 138 MA's), (Start: 43 @50179 has 3 MA's), (45, 50188), (69, 50302), (87, 50503),

Gene: Kimchi_42 Start: 34662, Stop: 34198, Start Num: 36

Candidate Starts for Kimchi_42:

(23, 34701), (Start: 29 @34683 has 1 MA's), (Start: 36 @34662 has 138 MA's), (Start: 43 @34638 has 3 MA's), (45, 34629), (55, 34596), (57, 34584), (58, 34581), (69, 34518), (73, 34464), (79, 34401), (84, 34359), (87, 34317), (91, 34266),

Gene: KingMidas_84 Start: 49936, Stop: 50313, Start Num: 33

Candidate Starts for KingMidas_84:

(Start: 33 @49936 has 6 MA's), (Start: 43 @49978 has 3 MA's), (45, 49987), (63, 50086), (69, 50101), (75, 50194), (78, 50212), (81, 50224), (85, 50266), (87, 50290),

Gene: KristaRAM_82 Start: 48874, Stop: 49245, Start Num: 36

Candidate Starts for KristaRAM_82:

(1, 48673), (2, 48685), (5, 48745), (6, 48757), (17, 48811), (Start: 36 @48874 has 138 MA's), (Start: 43 @48898 has 3 MA's), (45, 48907), (63, 49006), (69, 49021), (74, 49081), (87, 49222),

Gene: Kumao_61 Start: 43622, Stop: 44035, Start Num: 37

Candidate Starts for Kumao_61:

(7, 43517), (Start: 37 @43622 has 8 MA's), (45, 43655), (46, 43658), (50, 43685), (53, 43691), (69, 43811), (73, 43865), (79, 43928), (84, 43970), (87, 44012),

Gene: Kykar_62 Start: 41465, Stop: 41115, Start Num: 47

Candidate Starts for Kykar_62:

(3, 41666), (32, 41522), (34, 41519), (Start: 47 @41465 has 8 MA's), (49, 41444), (69, 41333), (72, 41282), (76, 41234), (77, 41231), (87, 41138),

Gene: Lamina13_65 Start: 42283, Stop: 41903, Start Num: 47

Candidate Starts for Lamina13_65:

(3, 42484), (32, 42340), (34, 42337), (Start: 47 @42283 has 8 MA's), (49, 42262), (54, 42247), (69, 42121), (72, 42070), (76, 42022), (77, 42019), (87, 41926),

Gene: Leperchaun_84 Start: 50368, Stop: 50739, Start Num: 36

Candidate Starts for Leperchaun_84:

(Start: 36 @50368 has 138 MA's), (Start: 43 @50392 has 3 MA's), (45, 50401), (63, 50500), (69, 50515), (87, 50716),

Gene: Lilac_42 Start: 34149, Stop: 33685, Start Num: 36

Candidate Starts for Lilac_42:

(23, 34188), (Start: 29 @34170 has 1 MA's), (Start: 36 @34149 has 138 MA's), (Start: 43 @34125 has 3 MA's), (45, 34116), (55, 34083), (57, 34071), (58, 34068), (69, 34005), (73, 33951), (79, 33888), (84, 33846), (87, 33804), (91, 33753),

Gene: Lilpickle_40 Start: 33973, Stop: 33602, Start Num: 36

Candidate Starts for Lilpickle_40:

(23, 34012), (Start: 29 @33994 has 1 MA's), (Start: 36 @33973 has 138 MA's), (Start: 43 @33949 has 3 MA's), (45, 33940), (69, 33826), (73, 33772), (79, 33709), (84, 33667), (87, 33625),

Gene: MISSy_39 Start: 34165, Stop: 33701, Start Num: 36

Candidate Starts for MISSy_39:

(23, 34204), (Start: 29 @34186 has 1 MA's), (Start: 36 @34165 has 138 MA's), (Start: 43 @34141 has 3 MA's), (45, 34132), (55, 34099), (57, 34087), (58, 34084), (69, 34021), (73, 33967), (79, 33904), (84, 33862), (87, 33820), (91, 33769),

Gene: MPhalcon_39 Start: 34158, Stop: 33694, Start Num: 36

Candidate Starts for MPhalcon_39:

(23, 34197), (Start: 29 @34179 has 1 MA's), (Start: 36 @34158 has 138 MA's), (Start: 43 @34134 has 3 MA's), (45, 34125), (55, 34092), (57, 34080), (58, 34077), (69, 34014), (73, 33960), (79, 33897), (84, 33855), (87, 33813), (91, 33762),

Gene: MadMen_89 Start: 50218, Stop: 50580, Start Num: 47

Candidate Starts for MadMen_89:

(Start: 47 @50218 has 8 MA's), (49, 50239), (67, 50347), (72, 50413), (76, 50461), (77, 50464), (87, 50557),

Gene: MadamMonkfish_41 Start: 34185, Stop: 33718, Start Num: 36

Candidate Starts for MadamMonkfish_41:

(18, 34245), (Start: 36 @34185 has 138 MA's), (Start: 43 @34161 has 3 MA's), (45, 34152), (69, 34038), (73, 33984), (79, 33921), (84, 33879), (87, 33837), (91, 33786),

Gene: Manda_40 Start: 34836, Stop: 34465, Start Num: 43

Candidate Starts for Manda_40:

(19, 34917), (26, 34887), (28, 34884), (Start: 36 @34860 has 138 MA's), (Start: 43 @34836 has 3 MA's), (45, 34827), (55, 34794), (63, 34728), (69, 34713), (82, 34599), (86, 34548),

Gene: Marker_79 Start: 47302, Stop: 47679, Start Num: 42

Candidate Starts for Marker_79:

(Start: 36 @47275 has 138 MA's), (Start: 42 @47302 has 1 MA's), (46, 47317), (59, 47386), (61, 47440), (62, 47443), (65, 47458), (69, 47467), (70, 47473), (75, 47560), (78, 47578), (81, 47590), (85, 47632), (87, 47656),

Gene: Marshmallow_41 Start: 35345, Stop: 34878, Start Num: 36

Candidate Starts for Marshmallow_41:

(10, 35438), (13, 35414), (Start: 36 @35345 has 138 MA's), (Start: 43 @35321 has 3 MA's), (45, 35312), (69, 35198), (73, 35144), (79, 35081), (84, 35039), (87, 34997), (91, 34946),

Gene: Mattes_82 Start: 50261, Stop: 50632, Start Num: 36

Candidate Starts for Mattes_82:

(8, 50174), (Start: 36 @50261 has 138 MA's), (Start: 43 @50285 has 3 MA's), (45, 50294), (63, 50393), (69, 50408), (87, 50609),

Gene: Maxxinista_41 Start: 34119, Stop: 33655, Start Num: 36

Candidate Starts for Maxxinista_41:

(23, 34158), (Start: 29 @34140 has 1 MA's), (Start: 36 @34119 has 138 MA's), (Start: 43 @34095 has 3 MA's), (45, 34086), (55, 34053), (57, 34041), (58, 34038), (69, 33975), (73, 33921), (79, 33858), (84, 33816), (87, 33774), (91, 33723),

Gene: MilanaBonita_79 Start: 48623, Stop: 49036, Start Num: 37

Candidate Starts for MilanaBonita_79:

(7, 48518), (Start: 37 @48623 has 8 MA's), (45, 48656), (46, 48659), (50, 48686), (53, 48692), (69, 48812), (73, 48866), (79, 48929), (84, 48971), (87, 49013),

Gene: MilleniumForce_84 Start: 50365, Stop: 50733, Start Num: 36

Candidate Starts for MilleniumForce_84:

(Start: 36 @50365 has 138 MA's), (Start: 43 @50389 has 3 MA's), (45, 50398), (55, 50431), (57, 50443), (58, 50446), (69, 50509), (87, 50710),

Gene: MinionDave_80 Start: 49276, Stop: 49686, Start Num: 39

Candidate Starts for MinionDave_80:

(Start: 39 @49276 has 6 MA's), (Start: 47 @49312 has 8 MA's), (60, 49381), (64, 49435), (66, 49438), (68, 49453), (69, 49462), (70, 49468), (74, 49522), (87, 49663),

Gene: Miniwave_40 Start: 34863, Stop: 34402, Start Num: 36

Candidate Starts for Miniwave_40:

(Start: 36 @34863 has 138 MA's), (Start: 42 @34842 has 1 MA's), (45, 34830), (69, 34722), (73, 34668), (79, 34605), (84, 34563), (87, 34521), (91, 34470),

Gene: Misfit_40 Start: 34739, Stop: 34275, Start Num: 36

Candidate Starts for Misfit_40:

(23, 34778), (Start: 29 @34760 has 1 MA's), (Start: 36 @34739 has 138 MA's), (Start: 43 @34715 has 3 MA's), (45, 34706), (55, 34673), (57, 34661), (58, 34658), (69, 34595), (73, 34541), (79, 34478), (84, 34436), (87, 34394), (91, 34343),

Gene: Moldemort_41 Start: 34414, Stop: 33947, Start Num: 36

Candidate Starts for Moldemort_41:

(18, 34474), (Start: 36 @34414 has 138 MA's), (Start: 43 @34390 has 3 MA's), (45, 34381), (69, 34267), (73, 34213), (79, 34150), (84, 34108), (87, 34066), (91, 34015),

Gene: Moonbeam_83 Start: 49609, Stop: 49980, Start Num: 36

Candidate Starts for Moonbeam_83:

(Start: 36 @49609 has 138 MA's), (Start: 43 @49633 has 3 MA's), (45, 49642), (63, 49741), (69, 49756), (87, 49957),

Gene: Mozy_91 Start: 49284, Stop: 49655, Start Num: 36

Candidate Starts for Mozy_91:

(1, 49083), (2, 49095), (5, 49155), (6, 49167), (17, 49221), (Start: 36 @49284 has 138 MA's), (Start: 43 @49308 has 3 MA's), (45, 49317), (69, 49431), (87, 49632),

Gene: Ms6_84 Start: 46316, Stop: 46729, Start Num: 37

Candidate Starts for Ms6_84:

(7, 46211), (Start: 37 @46316 has 8 MA's), (45, 46349), (46, 46352), (50, 46379), (53, 46385), (69, 46505), (87, 46706),

Gene: Murica_39 Start: 34636, Stop: 34172, Start Num: 36

Candidate Starts for Murica_39:

(23, 34675), (Start: 29 @34657 has 1 MA's), (Start: 36 @34636 has 138 MA's), (Start: 43 @34612 has 3 MA's), (45, 34603), (55, 34570), (57, 34558), (58, 34555), (69, 34492), (73, 34438), (79, 34375), (84, 34333), (87, 34291), (91, 34240),

Gene: Murphy_41 Start: 34631, Stop: 34167, Start Num: 36

Candidate Starts for Murphy_41:

(23, 34670), (Start: 29 @34652 has 1 MA's), (Start: 36 @34631 has 138 MA's), (Start: 43 @34607 has 3 MA's), (45, 34598), (55, 34565), (57, 34553), (58, 34550), (69, 34487), (73, 34433), (79, 34370), (84, 34328), (87, 34286), (91, 34235),

Gene: Myrale_42 Start: 35210, Stop: 34743, Start Num: 36

Candidate Starts for Myrale_42:

(10, 35303), (13, 35279), (Start: 36 @35210 has 138 MA's), (Start: 43 @35186 has 3 MA's), (45, 35177), (69, 35063), (73, 35009), (79, 34946), (84, 34904), (87, 34862), (91, 34811),

Gene: Nala_40 Start: 34670, Stop: 34206, Start Num: 36

Candidate Starts for Nala_40:

(23, 34709), (Start: 29 @34691 has 1 MA's), (Start: 36 @34670 has 138 MA's), (Start: 43 @34646 has 3 MA's), (45, 34637), (55, 34604), (57, 34592), (58, 34589), (69, 34526), (73, 34472), (79, 34409), (84, 34367), (87, 34325), (91, 34274),

Gene: NelitzaMV_40 Start: 34723, Stop: 34256, Start Num: 36

Candidate Starts for NelitzaMV_40:

(Start: 36 @34723 has 138 MA's), (Start: 43 @34699 has 3 MA's), (45, 34690), (69, 34576), (73, 34522), (79, 34459), (84, 34417), (87, 34375), (91, 34324),

Gene: Nimrod_40 Start: 34894, Stop: 34430, Start Num: 36

Candidate Starts for Nimrod_40:

(23, 34933), (Start: 29 @34915 has 1 MA's), (Start: 36 @34894 has 138 MA's), (Start: 43 @34870 has 3 MA's), (45, 34861), (55, 34828), (57, 34816), (58, 34813), (69, 34750), (73, 34696), (79, 34633), (84, 34591), (87, 34549), (91, 34498),

Gene: NoSleep_41 Start: 34391, Stop: 33927, Start Num: 36

Candidate Starts for NoSleep_41:

(23, 34430), (Start: 29 @34412 has 1 MA's), (Start: 36 @34391 has 138 MA's), (Start: 43 @34367 has 3 MA's), (45, 34358), (55, 34325), (57, 34313), (58, 34310), (69, 34247), (73, 34193), (79, 34130), (84, 34088), (87, 34046), (91, 33995),

Gene: Ogopogo_89 Start: 49435, Stop: 49848, Start Num: 37

Candidate Starts for Ogopogo_89:

(Start: 37 @49435 has 8 MA's), (45, 49468), (46, 49471), (50, 49498), (53, 49504), (69, 49624), (74, 49684), (87, 49825),

Gene: OlympiaSaint_85 Start: 50471, Stop: 50842, Start Num: 36

Candidate Starts for OlympiaSaint_85:

(Start: 36 @50471 has 138 MA's), (Start: 43 @50495 has 3 MA's), (45, 50504), (63, 50603), (69, 50618), (87, 50819),

Gene: OrionPax_42 Start: 34639, Stop: 34172, Start Num: 36

Candidate Starts for OrionPax_42:

(18, 34699), (Start: 36 @34639 has 138 MA's), (Start: 43 @34615 has 3 MA's), (45, 34606), (69, 34492), (73, 34438), (79, 34375), (84, 34333), (87, 34291), (91, 34240),

Gene: Ovechkin_89 Start: 50892, Stop: 51290, Start Num: 36

Candidate Starts for Ovechkin_89:

(24, 50862), (25, 50868), (Start: 36 @50892 has 138 MA's), (46, 50928), (59, 50997), (62, 51054), (65, 51069), (69, 51078), (70, 51084), (75, 51171), (78, 51189), (81, 51201), (85, 51243), (87, 51267),

Gene: Palpatine_40 Start: 34666, Stop: 34202, Start Num: 36

Candidate Starts for Palpatine_40:

(23, 34705), (Start: 29 @34687 has 1 MA's), (Start: 36 @34666 has 138 MA's), (Start: 43 @34642 has 3 MA's), (45, 34633), (55, 34600), (57, 34588), (58, 34585), (69, 34522), (73, 34468), (79, 34405), (84, 34363), (87, 34321), (91, 34270),

Gene: Paperbeatsrock_42 Start: 35652, Stop: 35185, Start Num: 36

Candidate Starts for Paperbeatsrock_42:

(Start: 36 @35652 has 138 MA's), (Start: 43 @35628 has 3 MA's), (45, 35619), (69, 35505), (73, 35451), (79, 35388), (84, 35346), (87, 35304), (91, 35253),

Gene: Paphu_61 Start: 41641, Stop: 41261, Start Num: 47

Candidate Starts for Paphu_61:

(3, 41842), (32, 41698), (34, 41695), (Start: 47 @41641 has 8 MA's), (49, 41620), (54, 41605), (69, 41479), (72, 41428), (76, 41380), (77, 41377), (87, 41284),

Gene: Parliament_63 Start: 43433, Stop: 43053, Start Num: 47

Candidate Starts for Parliament_63:

(3, 43634), (32, 43490), (34, 43487), (Start: 47 @43433 has 8 MA's), (49, 43412), (54, 43397), (69, 43271), (72, 43220), (76, 43172), (77, 43169), (87, 43076),

Gene: Petra64142_42 Start: 35106, Stop: 34705, Start Num: 43

Candidate Starts for Petra64142_42:

(23, 35169), (Start: 29 @35151 has 1 MA's), (Start: 36 @35130 has 138 MA's), (Start: 43 @35106 has 3 MA's), (45, 35097), (55, 35064), (57, 35052), (58, 35049), (69, 34986), (73, 34932), (79, 34869), (84, 34827), (88, 34776), (92, 34713),

Gene: Phaja_40 Start: 34910, Stop: 34443, Start Num: 36

Candidate Starts for Phaja_40:

(10, 35003), (13, 34979), (Start: 36 @34910 has 138 MA's), (Start: 43 @34886 has 3 MA's), (45, 34877), (69, 34763), (73, 34709), (79, 34646), (84, 34604), (87, 34562), (91, 34511),

Gene: Phanphagia_84 Start: 50468, Stop: 50839, Start Num: 36

Candidate Starts for Phanphagia_84:

(Start: 36 @50468 has 138 MA's), (Start: 43 @50492 has 3 MA's), (45, 50501), (63, 50600), (69, 50615), (87, 50816),

Gene: Pharsalus_41 Start: 35452, Stop: 34985, Start Num: 36

Candidate Starts for Pharsalus_41:

(Start: 36 @35452 has 138 MA's), (Start: 43 @35428 has 3 MA's), (45, 35419), (69, 35305), (73, 35251), (79, 35188), (84, 35146), (87, 35104), (91, 35053),

Gene: PhatBacter_40 Start: 34680, Stop: 34216, Start Num: 36

Candidate Starts for PhatBacter_40:

(23, 34719), (Start: 29 @34701 has 1 MA's), (Start: 36 @34680 has 138 MA's), (Start: 43 @34656 has 3 MA's), (45, 34647), (55, 34614), (57, 34602), (58, 34599), (69, 34536), (73, 34482), (79, 34419), (84, 34377), (87, 34335), (91, 34284),

Gene: Phaux_39 Start: 34678, Stop: 34214, Start Num: 36

Candidate Starts for Phaux_39:

(23, 34717), (Start: 29 @34699 has 1 MA's), (Start: 36 @34678 has 138 MA's), (Start: 43 @34654 has 3 MA's), (45, 34645), (55, 34612), (57, 34600), (58, 34597), (69, 34534), (73, 34480), (79, 34417), (84, 34375), (87, 34333), (91, 34282),

Gene: Phrux_41 Start: 34632, Stop: 34168, Start Num: 36

Candidate Starts for Phrux_41:

(18, 34692), (Start: 36 @34632 has 138 MA's), (Start: 43 @34608 has 3 MA's), (45, 34599), (55, 34566), (57, 34554), (58, 34551), (69, 34488), (73, 34434), (79, 34371), (84, 34329), (87, 34287), (91, 34236),

Gene: Piper2020_82 Start: 50625, Stop: 51008, Start Num: 48

Candidate Starts for Piper2020_82:

(13, 50499), (41, 50595), (Start: 48 @50625 has 1 MA's), (51, 50646), (71, 50814), (80, 50889), (83, 50916), (89, 50985), (90, 50991),

Gene: Poenanya_88 Start: 50710, Stop: 51087, Start Num: 33

Candidate Starts for Poenanya_88:

(Start: 33 @50710 has 6 MA's), (Start: 43 @50752 has 3 MA's), (45, 50761), (69, 50875), (75, 50968), (78, 50986), (81, 50998), (85, 51040), (87, 51064),

Gene: Policronamos_40 Start: 34678, Stop: 34214, Start Num: 36

Candidate Starts for Policronamos_40:

(23, 34717), (Start: 29 @34699 has 1 MA's), (Start: 36 @34678 has 138 MA's), (Start: 43 @34654 has 3 MA's), (45, 34645), (55, 34612), (57, 34600), (58, 34597), (69, 34534), (73, 34480), (79, 34417), (84, 34375), (87, 34333), (91, 34282),

Gene: Polka14_89 Start: 51500, Stop: 51877, Start Num: 33

Candidate Starts for Polka14_89:

(Start: 33 @51500 has 6 MA's), (Start: 43 @51542 has 3 MA's), (45, 51551), (63, 51650), (69, 51665), (75, 51758), (78, 51776), (81, 51788), (85, 51830), (87, 51854),

Gene: Pumpkin_44 Start: 35558, Stop: 35094, Start Num: 36

Candidate Starts for Pumpkin_44:

(18, 35618), (Start: 36 @35558 has 138 MA's), (Start: 43 @35534 has 3 MA's), (45, 35525), (55, 35492), (57, 35480), (58, 35477), (69, 35414), (73, 35360), (79, 35297), (84, 35255), (87, 35213), (91, 35162),

Gene: Quallification_41 Start: 34860, Stop: 34411, Start Num: 36

Candidate Starts for Quallification_41:

(Start: 36 @34860 has 138 MA's), (Start: 42 @34839 has 1 MA's), (45, 34827), (69, 34719), (75, 34626), (78, 34608), (81, 34596), (85, 34554), (87, 34530), (91, 34479),

Gene: Rakim_41 Start: 34775, Stop: 34311, Start Num: 36

Candidate Starts for Rakim_41:

(23, 34814), (Start: 29 @34796 has 1 MA's), (Start: 36 @34775 has 138 MA's), (Start: 43 @34751 has 3 MA's), (45, 34742), (55, 34709), (57, 34697), (58, 34694), (69, 34631), (73, 34577), (79, 34514), (84,

34472), (87, 34430), (91, 34379),

Gene: Ramsey_86 Start: 51149, Stop: 51520, Start Num: 36

Candidate Starts for Ramsey_86:

(1, 50948), (2, 50960), (5, 51020), (6, 51032), (17, 51086), (Start: 36 @51149 has 138 MA's), (Start: 43 @51173 has 3 MA's), (45, 51182), (63, 51281), (69, 51296), (87, 51497),

Gene: Rearden_66 Start: 46135, Stop: 45818, Start Num: 36

Candidate Starts for Rearden_66:

(Start: 36 @46135 has 138 MA's), (Start: 43 @46111 has 3 MA's), (45, 46102), (55, 46069), (57, 46057), (58, 46054), (63, 46006), (69, 45991), (74, 45931), (87, 45841),

Gene: RedBird_83 Start: 50910, Stop: 51281, Start Num: 36

Candidate Starts for RedBird_83:

(1, 50709), (2, 50721), (5, 50781), (6, 50793), (17, 50847), (Start: 36 @50910 has 138 MA's), (Start: 43 @50934 has 3 MA's), (45, 50943), (63, 51042), (69, 51057), (87, 51258),

Gene: Rimmer_40 Start: 34315, Stop: 33944, Start Num: 36

Candidate Starts for Rimmer_40:

(23, 34354), (Start: 29 @34336 has 1 MA's), (Start: 36 @34315 has 138 MA's), (Start: 43 @34291 has 3 MA's), (45, 34282), (69, 34168), (73, 34114), (79, 34051), (84, 34009), (87, 33967),

Gene: RiverMonster_40 Start: 34407, Stop: 33943, Start Num: 36

Candidate Starts for RiverMonster_40:

(23, 34446), (Start: 29 @34428 has 1 MA's), (Start: 36 @34407 has 138 MA's), (Start: 43 @34383 has 3 MA's), (45, 34374), (55, 34341), (57, 34329), (58, 34326), (69, 34263), (73, 34209), (79, 34146), (84, 34104), (87, 34062), (91, 34011),

Gene: SG4_84 Start: 50324, Stop: 50698, Start Num: 36

Candidate Starts for SG4_84:

(Start: 36 @50324 has 138 MA's), (Start: 42 @50345 has 1 MA's), (46, 50360), (69, 50486), (75, 50579), (78, 50597), (81, 50609), (85, 50651), (87, 50675),

Gene: SG4_86 Start: 50874, Stop: 51251, Start Num: 39

Candidate Starts for SG4_86:

(Start: 39 @50874 has 6 MA's), (44, 50895), (Start: 47 @50910 has 8 MA's), (52, 50934), (69, 51027), (74, 51087), (87, 51228),

Gene: Saints25_42 Start: 34424, Stop: 33957, Start Num: 36

Candidate Starts for Saints25_42:

(Start: 36 @34424 has 138 MA's), (Start: 43 @34400 has 3 MA's), (45, 34391), (69, 34277), (73, 34223), (79, 34160), (84, 34118), (87, 34076), (91, 34025),

Gene: Sandalphon_83 Start: 50748, Stop: 51119, Start Num: 36

Candidate Starts for Sandalphon_83:

(Start: 36 @50748 has 138 MA's), (Start: 43 @50772 has 3 MA's), (45, 50781), (69, 50895), (87, 51096),

Gene: Sassafras_83 Start: 49224, Stop: 49595, Start Num: 36

Candidate Starts for Sassafras_83:

(1, 49023), (2, 49035), (5, 49095), (6, 49107), (17, 49161), (Start: 36 @49224 has 138 MA's), (Start: 43 @49248 has 3 MA's), (45, 49257), (63, 49356), (69, 49371), (87, 49572),

Gene: Scottish_83 Start: 49191, Stop: 49568, Start Num: 33

Candidate Starts for Scottish_83:

(Start: 33 @49191 has 6 MA's), (Start: 43 @49233 has 3 MA's), (45, 49242), (63, 49341), (69, 49356), (75, 49449), (78, 49467), (81, 49479), (85, 49521), (87, 49545),

Gene: Seagreen_84 Start: 50260, Stop: 50628, Start Num: 36

Candidate Starts for Seagreen_84:

(Start: 36 @50260 has 138 MA's), (Start: 43 @50284 has 3 MA's), (45, 50293), (55, 50326), (57, 50338), (58, 50341), (63, 50389), (69, 50404), (74, 50464), (87, 50605),

Gene: Shaboozey_64 Start: 44166, Stop: 43780, Start Num: 36

Candidate Starts for Shaboozey_64:

(11, 44259), (14, 44235), (Start: 36 @44166 has 138 MA's), (Start: 42 @44145 has 1 MA's), (46, 44130), (69, 44004), (74, 43944), (87, 43803),

Gene: ShamWow_42 Start: 35347, Stop: 34880, Start Num: 36

Candidate Starts for ShamWow_42:

(10, 35440), (13, 35416), (Start: 36 @35347 has 138 MA's), (Start: 43 @35323 has 3 MA's), (45, 35314), (69, 35200), (73, 35146), (79, 35083), (84, 35041), (87, 34999), (91, 34948),

Gene: Shauna1_83 Start: 50441, Stop: 50812, Start Num: 36

Candidate Starts for Shauna1_83:

(8, 50348), (12, 50372), (Start: 36 @50441 has 138 MA's), (Start: 43 @50465 has 3 MA's), (45, 50474), (63, 50573), (69, 50588), (87, 50789),

Gene: ShiLan_85 Start: 51984, Stop: 52355, Start Num: 36

Candidate Starts for ShiLan_85:

(Start: 36 @51984 has 138 MA's), (Start: 43 @52008 has 3 MA's), (45, 52017), (63, 52116), (69, 52131), (87, 52332),

Gene: SilverChicken_91 Start: 49686, Stop: 50078, Start Num: 30

Candidate Starts for SilverChicken_91:

(21, 49668), (Start: 30 @49686 has 1 MA's), (Start: 36 @49707 has 138 MA's), (Start: 43 @49731 has 3 MA's), (45, 49740), (63, 49839), (69, 49854), (87, 50055),

Gene: Simpliphy_42 Start: 34499, Stop: 34032, Start Num: 36

Candidate Starts for Simpliphy_42:

(Start: 36 @34499 has 138 MA's), (Start: 43 @34475 has 3 MA's), (45, 34466), (69, 34352), (73, 34298), (79, 34235), (84, 34193), (87, 34151), (91, 34100),

Gene: SimranZ1_83 Start: 48924, Stop: 49286, Start Num: 47

Candidate Starts for SimranZ1_83:

(Start: 47 @48924 has 8 MA's), (49, 48945), (72, 49119), (76, 49167), (77, 49170), (87, 49263),

Gene: SophKB_40 Start: 34671, Stop: 34204, Start Num: 36

Candidate Starts for SophKB_40:

(Start: 36 @34671 has 138 MA's), (Start: 43 @34647 has 3 MA's), (45, 34638), (69, 34524), (73, 34470), (79, 34407), (84, 34365), (87, 34323), (91, 34272),

Gene: Sotrice96_40 Start: 34623, Stop: 34159, Start Num: 36

Candidate Starts for Sotrice96_40:

(23, 34662), (Start: 29 @34644 has 1 MA's), (Start: 36 @34623 has 138 MA's), (Start: 43 @34599 has 3 MA's), (45, 34590), (55, 34557), (57, 34545), (58, 34542), (69, 34479), (73, 34425), (79, 34362), (84,

34320), (87, 34278), (91, 34227),

Gene: Spoonbill_81 Start: 47897, Stop: 48268, Start Num: 36

Candidate Starts for Spoonbill_81:

(Start: 36 @47897 has 138 MA's), (Start: 43 @47921 has 3 MA's), (45, 47930), (63, 48029), (69, 48044), (87, 48245),

Gene: Stank_43 Start: 35175, Stop: 34711, Start Num: 36

Candidate Starts for Stank_43:

(23, 35214), (Start: 29 @35196 has 1 MA's), (Start: 36 @35175 has 138 MA's), (Start: 43 @35151 has 3 MA's), (45, 35142), (55, 35109), (57, 35097), (58, 35094), (69, 35031), (73, 34977), (79, 34914), (84, 34872), (87, 34830), (91, 34779),

Gene: Stap_78 Start: 46857, Stop: 47246, Start Num: 29

Candidate Starts for Stap_78:

(Start: 29 @46857 has 1 MA's), (Start: 43 @46899 has 3 MA's), (45, 46908), (63, 47007), (69, 47022), (73, 47076), (79, 47139), (84, 47181), (87, 47223),

Gene: Stark_41 Start: 34410, Stop: 33946, Start Num: 36

Candidate Starts for Stark_41:

(23, 34449), (Start: 29 @34431 has 1 MA's), (Start: 36 @34410 has 138 MA's), (Start: 43 @34386 has 3 MA's), (45, 34377), (55, 34344), (57, 34332), (58, 34329), (69, 34266), (73, 34212), (79, 34149), (84, 34107), (87, 34065), (91, 34014),

Gene: StellaBean_40 Start: 34671, Stop: 34204, Start Num: 36

Candidate Starts for StellaBean_40:

(10, 34764), (13, 34740), (Start: 36 @34671 has 138 MA's), (Start: 43 @34647 has 3 MA's), (45, 34638), (69, 34524), (73, 34470), (79, 34407), (84, 34365), (87, 34323), (91, 34272),

Gene: StolenFromERC_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for StolenFromERC_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: StormChicken_41 Start: 34923, Stop: 34552, Start Num: 36

Candidate Starts for StormChicken_41:

(23, 34962), (Start: 29 @34944 has 1 MA's), (Start: 36 @34923 has 138 MA's), (Start: 43 @34899 has 3 MA's), (45, 34890), (69, 34776), (73, 34722), (79, 34659), (84, 34617), (87, 34575),

Gene: SuperGrey_84 Start: 51807, Stop: 52193, Start Num: 36

Candidate Starts for SuperGrey_84:

(11, 51714), (14, 51738), (Start: 36 @51807 has 138 MA's), (Start: 42 @51828 has 1 MA's), (46, 51843), (69, 51969), (74, 52029), (87, 52170),

Gene: TBrady12_42 Start: 34659, Stop: 34195, Start Num: 36

Candidate Starts for TBrady12_42:

(23, 34698), (Start: 29 @34680 has 1 MA's), (Start: 36 @34659 has 138 MA's), (Start: 43 @34635 has 3 MA's), (45, 34626), (55, 34593), (57, 34581), (58, 34578), (69, 34515), (73, 34461), (79, 34398), (84, 34356), (87, 34314), (91, 34263),

Gene: Tarkin_42 Start: 35661, Stop: 35194, Start Num: 36

Candidate Starts for Tarkin_42:

(Start: 36 @35661 has 138 MA's), (Start: 43 @35637 has 3 MA's), (45, 35628), (69, 35514), (73, 35460), (79, 35397), (84, 35355), (87, 35313), (91, 35262),

Gene: Tasp14_65 Start: 42922, Stop: 42542, Start Num: 47

Candidate Starts for Tasp14_65:

(3, 43123), (32, 42979), (34, 42976), (Start: 47 @42922 has 8 MA's), (49, 42901), (54, 42886), (69, 42760), (72, 42709), (76, 42661), (77, 42658), (87, 42565),

Gene: Tchotchke_78 Start: 48324, Stop: 48737, Start Num: 37

Candidate Starts for Tchotchke_78:

(Start: 37 @48324 has 8 MA's), (45, 48357), (46, 48360), (50, 48387), (53, 48393), (69, 48513), (74, 48573), (87, 48714),

Gene: TeardropMSU_39 Start: 34571, Stop: 34104, Start Num: 36

Candidate Starts for TeardropMSU_39:

(15, 34631), (Start: 36 @34571 has 138 MA's), (Start: 43 @34547 has 3 MA's), (45, 34538), (69, 34424), (87, 34223), (91, 34172),

Gene: Teaspoon_45 Start: 35627, Stop: 35256, Start Num: 35

Candidate Starts for Teaspoon_45:

(Start: 35 @35627 has 2 MA's), (Start: 43 @35600 has 3 MA's), (45, 35591), (55, 35558), (57, 35546), (58, 35543), (69, 35480), (73, 35426), (79, 35363), (84, 35321), (87, 35279),

Gene: Teodoridan_59 Start: 40032, Stop: 39670, Start Num: 37

Candidate Starts for Teodoridan_59:

(Start: 37 @40032 has 8 MA's), (45, 39999), (46, 39996), (50, 39969), (53, 39963), (69, 39843), (74, 39783), (87, 39693),

Gene: Terminus_40 Start: 34739, Stop: 34275, Start Num: 36

Candidate Starts for Terminus_40:

(23, 34778), (Start: 29 @34760 has 1 MA's), (Start: 36 @34739 has 138 MA's), (Start: 43 @34715 has 3 MA's), (45, 34706), (55, 34673), (57, 34661), (58, 34658), (69, 34595), (73, 34541), (79, 34478), (84, 34436), (87, 34394), (91, 34343),

Gene: Thimble_41 Start: 33817, Stop: 33377, Start Num: 43

Candidate Starts for Thimble_41:

(23, 33880), (Start: 29 @33862 has 1 MA's), (Start: 36 @33841 has 138 MA's), (Start: 43 @33817 has 3 MA's), (45, 33808), (55, 33775), (57, 33763), (58, 33760), (69, 33697), (73, 33643), (79, 33580), (84, 33538), (87, 33496), (91, 33445),

Gene: Thresher_42 Start: 35645, Stop: 35181, Start Num: 36

Candidate Starts for Thresher_42:

(23, 35684), (Start: 29 @35666 has 1 MA's), (Start: 36 @35645 has 138 MA's), (Start: 43 @35621 has 3 MA's), (45, 35612), (55, 35579), (57, 35567), (58, 35564), (69, 35501), (73, 35447), (79, 35384), (84, 35342), (87, 35300), (91, 35249),

Gene: Tootsieroll_80 Start: 50185, Stop: 50562, Start Num: 33

Candidate Starts for Tootsieroll_80:

(Start: 33 @50185 has 6 MA's), (Start: 43 @50227 has 3 MA's), (45, 50236), (63, 50335), (69, 50350), (75, 50443), (78, 50461), (81, 50473), (85, 50515), (87, 50539),

Gene: Toto_41 Start: 35347, Stop: 34880, Start Num: 36

Candidate Starts for Toto_41:

(10, 35440), (13, 35416), (Start: 36 @35347 has 138 MA's), (Start: 43 @35323 has 3 MA's), (45, 35314), (69, 35200), (73, 35146), (79, 35083), (84, 35041), (87, 34999), (91, 34948),

Gene: Traaww1_38 Start: 34290, Stop: 33826, Start Num: 36

Candidate Starts for Traaww1_38:

(Start: 36 @34290 has 138 MA's), (Start: 43 @34266 has 3 MA's), (45, 34257), (55, 34224), (57, 34212), (58, 34209), (63, 34161), (69, 34146), (73, 34092), (79, 34029), (84, 33987), (87, 33945), (91, 33894),

Gene: Tuco_43 Start: 35855, Stop: 35388, Start Num: 36

Candidate Starts for Tuco_43:

(10, 35948), (13, 35924), (Start: 36 @35855 has 138 MA's), (Start: 43 @35831 has 3 MA's), (45, 35822), (69, 35708), (73, 35654), (79, 35591), (84, 35549), (87, 35507), (91, 35456),

Gene: Whatsapiecost_76 Start: 44789, Stop: 45166, Start Num: 39

Candidate Starts for Whatsapiecost_76:

(Start: 39 @44789 has 6 MA's), (44, 44810), (Start: 47 @44825 has 8 MA's), (52, 44849), (69, 44942), (74, 45002), (87, 45143),

Gene: Wiggin_43 Start: 35173, Stop: 34709, Start Num: 36

Candidate Starts for Wiggin_43:

(Start: 36 @35173 has 138 MA's), (Start: 43 @35149 has 3 MA's), (45, 35140), (55, 35107), (57, 35095), (58, 35092), (69, 35029), (73, 34975), (79, 34912), (84, 34870), (87, 34828), (91, 34777),

Gene: WillSterrel_82 Start: 50063, Stop: 50434, Start Num: 36

Candidate Starts for WillSterrel_82:

(Start: 36 @50063 has 138 MA's), (Start: 43 @50087 has 3 MA's), (45, 50096), (63, 50195), (69, 50210), (87, 50411),

Gene: Xandras_42 Start: 34687, Stop: 34178, Start Num: 36

Candidate Starts for Xandras_42:

(16, 34747), (Start: 36 @34687 has 138 MA's), (45, 34654), (46, 34651), (54, 34624), (56, 34618), (69, 34498), (73, 34444), (79, 34381), (84, 34339), (87, 34297), (91, 34246),

Gene: Youngblood_41 Start: 34902, Stop: 34555, Start Num: 43

Candidate Starts for Youngblood_41:

(23, 34965), (Start: 29 @34947 has 1 MA's), (Start: 36 @34926 has 138 MA's), (Start: 43 @34902 has 3 MA's), (45, 34893), (69, 34779), (73, 34725), (79, 34662), (84, 34620), (87, 34578),

Gene: Zeuska_61 Start: 42220, Stop: 41843, Start Num: 39

Candidate Starts for Zeuska_61:

(Start: 39 @42220 has 6 MA's), (44, 42199), (Start: 47 @42184 has 8 MA's), (52, 42160), (69, 42067), (87, 41866),

Gene: xkcd_41 Start: 34821, Stop: 34357, Start Num: 36

Candidate Starts for xkcd_41:

(23, 34860), (Start: 29 @34842 has 1 MA's), (Start: 36 @34821 has 138 MA's), (Start: 43 @34797 has 3 MA's), (45, 34788), (55, 34755), (57, 34743), (58, 34740), (69, 34677), (73, 34623), (79, 34560), (84, 34518), (87, 34476), (91, 34425),