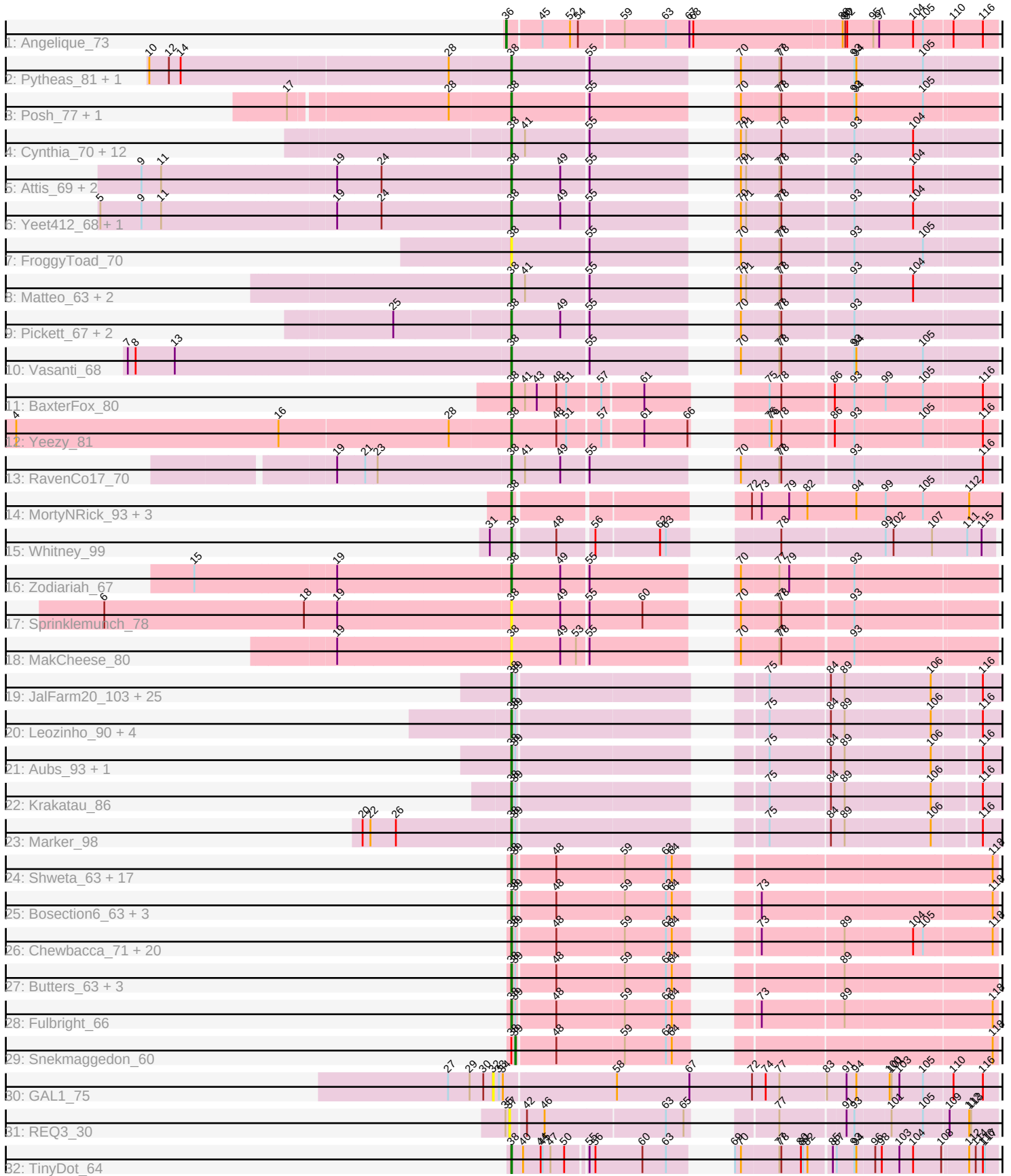


Zoomed Pham 275998



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 275998 Report

This analysis was run 02/07/26 on database version 634.

Pham number 275998 has 129 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Angelique_73
- Track 2 : Pytheas_81, Jablanski_80
- Track 3 : Posh_77, Wrigley_79
- Track 4 : Cynthia_70, Haley23_70, GemG_70, TuertoX_70, Sproutie_70, Bjanes7_67, Ebert_73, Gizermo_70, Mocha12_70, Whiteclaw_70, Clap_70, Savage_70, Lamberg_66
- Track 5 : Attis_69, LordFarquaad_72, SoilAssassin_69
- Track 6 : Yeet412_68, Nettuno_67
- Track 7 : FroggyToad_70
- Track 8 : Matteo_63, Jalleen_73, Sahara_68
- Track 9 : Pickett_67, JCole_67, EdnaMode_69
- Track 10 : Vasanti_68
- Track 11 : BaxterFox_80
- Track 12 : Yeezy_81
- Track 13 : RavenCo17_70
- Track 14 : MortyNRick_93, Phabuloso_105, BotCity_100, Budski_103
- Track 15 : Whitney_99
- Track 16 : Zodiariah_67
- Track 17 : Sprinklemunch_78
- Track 18 : MakCheese_80
- Track 19 : JalFarm20_103, Renaud18_102, Fancypants_99, DosHalletts_90, MisterCuddles_92, Donkeykong_100, Oksu_96, Jabbawokkie_100, Brushbloom_94, SG4_94, Girr_91, Rialto_98, Llij_89, Phasih_90, Blarby_101, Eradicator_86, Gandolph_93, Cornie_90, Bipolar_95, ShroomBoi_91, SilverChicken_101, Avani_99, Ruby_89, Bobi_96, Zapner_100, SuperGrey_94
- Track 20 : Leozinho_90, Totinger_96, Alexphander_94, Karhdo_88, Plumbus_93
- Track 21 : Aubs_93, Spartacus_100
- Track 22 : Krakatau_86
- Track 23 : Marker_98
- Track 24 : Shweta_63, Redi_64, ShrimpFriedEgg_65, Impisi_66, Raymond7_58, Spinach_64, BabeRuth_65, SpongeBob_60, Philonius_68, Purgamenstris_65, Jamie19_60, Nenae_65, Hanako_64, MichelleMyBell_65, Phrann_64, PhancyPhin_65, SkinnyPete_64, Panchino_61
- Track 25 : Bosection6_63, Charlie_64, Xeno_65, Journey_61
- Track 26 : Chewbacca_71, Pipsqueaks_69, Smurph_68, Aggie_64, Carcharodon_67, Silvy_64, EGUnicorn_63, Magsby_67, Schnauzer_69, Silvafighter_70, Xerxes_68, ParmesanJohn_68, Phloss_66, Duplicity_66, Tapioca_66,

Cubone_73, Andies_61, Melville_73, Tortoise12_68, Scitech_63, Gex_69

- Track 27 : Butters_63, Rebel_61, Rubeelu_63, Kevin1_66
- Track 28 : Fulbright_66
- Track 29 : Snekmaggon_60
- Track 30 : GAL1_75
- Track 31 : REQ3_30
- Track 32 : TinyDot_64

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

The start number called the most often in the published annotations is 38, it was called in 114 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aggie_64, Alexphander_94, Andies_61, Attis_69, Aubs_93, Avani_99, BabeRuth_65, BaxterFox_80, Bipolar_95, Bjaner7_67, Blarby_101, Bobi_96, Borection6_63, BotCity_100, Brushbloom_94, Budski_103, Butters_63, Carcharodon_67, Charlie_64, Chewbacca_71, Clap_70, Cornie_90, Cubone_73, Cynthia_70, Donkeykong_100, DosHalletts_90, Duplicity_66, EGUnicorn_63, Ebert_73, EdnaMode_69, Eradicator_86, Fancypants_99, FroggyToad_70, Fulbright_66, Gandolph_93, GemG_70, Gex_69, Gurr_91, Gizmo_70, Haley23_70, Hanako_64, Impisi_66, JCole_67, Jabbawokkie_100, Jablanski_80, JalFarm20_103, Jalleen_73, Jamie19_60, Journey_61, Karhdo_88, Kevin1_66, Krakatau_86, Lamberg_66, Leozinho_90, Llij_89, LordFarquaad_72, Magsby_67, MakCheese_80, Marker_98, Matteo_63, Melville_73, MichelleMyBell_65, MisterCuddles_92, Mocha12_70, MortyNRick_93, Nenae_65, Nettuno_67, Oksu_96, Panchino_61, ParmesanJohn_68, Phabuloso_105, PhancyPhin_65, Phasih_90, Philonius_68, Phloss_66, Phrann_64, Pickett_67, Pipsqueaks_69, Plumbus_93, Posh_77, Purgamenstris_65, Pytheas_81, RavenCo17_70, Raymond7_58, Rebel_61, Redi_64, Renaud18_102, Rialto_98, Rubeelu_63, Ruby_89, SG4_94, Sahara_68, Savage_70, Schnauzer_69, Scitech_63, ShrimpFriedEgg_65, ShroomBoi_91, Shweta_63, SilvaFighter_70, SilverChicken_101, Silvy_64, SkinnyPete_64, Smurph_68, SoilAssassin_69, Spartacus_100, Spinach_64, SpongeBob_60, Sprinklemunch_78, Sproutie_70, SuperGrey_94, Tapioca_66, TinyDot_64, Tortoise12_68, Totinger_96, TuertoX_70, Vasanti_68, Whiteclaw_70, Whitney_99, Wrigley_79, Xeno_65, Xerxes_68, Yeet412_68, Yeezy_81, Zapner_100, Zodiariah_67,

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

- Snekmaggon_60,

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

- Angelique_73, GAL1_75, REQ3_30,

Summary by start number:

Start 32:

- Found in 1 of 129 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GAL1_75 (singleton),

Start 36:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_73 (CY1),

Start 37:

- Found in 1 of 129 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ3_30 (singleton),

Start 38:

- Found in 126 of 129 (97.7%) of genes in pham
- Manual Annotations of this start: 114 of 116
- Called 99.2% of time when present
- Phage (with cluster) where this start called: Aggie_64 (N), Alexphander_94 (F1), Andies_61 (N), Attis_69 (CZ2), Aubs_93 (F1), Avani_99 (F2), BabeRuth_65 (N), BaxterFox_80 (CZ3), Bipolar_95 (F1), Bjaness_67 (CZ2), Blarby_101 (F), Bobi_96 (F1), Bosomection6_63 (N), BotCity_100 (DN), Brushbloom_94 (F1), Budski_103 (DN), Butters_63 (N), Carcharodon_67 (N), Charlie_64 (N), Chewbacca_71 (N), Clap_70 (CZ2), Cornie_90 (F5), Cubone_73 (N), Cynthia_70 (CZ2), Donkeykong_100 (F1), DosHalletts_90 (F1), Duplicity_66 (N), EGUnicorn_63 (N), Ebert_73 (CZ2), EdnaMode_69 (CZ2), Eradicator_86 (F1), Fancypants_99 (F1), FroggyToad_70 (CZ2), Fulbright_66 (N), Gandolph_93 (F1), GemG_70 (CZ2), Gex_69 (N), Girr_91 (F1), Gizermo_70 (CZ2), Haley23_70 (CZ2), Hanako_64 (N), Impisi_66 (N), JCole_67 (CZ2), Jabbawokkie_100 (F2), Jablanski_80 (CY3), JalFarm20_103 (F1), Jalleen_73 (CZ2), Jamie19_60 (N), Journey_61 (N), Karhdo_88 (F1), Kevin1_66 (N), Krakatau_86 (F1), Lamberg_66 (CZ2), Leozinho_90 (F1), Llij_89 (F1), LordFarquaad_72 (CZ2), Magsby_67 (N), MakCheese_80 (DW), Marker_98 (F1), Matteo_63 (CZ2), Melville_73 (N), MichelleMyBell_65 (N), MisterCuddles_92 (F1), Mocha12_70 (CZ2), MortyNRick_93 (DN), Nenae_65 (N), Nettuno_67 (CZ2), Oksu_96 (F1), Panchino_61 (N), Parmesanjohn_68 (N), Phabuloso_105 (DN1), PhancyPhin_65 (N), Phasih_90 (F1), Philonius_68 (N), Phloss_66 (N), Phrann_64 (N), Pickett_67 (CZ2), Pipsqueaks_69 (N), Plumbus_93 (F1), Posh_77 (CY4), Purgamenstris_65 (N), Pytheas_81 (CY3), RavenCo17_70 (CZ8), Raymond7_58 (N), Rebel_61 (N), Redi_64 (N), Renaud18_102 (F4), Rialto_98 (F1), Rubeelu_63 (N), Ruby_89 (F1), SG4_94 (F1), Sahara_68 (CZ2), Savage_70 (CZ2), Schnauzer_69 (N), Scitech_63 (N), ShrimpFriedEgg_65 (N), ShroomBoi_91 (F1), Shweta_63 (N), Silvafighter_70 (N), SilverChicken_101 (F2), Silvy_64 (N), SkinnyPete_64 (N), Smurph_68 (N), SoilAssassin_69 (CZ2), Spartacus_100 (F1), Spinach_64 (N), SpongeBob_60 (N), Sprinklemunch_78 (DW), Sproutie_70 (CZ2), SuperGrey_94 (F1), Tapioca_66 (N), TinyDot_64 (singleton), Tortoise12_68 (N), Totinger_96 (F1), TuertoX_70 (CZ2), Vasanti_68 (CZ2), Whiteclaw_70 (CZ2), Whitney_99 (DN1), Wrigley_79 (CY4), Xeno_65 (N), Xerxes_68 (N), Yeet412_68 (CZ2), Yeezy_81 (CZ3), Zapner_100 (F2), Zodiariah_67 (DW),

Start 39:

- Found in 84 of 129 (65.1%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 1.2% of time when present
- Phage (with cluster) where this start called: Snekmaggon_60 (N),

Summary by clusters:

There are 16 clusters represented in this pham: DN, F1, singleton, F4, CY3, CY4, CZ2, CZ3, F, F2, N, CY1, DN1, CZ8, DW, F5,

Info for manual annotations of cluster CY1:

- Start number 36 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 38 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 38 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CZ2:

- Start number 38 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 38 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ8:

- Start number 38 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DN:

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

Info for manual annotations of cluster DN1:

- Start number 38 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DW:

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

Info for manual annotations of cluster F1:

- Start number 38 was manually annotated 27 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 38 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 38 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

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

Info for manual annotations of cluster N:

- Start number 38 was manually annotated 45 times for cluster N.
- Start number 39 was manually annotated 1 time for cluster N.

Gene Information:

Gene: Aggie_64 Start: 42220, Stop: 42885, Start Num: 38

Candidate Starts for Aggie_64:

(Start: 38 @42220 has 114 MA's), (Start: 39 @42226 has 1 MA's), (48, 42283), (59, 42385), (63, 42448), (64, 42457), (73, 42520), (89, 42640), (104, 42739), (105, 42754), (118, 42853),

Gene: Alexphander_94 Start: 52500, Stop: 53186, Start Num: 38

Candidate Starts for Alexphander_94:

(Start: 38 @52500 has 114 MA's), (Start: 39 @52506 has 1 MA's), (75, 52812), (84, 52899), (89, 52920), (106, 53046), (116, 53112),

Gene: Andies_61 Start: 41666, Stop: 42331, Start Num: 38

Candidate Starts for Andies_61:

(Start: 38 @41666 has 114 MA's), (Start: 39 @41672 has 1 MA's), (48, 41729), (59, 41831), (63, 41894), (64, 41903), (73, 41966), (89, 42086), (104, 42185), (105, 42200), (118, 42299),

Gene: Angelique_73 Start: 49381, Stop: 50136, Start Num: 36

Candidate Starts for Angelique_73:

(Start: 36 @49381 has 1 MA's), (45, 49429), (52, 49471), (54, 49483), (59, 49549), (63, 49612), (67, 49648), (68, 49654), (88, 49870), (90, 49873), (92, 49876), (95, 49912), (97, 49921), (104, 49972), (105, 49987), (110, 50029), (116, 50071),

Gene: Attis_69 Start: 45645, Stop: 46316, Start Num: 38

Candidate Starts for Attis_69:

(9, 45099), (11, 45129), (19, 45387), (24, 45453), (Start: 38 @45645 has 114 MA's), (49, 45720), (55, 45759), (70, 45918), (71, 45924), (77, 45972), (78, 45975), (93, 46077), (104, 46161),

Gene: Aubs_93 Start: 53106, Stop: 53780, Start Num: 38

Candidate Starts for Aubs_93:

(Start: 38 @53106 has 114 MA's), (Start: 39 @53112 has 1 MA's), (75, 53418), (84, 53505), (89, 53526), (106, 53652), (116, 53718), (119, 53769),

Gene: Avani_99 Start: 49320, Stop: 50006, Start Num: 38

Candidate Starts for Avani_99:

(Start: 38 @49320 has 114 MA's), (Start: 39 @49326 has 1 MA's), (75, 49632), (84, 49719), (89, 49740), (106, 49866), (116, 49932),

Gene: BabeRuth_65 Start: 40184, Stop: 40849, Start Num: 38

Candidate Starts for BabeRuth_65:

(Start: 38 @40184 has 114 MA's), (Start: 39 @40190 has 1 MA's), (48, 40247), (59, 40349), (63, 40412), (64, 40421), (118, 40817),

Gene: BaxterFox_80 Start: 51485, Stop: 52147, Start Num: 38

Candidate Starts for BaxterFox_80:

(Start: 38 @51485 has 114 MA's), (41, 51506), (43, 51524), (48, 51554), (51, 51569), (57, 51617), (61, 51677), (75, 51797), (78, 51815), (86, 51887), (93, 51917), (99, 51959), (105, 52016), (116, 52097),

Gene: Bipolar_95 Start: 53583, Stop: 54269, Start Num: 38

Candidate Starts for Bipolar_95:

(Start: 38 @53583 has 114 MA's), (Start: 39 @53589 has 1 MA's), (75, 53895), (84, 53982), (89, 54003), (106, 54129), (116, 54195),

Gene: Bjan7_67 Start: 43806, Stop: 44477, Start Num: 38

Candidate Starts for Bjan7_67:

(Start: 38 @43806 has 114 MA's), (41, 43827), (55, 43920), (70, 44079), (71, 44085), (78, 44136), (93, 44238), (104, 44322),

Gene: Blarby_101 Start: 50147, Stop: 50833, Start Num: 38

Candidate Starts for Blarby_101:

(Start: 38 @50147 has 114 MA's), (Start: 39 @50153 has 1 MA's), (75, 50459), (84, 50546), (89, 50567), (106, 50693), (116, 50759),

Gene: Bobi_96 Start: 53291, Stop: 53977, Start Num: 38

Candidate Starts for Bobi_96:

(Start: 38 @53291 has 114 MA's), (Start: 39 @53297 has 1 MA's), (75, 53603), (84, 53690), (89, 53711), (106, 53837), (116, 53903),

Gene: Bosection6_63 Start: 41269, Stop: 41934, Start Num: 38

Candidate Starts for Bosection6_63:

(Start: 38 @41269 has 114 MA's), (Start: 39 @41275 has 1 MA's), (48, 41332), (59, 41434), (63, 41497), (64, 41506), (73, 41569), (118, 41902),

Gene: BotCity_100 Start: 52998, Stop: 53675, Start Num: 38

Candidate Starts for BotCity_100:

(Start: 38 @52998 has 114 MA's), (72, 53271), (73, 53283), (79, 53325), (82, 53352), (94, 53427), (99, 53469), (105, 53526), (112, 53595),

Gene: Brushbloom_94 Start: 52861, Stop: 53547, Start Num: 38

Candidate Starts for Brushbloom_94:

(Start: 38 @52861 has 114 MA's), (Start: 39 @52867 has 1 MA's), (75, 53173), (84, 53260), (89, 53281), (106, 53407), (116, 53473),

Gene: Budski_103 Start: 54022, Stop: 54699, Start Num: 38

Candidate Starts for Budski_103:

(Start: 38 @54022 has 114 MA's), (72, 54295), (73, 54307), (79, 54349), (82, 54376), (94, 54451), (99, 54493), (105, 54550), (112, 54619),

Gene: Butters_63 Start: 39341, Stop: 40006, Start Num: 38

Candidate Starts for Butters_63:

(Start: 38 @39341 has 114 MA's), (Start: 39 @39347 has 1 MA's), (48, 39404), (59, 39506), (63, 39569), (64, 39578), (89, 39761),

Gene: Carcharodon_67 Start: 41567, Stop: 42232, Start Num: 38

Candidate Starts for Carcharodon_67:

(Start: 38 @41567 has 114 MA's), (Start: 39 @41573 has 1 MA's), (48, 41630), (59, 41732), (63, 41795), (64, 41804), (73, 41867), (89, 41987), (104, 42086), (105, 42101), (118, 42200),

Gene: Charlie_64 Start: 40893, Stop: 41558, Start Num: 38

Candidate Starts for Charlie_64:

(Start: 38 @40893 has 114 MA's), (Start: 39 @40899 has 1 MA's), (48, 40956), (59, 41058), (63, 41121), (64, 41130), (73, 41193), (118, 41526),

Gene: Chewbacca_71 Start: 41462, Stop: 42127, Start Num: 38

Candidate Starts for Chewbacca_71:

(Start: 38 @41462 has 114 MA's), (Start: 39 @41468 has 1 MA's), (48, 41525), (59, 41627), (63, 41690), (64, 41699), (73, 41762), (89, 41882), (104, 41981), (105, 41996), (118, 42095),

Gene: Clap_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Clap_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Cornie_90 Start: 50883, Stop: 51569, Start Num: 38

Candidate Starts for Cornie_90:

(Start: 38 @50883 has 114 MA's), (Start: 39 @50889 has 1 MA's), (75, 51195), (84, 51282), (89, 51303), (106, 51429), (116, 51495),

Gene: Cubone_73 Start: 42189, Stop: 42854, Start Num: 38

Candidate Starts for Cubone_73:

(Start: 38 @42189 has 114 MA's), (Start: 39 @42195 has 1 MA's), (48, 42252), (59, 42354), (63, 42417), (64, 42426), (73, 42489), (89, 42609), (104, 42708), (105, 42723), (118, 42822),

Gene: Cynthia_70 Start: 43983, Stop: 44654, Start Num: 38

Candidate Starts for Cynthia_70:

(Start: 38 @43983 has 114 MA's), (41, 44004), (55, 44097), (70, 44256), (71, 44262), (78, 44313), (93, 44415), (104, 44499),

Gene: Donkeykong_100 Start: 54073, Stop: 54759, Start Num: 38

Candidate Starts for Donkeykong_100:

(Start: 38 @54073 has 114 MA's), (Start: 39 @54079 has 1 MA's), (75, 54385), (84, 54472), (89, 54493), (106, 54619), (116, 54685),

Gene: DosHalletts_90 Start: 52077, Stop: 52763, Start Num: 38

Candidate Starts for DosHalletts_90:

(Start: 38 @52077 has 114 MA's), (Start: 39 @52083 has 1 MA's), (75, 52389), (84, 52476), (89, 52497), (106, 52623), (116, 52689),

Gene: Duplicity_66 Start: 40824, Stop: 41489, Start Num: 38

Candidate Starts for Duplicity_66:

(Start: 38 @40824 has 114 MA's), (Start: 39 @40830 has 1 MA's), (48, 40887), (59, 40989), (63, 41052), (64, 41061), (73, 41124), (89, 41244), (104, 41343), (105, 41358), (118, 41457),

Gene: EGUnicorn_63 Start: 39890, Stop: 40555, Start Num: 38

Candidate Starts for EGUnicorn_63:

(Start: 38 @39890 has 114 MA's), (Start: 39 @39896 has 1 MA's), (48, 39953), (59, 40055), (63, 40118), (64, 40127), (73, 40190), (89, 40310), (104, 40409), (105, 40424), (118, 40523),

Gene: Ebert_73 Start: 44417, Stop: 45088, Start Num: 38

Candidate Starts for Ebert_73:

(Start: 38 @44417 has 114 MA's), (41, 44438), (55, 44531), (70, 44690), (71, 44696), (78, 44747), (93, 44849), (104, 44933),

Gene: EdnaMode_69 Start: 44093, Stop: 44764, Start Num: 38

Candidate Starts for EdnaMode_69:

(25, 43922), (Start: 38 @44093 has 114 MA's), (49, 44168), (55, 44207), (70, 44366), (77, 44420), (78, 44423), (93, 44525),

Gene: Eradicator_86 Start: 50294, Stop: 50980, Start Num: 38

Candidate Starts for Eradicator_86:

(Start: 38 @50294 has 114 MA's), (Start: 39 @50300 has 1 MA's), (75, 50606), (84, 50693), (89, 50714), (106, 50840), (116, 50906),

Gene: Fancypants_99 Start: 54397, Stop: 55083, Start Num: 38

Candidate Starts for Fancypants_99:

(Start: 38 @54397 has 114 MA's), (Start: 39 @54403 has 1 MA's), (75, 54709), (84, 54796), (89, 54817), (106, 54943), (116, 55009),

Gene: FroggyToad_70 Start: 44725, Stop: 45396, Start Num: 38

Candidate Starts for FroggyToad_70:

(Start: 38 @44725 has 114 MA's), (55, 44839), (70, 44998), (77, 45052), (78, 45055), (93, 45157), (105, 45256),

Gene: Fulbright_66 Start: 40261, Stop: 40926, Start Num: 38

Candidate Starts for Fulbright_66:

(Start: 38 @40261 has 114 MA's), (Start: 39 @40267 has 1 MA's), (48, 40324), (59, 40426), (63, 40489), (64, 40498), (73, 40561), (89, 40681), (118, 40894),

Gene: GAL1_75 Start: 46097, Stop: 46876, Start Num: 32

Candidate Starts for GAL1_75:

(27, 46028), (29, 46061), (30, 46082), (32, 46097), (33, 46106), (34, 46112), (58, 46280), (67, 46391), (72, 46487), (74, 46508), (77, 46529), (83, 46595), (91, 46625), (94, 46640), (100, 46685), (101, 46688), (103, 46700), (105, 46736), (110, 46778), (116, 46820),

Gene: Gandolph_93 Start: 49364, Stop: 50050, Start Num: 38

Candidate Starts for Gandolph_93:

(Start: 38 @49364 has 114 MA's), (Start: 39 @49370 has 1 MA's), (75, 49676), (84, 49763), (89, 49784), (106, 49910), (116, 49976),

Gene: GemG_70 Start: 43989, Stop: 44660, Start Num: 38

Candidate Starts for GemG_70:

(Start: 38 @43989 has 114 MA's), (41, 44010), (55, 44103), (70, 44262), (71, 44268), (78, 44319), (93, 44421), (104, 44505),

Gene: Gex_69 Start: 41583, Stop: 42248, Start Num: 38

Candidate Starts for Gex_69:

(Start: 38 @41583 has 114 MA's), (Start: 39 @41589 has 1 MA's), (48, 41646), (59, 41748), (63, 41811), (64, 41820), (73, 41883), (89, 42003), (104, 42102), (105, 42117), (118, 42216),

Gene: Girr_91 Start: 52108, Stop: 52794, Start Num: 38

Candidate Starts for Girr_91:

(Start: 38 @52108 has 114 MA's), (Start: 39 @52114 has 1 MA's), (75, 52420), (84, 52507), (89, 52528), (106, 52654), (116, 52720),

Gene: Gizermo_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Gizermo_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Haley23_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Haley23_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Hanako_64 Start: 40184, Stop: 40849, Start Num: 38

Candidate Starts for Hanako_64:

(Start: 38 @40184 has 114 MA's), (Start: 39 @40190 has 1 MA's), (48, 40247), (59, 40349), (63, 40412), (64, 40421), (118, 40817),

Gene: Impisi_66 Start: 39909, Stop: 40574, Start Num: 38

Candidate Starts for Impisi_66:

(Start: 38 @39909 has 114 MA's), (Start: 39 @39915 has 1 MA's), (48, 39972), (59, 40074), (63, 40137), (64, 40146), (118, 40542),

Gene: JCole_67 Start: 42655, Stop: 43326, Start Num: 38

Candidate Starts for JCole_67:

(25, 42484), (Start: 38 @42655 has 114 MA's), (49, 42730), (55, 42769), (70, 42928), (77, 42982), (78, 42985), (93, 43087),

Gene: Jabbawokkie_100 Start: 50067, Stop: 50753, Start Num: 38

Candidate Starts for Jabbawokkie_100:

(Start: 38 @50067 has 114 MA's), (Start: 39 @50073 has 1 MA's), (75, 50379), (84, 50466), (89, 50487), (106, 50613), (116, 50679),

Gene: Jablanski_80 Start: 52205, Stop: 52876, Start Num: 38

Candidate Starts for Jablanski_80:

(10, 51665), (12, 51695), (14, 51713), (28, 52112), (Start: 38 @52205 has 114 MA's), (55, 52319), (70, 52478), (77, 52532), (78, 52535), (93, 52637), (94, 52640), (105, 52736),

Gene: JalFarm20_103 Start: 53760, Stop: 54446, Start Num: 38

Candidate Starts for JalFarm20_103:

(Start: 38 @53760 has 114 MA's), (Start: 39 @53766 has 1 MA's), (75, 54072), (84, 54159), (89, 54180), (106, 54306), (116, 54372),

Gene: Jalleen_73 Start: 43925, Stop: 44596, Start Num: 38

Candidate Starts for Jalleen_73:

(Start: 38 @43925 has 114 MA's), (41, 43946), (55, 44039), (70, 44198), (71, 44204), (77, 44252), (78, 44255), (93, 44357), (104, 44441),

Gene: Jamie19_60 Start: 38864, Stop: 39529, Start Num: 38

Candidate Starts for Jamie19_60:

(Start: 38 @38864 has 114 MA's), (Start: 39 @38870 has 1 MA's), (48, 38927), (59, 39029), (63, 39092), (64, 39101), (118, 39497),

Gene: Journey_61 Start: 39852, Stop: 40517, Start Num: 38

Candidate Starts for Journey_61:

(Start: 38 @39852 has 114 MA's), (Start: 39 @39858 has 1 MA's), (48, 39915), (59, 40017), (63, 40080), (64, 40089), (73, 40152), (118, 40485),

Gene: Karhdo_88 Start: 49495, Stop: 50181, Start Num: 38

Candidate Starts for Karhdo_88:

(Start: 38 @49495 has 114 MA's), (Start: 39 @49501 has 1 MA's), (75, 49807), (84, 49894), (89, 49915), (106, 50041), (116, 50107),

Gene: Kevin1_66 Start: 39850, Stop: 40515, Start Num: 38

Candidate Starts for Kevin1_66:

(Start: 38 @39850 has 114 MA's), (Start: 39 @39856 has 1 MA's), (48, 39913), (59, 40015), (63, 40078), (64, 40087), (89, 40270),

Gene: Krakatau_86 Start: 47453, Stop: 48139, Start Num: 38

Candidate Starts for Krakatau_86:

(Start: 38 @47453 has 114 MA's), (Start: 39 @47459 has 1 MA's), (75, 47765), (84, 47852), (89, 47873), (106, 47999), (116, 48065),

Gene: Lamberg_66 Start: 42494, Stop: 43165, Start Num: 38

Candidate Starts for Lamberg_66:

(Start: 38 @42494 has 114 MA's), (41, 42515), (55, 42608), (70, 42767), (71, 42773), (78, 42824), (93, 42926), (104, 43010),

Gene: Leozinho_90 Start: 49140, Stop: 49826, Start Num: 38

Candidate Starts for Leozinho_90:

(Start: 38 @49140 has 114 MA's), (Start: 39 @49146 has 1 MA's), (75, 49452), (84, 49539), (89, 49560), (106, 49686), (116, 49752),

Gene: Llij_89 Start: 50685, Stop: 51371, Start Num: 38

Candidate Starts for Llij_89:

(Start: 38 @50685 has 114 MA's), (Start: 39 @50691 has 1 MA's), (75, 50997), (84, 51084), (89, 51105), (106, 51231), (116, 51297),

Gene: LordFarquaad_72 Start: 45626, Stop: 46297, Start Num: 38

Candidate Starts for LordFarquaad_72:

(9, 45080), (11, 45110), (19, 45368), (24, 45434), (Start: 38 @45626 has 114 MA's), (49, 45701), (55, 45740), (70, 45899), (71, 45905), (77, 45953), (78, 45956), (93, 46058), (104, 46142),

Gene: Magsby_67 Start: 41529, Stop: 42194, Start Num: 38

Candidate Starts for Magsby_67:

(Start: 38 @41529 has 114 MA's), (Start: 39 @41535 has 1 MA's), (48, 41592), (59, 41694), (63, 41757), (64, 41766), (73, 41829), (89, 41949), (104, 42048), (105, 42063), (118, 42162),

Gene: MakCheese_80 Start: 49832, Stop: 50503, Start Num: 38

Candidate Starts for MakCheese_80:

(19, 49574), (Start: 38 @49832 has 114 MA's), (49, 49907), (53, 49931), (55, 49946), (70, 50105), (77, 50159), (78, 50162), (93, 50264),

Gene: Marker_98 Start: 52855, Stop: 53529, Start Num: 38

Candidate Starts for Marker_98:

(20, 52630), (22, 52642), (26, 52681), (Start: 38 @52855 has 114 MA's), (Start: 39 @52861 has 1 MA's), (75, 53167), (84, 53254), (89, 53275), (106, 53401), (116, 53467), (119, 53518),

Gene: Matteo_63 Start: 41739, Stop: 42410, Start Num: 38

Candidate Starts for Matteo_63:

(Start: 38 @41739 has 114 MA's), (41, 41760), (55, 41853), (70, 42012), (71, 42018), (77, 42066), (78, 42069), (93, 42171), (104, 42255),

Gene: Melville_73 Start: 41138, Stop: 41803, Start Num: 38

Candidate Starts for Melville_73:

(Start: 38 @41138 has 114 MA's), (Start: 39 @41144 has 1 MA's), (48, 41201), (59, 41303), (63, 41366), (64, 41375), (73, 41438), (89, 41558), (104, 41657), (105, 41672), (118, 41771),

Gene: MichelleMyBell_65 Start: 39827, Stop: 40492, Start Num: 38

Candidate Starts for MichelleMyBell_65:

(Start: 38 @39827 has 114 MA's), (Start: 39 @39833 has 1 MA's), (48, 39890), (59, 39992), (63, 40055), (64, 40064), (118, 40460),

Gene: MisterCuddles_92 Start: 52108, Stop: 52794, Start Num: 38

Candidate Starts for MisterCuddles_92:

(Start: 38 @52108 has 114 MA's), (Start: 39 @52114 has 1 MA's), (75, 52420), (84, 52507), (89, 52528), (106, 52654), (116, 52720),

Gene: Mocha12_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Mocha12_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: MortyNRick_93 Start: 52169, Stop: 52846, Start Num: 38

Candidate Starts for MortyNRick_93:

(Start: 38 @52169 has 114 MA's), (72, 52442), (73, 52454), (79, 52496), (82, 52523), (94, 52598), (99, 52640), (105, 52697), (112, 52766),

Gene: Nenae_65 Start: 40186, Stop: 40851, Start Num: 38

Candidate Starts for Nenae_65:

(Start: 38 @40186 has 114 MA's), (Start: 39 @40192 has 1 MA's), (48, 40249), (59, 40351), (63, 40414), (64, 40423), (118, 40819),

Gene: Nettuno_67 Start: 42403, Stop: 43074, Start Num: 38

Candidate Starts for Nettuno_67:

(5, 41794), (9, 41857), (11, 41887), (19, 42145), (24, 42211), (Start: 38 @42403 has 114 MA's), (49, 42478), (55, 42517), (70, 42676), (71, 42682), (77, 42730), (78, 42733), (93, 42835), (104, 42919),

Gene: Oksu_96 Start: 53862, Stop: 54548, Start Num: 38

Candidate Starts for Oksu_96:

(Start: 38 @53862 has 114 MA's), (Start: 39 @53868 has 1 MA's), (75, 54174), (84, 54261), (89, 54282), (106, 54408), (116, 54474),

Gene: Panchino_61 Start: 41092, Stop: 41757, Start Num: 38

Candidate Starts for Panchino_61:

(Start: 38 @41092 has 114 MA's), (Start: 39 @41098 has 1 MA's), (48, 41155), (59, 41257), (63, 41320), (64, 41329), (118, 41725),

Gene: Parmesanjohn_68 Start: 41587, Stop: 42252, Start Num: 38

Candidate Starts for Parmesanjohn_68:

(Start: 38 @41587 has 114 MA's), (Start: 39 @41593 has 1 MA's), (48, 41650), (59, 41752), (63, 41815), (64, 41824), (73, 41887), (89, 42007), (104, 42106), (105, 42121), (118, 42220),

Gene: Phabuloso_105 Start: 53390, Stop: 54067, Start Num: 38

Candidate Starts for Phabuloso_105:

(Start: 38 @53390 has 114 MA's), (72, 53663), (73, 53675), (79, 53717), (82, 53744), (94, 53819), (99, 53861), (105, 53918), (112, 53987),

Gene: PhancyPhin_65 Start: 40312, Stop: 40977, Start Num: 38

Candidate Starts for PhancyPhin_65:

(Start: 38 @40312 has 114 MA's), (Start: 39 @40318 has 1 MA's), (48, 40375), (59, 40477), (63, 40540), (64, 40549), (118, 40945),

Gene: Phasih_90 Start: 50463, Stop: 51149, Start Num: 38

Candidate Starts for Phasih_90:

(Start: 38 @50463 has 114 MA's), (Start: 39 @50469 has 1 MA's), (75, 50775), (84, 50862), (89, 50883), (106, 51009), (116, 51075),

Gene: Philonius_68 Start: 41752, Stop: 42417, Start Num: 38

Candidate Starts for Philonius_68:

(Start: 38 @41752 has 114 MA's), (Start: 39 @41758 has 1 MA's), (48, 41815), (59, 41917), (63, 41980), (64, 41989), (118, 42385),

Gene: Phloss_66 Start: 40994, Stop: 41659, Start Num: 38

Candidate Starts for Phloss_66:

(Start: 38 @40994 has 114 MA's), (Start: 39 @41000 has 1 MA's), (48, 41057), (59, 41159), (63, 41222), (64, 41231), (73, 41294), (89, 41414), (104, 41513), (105, 41528), (118, 41627),

Gene: Phrann_64 Start: 42729, Stop: 43394, Start Num: 38

Candidate Starts for Phrann_64:

(Start: 38 @42729 has 114 MA's), (Start: 39 @42735 has 1 MA's), (48, 42792), (59, 42894), (63, 42957), (64, 42966), (118, 43362),

Gene: Pickett_67 Start: 42698, Stop: 43369, Start Num: 38

Candidate Starts for Pickett_67:

(25, 42527), (Start: 38 @42698 has 114 MA's), (49, 42773), (55, 42812), (70, 42971), (77, 43025), (78, 43028), (93, 43130),

Gene: Pipsqueaks_69 Start: 41565, Stop: 42230, Start Num: 38

Candidate Starts for Pipsqueaks_69:

(Start: 38 @41565 has 114 MA's), (Start: 39 @41571 has 1 MA's), (48, 41628), (59, 41730), (63, 41793), (64, 41802), (73, 41865), (89, 41985), (104, 42084), (105, 42099), (118, 42198),

Gene: Plumbus_93 Start: 49449, Stop: 50135, Start Num: 38

Candidate Starts for Plumbus_93:

(Start: 38 @49449 has 114 MA's), (Start: 39 @49455 has 1 MA's), (75, 49761), (84, 49848), (89, 49869), (106, 49995), (116, 50061),

Gene: Posh_77 Start: 50978, Stop: 51649, Start Num: 38

Candidate Starts for Posh_77:

(17, 50663), (28, 50885), (Start: 38 @50978 has 114 MA's), (55, 51092), (70, 51251), (77, 51305), (78, 51308), (93, 51410), (94, 51413), (105, 51509),

Gene: Purgamenstris_65 Start: 40184, Stop: 40849, Start Num: 38

Candidate Starts for Purgamenstris_65:

(Start: 38 @40184 has 114 MA's), (Start: 39 @40190 has 1 MA's), (48, 40247), (59, 40349), (63, 40412), (64, 40421), (118, 40817),

Gene: Pytheas_81 Start: 52204, Stop: 52875, Start Num: 38

Candidate Starts for Pytheas_81:

(10, 51664), (12, 51694), (14, 51712), (28, 52111), (Start: 38 @52204 has 114 MA's), (55, 52318), (70, 52477), (77, 52531), (78, 52534), (93, 52636), (94, 52639), (105, 52735),

Gene: REQ3_30 Start: 13527, Stop: 14201, Start Num: 37

Candidate Starts for REQ3_30:

(35, 13521), (37, 13527), (42, 13548), (46, 13575), (63, 13755), (65, 13782), (77, 13854), (91, 13947), (93, 13959), (101, 14007), (105, 14055), (109, 14091), (112, 14121), (113, 14124),

Gene: RavenCo17_70 Start: 47726, Stop: 48397, Start Num: 38

Candidate Starts for RavenCo17_70:

(19, 47468), (21, 47510), (23, 47528), (Start: 38 @47726 has 114 MA's), (41, 47747), (49, 47801), (55, 47840), (70, 47999), (77, 48053), (78, 48056), (93, 48158), (116, 48338),

Gene: Raymond7_58 Start: 39972, Stop: 40637, Start Num: 38

Candidate Starts for Raymond7_58:

(Start: 38 @39972 has 114 MA's), (Start: 39 @39978 has 1 MA's), (48, 40035), (59, 40137), (63, 40200), (64, 40209), (118, 40605),

Gene: Rebel_61 Start: 38160, Stop: 38825, Start Num: 38

Candidate Starts for Rebel_61:

(Start: 38 @38160 has 114 MA's), (Start: 39 @38166 has 1 MA's), (48, 38223), (59, 38325), (63, 38388), (64, 38397), (89, 38580),

Gene: Redi_64 Start: 40183, Stop: 40848, Start Num: 38

Candidate Starts for Redi_64:

(Start: 38 @40183 has 114 MA's), (Start: 39 @40189 has 1 MA's), (48, 40246), (59, 40348), (63, 40411), (64, 40420), (118, 40816),

Gene: Renaud18_102 Start: 52412, Stop: 53098, Start Num: 38

Candidate Starts for Renaud18_102:

(Start: 38 @52412 has 114 MA's), (Start: 39 @52418 has 1 MA's), (75, 52724), (84, 52811), (89, 52832), (106, 52958), (116, 53024),

Gene: Rialto_98 Start: 52702, Stop: 53388, Start Num: 38

Candidate Starts for Rialto_98:

(Start: 38 @52702 has 114 MA's), (Start: 39 @52708 has 1 MA's), (75, 53014), (84, 53101), (89, 53122), (106, 53248), (116, 53314),

Gene: Rubeelu_63 Start: 39341, Stop: 40006, Start Num: 38

Candidate Starts for Rubeelu_63:

(Start: 38 @39341 has 114 MA's), (Start: 39 @39347 has 1 MA's), (48, 39404), (59, 39506), (63, 39569), (64, 39578), (89, 39761),

Gene: Ruby_89 Start: 52109, Stop: 52795, Start Num: 38

Candidate Starts for Ruby_89:

(Start: 38 @52109 has 114 MA's), (Start: 39 @52115 has 1 MA's), (75, 52421), (84, 52508), (89, 52529), (106, 52655), (116, 52721),

Gene: SG4_94 Start: 52945, Stop: 53631, Start Num: 38

Candidate Starts for SG4_94:

(Start: 38 @52945 has 114 MA's), (Start: 39 @52951 has 1 MA's), (75, 53257), (84, 53344), (89, 53365), (106, 53491), (116, 53557),

Gene: Sahara_68 Start: 43019, Stop: 43690, Start Num: 38

Candidate Starts for Sahara_68:

(Start: 38 @43019 has 114 MA's), (41, 43040), (55, 43133), (70, 43292), (71, 43298), (77, 43346), (78, 43349), (93, 43451), (104, 43535),

Gene: Savage_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Savage_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Schnauzer_69 Start: 41587, Stop: 42252, Start Num: 38

Candidate Starts for Schnauzer_69:

(Start: 38 @41587 has 114 MA's), (Start: 39 @41593 has 1 MA's), (48, 41650), (59, 41752), (63, 41815), (64, 41824), (73, 41887), (89, 42007), (104, 42106), (105, 42121), (118, 42220),

Gene: Scitech_63 Start: 40990, Stop: 41655, Start Num: 38

Candidate Starts for Scitech_63:

(Start: 38 @40990 has 114 MA's), (Start: 39 @40996 has 1 MA's), (48, 41053), (59, 41155), (63, 41218), (64, 41227), (73, 41290), (89, 41410), (104, 41509), (105, 41524), (118, 41623),

Gene: ShrimpFriedEgg_65 Start: 40183, Stop: 40848, Start Num: 38

Candidate Starts for ShrimpFriedEgg_65:

(Start: 38 @40183 has 114 MA's), (Start: 39 @40189 has 1 MA's), (48, 40246), (59, 40348), (63, 40411), (64, 40420), (118, 40816),

Gene: ShroomBoi_91 Start: 51496, Stop: 52182, Start Num: 38

Candidate Starts for ShroomBoi_91:

(Start: 38 @51496 has 114 MA's), (Start: 39 @51502 has 1 MA's), (75, 51808), (84, 51895), (89, 51916), (106, 52042), (116, 52108),

Gene: Shweta_63 Start: 40547, Stop: 41212, Start Num: 38

Candidate Starts for Shweta_63:

(Start: 38 @40547 has 114 MA's), (Start: 39 @40553 has 1 MA's), (48, 40610), (59, 40712), (63, 40775), (64, 40784), (118, 41180),

Gene: Silvafighter_70 Start: 41130, Stop: 41795, Start Num: 38

Candidate Starts for Silvafighter_70:

(Start: 38 @41130 has 114 MA's), (Start: 39 @41136 has 1 MA's), (48, 41193), (59, 41295), (63, 41358), (64, 41367), (73, 41430), (89, 41550), (104, 41649), (105, 41664), (118, 41763),

Gene: SilverChicken_101 Start: 52299, Stop: 52985, Start Num: 38

Candidate Starts for SilverChicken_101:

(Start: 38 @52299 has 114 MA's), (Start: 39 @52305 has 1 MA's), (75, 52611), (84, 52698), (89, 52719), (106, 52845), (116, 52911),

Gene: Silvy_64 Start: 42220, Stop: 42885, Start Num: 38

Candidate Starts for Silvy_64:

(Start: 38 @42220 has 114 MA's), (Start: 39 @42226 has 1 MA's), (48, 42283), (59, 42385), (63, 42448), (64, 42457), (73, 42520), (89, 42640), (104, 42739), (105, 42754), (118, 42853),

Gene: SkinnyPete_64 Start: 41335, Stop: 42000, Start Num: 38

Candidate Starts for SkinnyPete_64:

(Start: 38 @41335 has 114 MA's), (Start: 39 @41341 has 1 MA's), (48, 41398), (59, 41500), (63, 41563), (64, 41572), (118, 41968),

Gene: Smurph_68 Start: 41587, Stop: 42252, Start Num: 38

Candidate Starts for Smurph_68:

(Start: 38 @41587 has 114 MA's), (Start: 39 @41593 has 1 MA's), (48, 41650), (59, 41752), (63, 41815), (64, 41824), (73, 41887), (89, 42007), (104, 42106), (105, 42121), (118, 42220),

Gene: Snekmaggedon_60 Start: 38870, Stop: 39529, Start Num: 39

Candidate Starts for Snekmaggedon_60:

(Start: 38 @38864 has 114 MA's), (Start: 39 @38870 has 1 MA's), (48, 38927), (59, 39029), (63, 39092), (64, 39101), (118, 39497),

Gene: SoilAssassin_69 Start: 45644, Stop: 46315, Start Num: 38

Candidate Starts for SoilAssassin_69:

(9, 45098), (11, 45128), (19, 45386), (24, 45452), (Start: 38 @45644 has 114 MA's), (49, 45719), (55, 45758), (70, 45917), (71, 45923), (77, 45971), (78, 45974), (93, 46076), (104, 46160),

Gene: Spartacus_100 Start: 54815, Stop: 55489, Start Num: 38

Candidate Starts for Spartacus_100:

(Start: 38 @54815 has 114 MA's), (Start: 39 @54821 has 1 MA's), (75, 55127), (84, 55214), (89, 55235), (106, 55361), (116, 55427), (119, 55478),

Gene: Spinach_64 Start: 40183, Stop: 40848, Start Num: 38

Candidate Starts for Spinach_64:

(Start: 38 @40183 has 114 MA's), (Start: 39 @40189 has 1 MA's), (48, 40246), (59, 40348), (63, 40411), (64, 40420), (118, 40816),

Gene: SpongeBob_60 Start: 38864, Stop: 39529, Start Num: 38

Candidate Starts for SpongeBob_60:

(Start: 38 @38864 has 114 MA's), (Start: 39 @38870 has 1 MA's), (48, 38927), (59, 39029), (63, 39092), (64, 39101), (118, 39497),

Gene: Sprinklemunch_78 Start: 49691, Stop: 50362, Start Num: 38

Candidate Starts for Sprinklemunch_78:

(6, 49082), (18, 49388), (19, 49439), (Start: 38 @49691 has 114 MA's), (49, 49766), (55, 49805), (60, 49886), (70, 49964), (77, 50018), (78, 50021), (93, 50123),

Gene: Sproutie_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Sproutie_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: SuperGrey_94 Start: 53947, Stop: 54633, Start Num: 38

Candidate Starts for SuperGrey_94:

(Start: 38 @53947 has 114 MA's), (Start: 39 @53953 has 1 MA's), (75, 54259), (84, 54346), (89, 54367), (106, 54493), (116, 54559),

Gene: Tapioca_66 Start: 42092, Stop: 42757, Start Num: 38

Candidate Starts for Tapioca_66:

(Start: 38 @42092 has 114 MA's), (Start: 39 @42098 has 1 MA's), (48, 42155), (59, 42257), (63, 42320), (64, 42329), (73, 42392), (89, 42512), (104, 42611), (105, 42626), (118, 42725),

Gene: TinyDot_64 Start: 39132, Stop: 39797, Start Num: 38

Candidate Starts for TinyDot_64:

(Start: 38 @39132 has 114 MA's), (40, 39150), (44, 39177), (45, 39180), (47, 39192), (50, 39213), (55, 39240), (56, 39249), (60, 39321), (63, 39357), (69, 39390), (70, 39399), (77, 39453), (78, 39456), (80, 39486), (81, 39489), (82, 39495), (85, 39525), (87, 39531), (93, 39558), (94, 39561), (96, 39585), (98, 39594), (103, 39621), (104, 39642), (108, 39684), (112, 39720), (114, 39729), (116, 39738), (117, 39741),

Gene: Tortoise12_68 Start: 40576, Stop: 41241, Start Num: 38

Candidate Starts for Tortoise12_68:

(Start: 38 @40576 has 114 MA's), (Start: 39 @40582 has 1 MA's), (48, 40639), (59, 40741), (63, 40804), (64, 40813), (73, 40876), (89, 40996), (104, 41095), (105, 41110), (118, 41209),

Gene: Totinger_96 Start: 52215, Stop: 52901, Start Num: 38

Candidate Starts for Totinger_96:

(Start: 38 @52215 has 114 MA's), (Start: 39 @52221 has 1 MA's), (75, 52527), (84, 52614), (89, 52635), (106, 52761), (116, 52827),

Gene: TuertoX_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for TuertoX_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Vasanti_68 Start: 44621, Stop: 45292, Start Num: 38

Candidate Starts for Vasanti_68:

(7, 44054), (8, 44066), (13, 44126), (Start: 38 @44621 has 114 MA's), (55, 44735), (70, 44894), (77, 44948), (78, 44951), (93, 45053), (94, 45056), (105, 45152),

Gene: Whiteclaw_70 Start: 43985, Stop: 44656, Start Num: 38

Candidate Starts for Whiteclaw_70:

(Start: 38 @43985 has 114 MA's), (41, 44006), (55, 44099), (70, 44258), (71, 44264), (78, 44315), (93, 44417), (104, 44501),

Gene: Whitney_99 Start: 53822, Stop: 54451, Start Num: 38

Candidate Starts for Whitney_99:

(31, 53789), (Start: 38 @53822 has 114 MA's), (48, 53882), (56, 53933), (62, 54026), (63, 54035), (78, 54137), (99, 54287), (102, 54299), (107, 54356), (111, 54410), (115, 54431),

Gene: Wrigley_79 Start: 50561, Stop: 51232, Start Num: 38

Candidate Starts for Wrigley_79:

(17, 50246), (28, 50468), (Start: 38 @50561 has 114 MA's), (55, 50675), (70, 50834), (77, 50888), (78, 50891), (93, 50993), (94, 50996), (105, 51092),

Gene: Xeno_65 Start: 40252, Stop: 40917, Start Num: 38

Candidate Starts for Xeno_65:

(Start: 38 @40252 has 114 MA's), (Start: 39 @40258 has 1 MA's), (48, 40315), (59, 40417), (63, 40480), (64, 40489), (73, 40552), (118, 40885),

Gene: Xerxes_68 Start: 41584, Stop: 42249, Start Num: 38

Candidate Starts for Xerxes_68:

(Start: 38 @41584 has 114 MA's), (Start: 39 @41590 has 1 MA's), (48, 41647), (59, 41749), (63, 41812), (64, 41821), (73, 41884), (89, 42004), (104, 42103), (105, 42118), (118, 42217),

Gene: Yeet412_68 Start: 44448, Stop: 45119, Start Num: 38

Candidate Starts for Yeet412_68:

(5, 43839), (9, 43902), (11, 43932), (19, 44190), (24, 44256), (Start: 38 @44448 has 114 MA's), (49, 44523), (55, 44562), (70, 44721), (71, 44727), (77, 44775), (78, 44778), (93, 44880), (104, 44964),

Gene: Yeezy_81 Start: 49176, Stop: 49838, Start Num: 38

Candidate Starts for Yeezy_81:

(1, 48276), (2, 48327), (3, 48405), (4, 48426), (16, 48828), (28, 49083), (Start: 38 @49176 has 114 MA's), (48, 49245), (51, 49260), (57, 49308), (61, 49368), (66, 49434), (75, 49488), (76, 49491), (78, 49506), (86, 49578), (93, 49608), (105, 49707), (116, 49788),

Gene: Zapner_100 Start: 50161, Stop: 50847, Start Num: 38

Candidate Starts for Zapner_100:

(Start: 38 @50161 has 114 MA's), (Start: 39 @50167 has 1 MA's), (75, 50473), (84, 50560), (89, 50581), (106, 50707), (116, 50773),

Gene: Zodiariah_67 Start: 49214, Stop: 49885, Start Num: 38

Candidate Starts for Zodiariah_67:

(15, 48749), (19, 48959), (Start: 38 @49214 has 114 MA's), (49, 49289), (55, 49328), (70, 49487), (77, 49541), (79, 49556), (93, 49646),