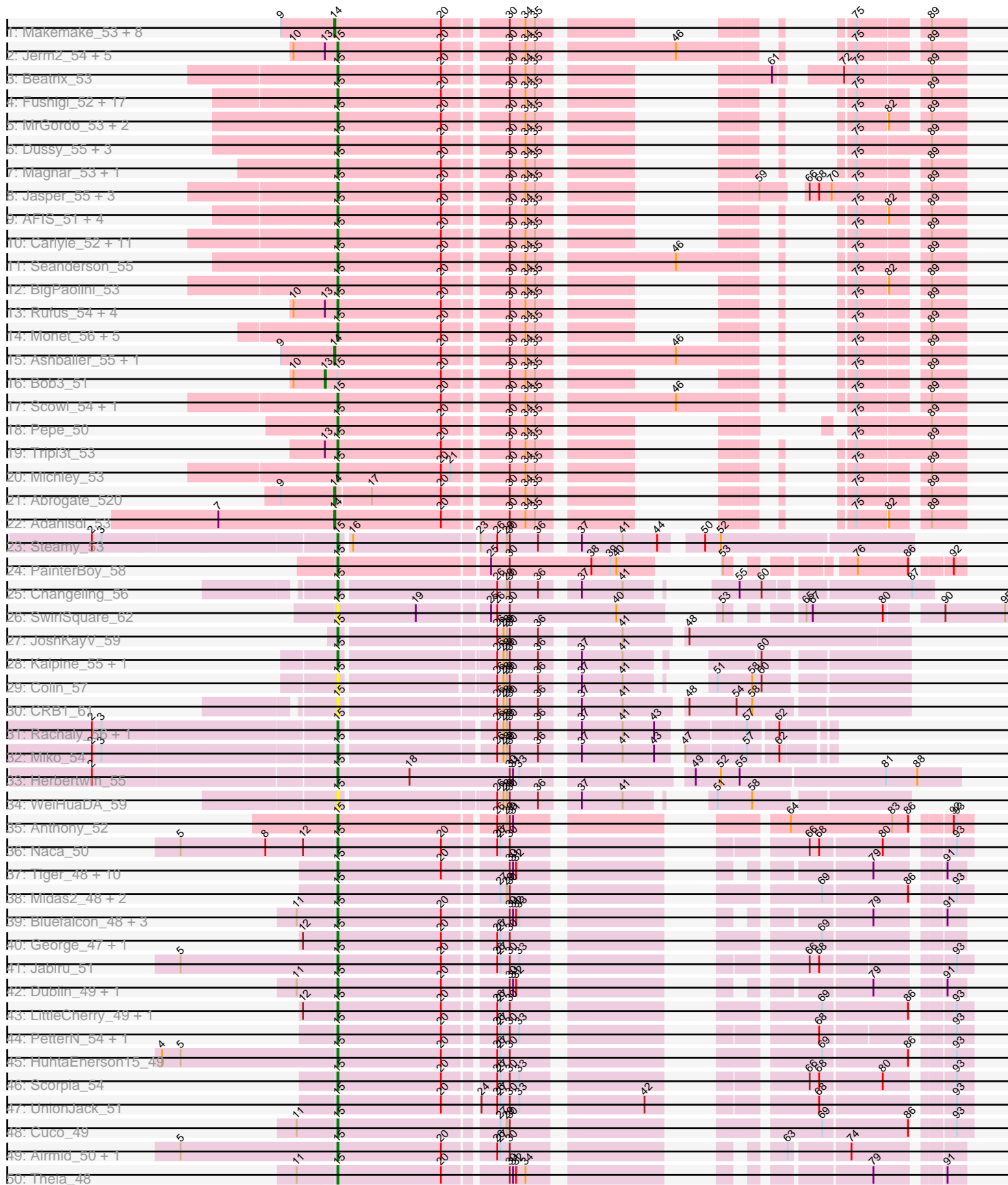


Pham 163410



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 163410 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163410 has 144 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Makemake_53, Smairt_55, Perseus_53, Zeeculate_51, Violet_51, Aeneas_55, Pelly_53, Mule_50, PhrostyMug_52
- Track 2 : Jerm2_54, PSullivan_53, Rohr_54, BigMau_54, Pita2_56, HermioneGrange_53
- Track 3 : Beatrix_53
- Track 4 : Fushigi_52, BluSpix_53, PacerPaul_53, IgnatiusPatJac_54, Froghopper_51, Ajay_55, Francis47_52, MPlant7149_52, Trouble_56, Gompeii16_52, DrFeelGood_51, Applejack_49, Alvin_53, Bones_54, Agaliana_49, Hami1_46, Bircsak_52, Acme_55
- Track 5 : MrGordo_53, Rutherferd_55, Big3_53
- Track 6 : Dussy_55, Abbyshoes_56, Espresso_53, Kenmech_57
- Track 7 : Magnar_53, Blue_53
- Track 8 : Jasper_55, PherrisBueller_53, Dreamboat_55, Petruchio_53
- Track 9 : AFIS_51, Lesedi_50, SpikeBT_53, Crispicous1_51, GageAP_54
- Track 10 : Carlyle_52, Wheeler_54, Rhynn_52, Manatee_55, Chanagan_50, Payneful_52, Anglerfish_55, Marchy_47, Teodoridan_52, Zeuska_52, Niza_56, Euphoria_51
- Track 11 : Seanderson_55
- Track 12 : BigPaolini_53
- Track 13 : Rufus_54, Arlo_51, Bruns_52, Sibs6_55, TwoPeat_53
- Track 14 : Monet_56, Graduation_57, Eyeball_55, Treddle_54, Edtherson_53, Cueyllyss_55
- Track 15 : Ashballer_55, JC27_55
- Track 16 : Bob3_51
- Track 17 : Scowl_54, Barriga_54
- Track 18 : Pepe_50
- Track 19 : Tripl3t_53
- Track 20 : Michley_53
- Track 21 : Abrogate_520
- Track 22 : Adahisdi_53
- Track 23 : Steamy_53
- Track 24 : PainterBoy_58
- Track 25 : Changeling_56
- Track 26 : SwirlSquare_62
- Track 27 : JoshKayV_59
- Track 28 : Kalpine_55, Trixie_55
- Track 29 : Colin_57

- Track 30 : CRB1_61
- Track 31 : Rachaly_56, Lokk_54
- Track 32 : Miko_54
- Track 33 : Herbertwm_55
- Track 34 : WeiHuaDA_59
- Track 35 : Anthony_52
- Track 36 : Naca_50
- Track 37 : Tiger_48, Jovo_49, Aragog_48, Phlorence_47, Conspiracy_49, AgentM_48, PickleBack_49, Lev2_49, Archetta_48, ForGetIt_49, Discoknowium_47
- Track 38 : Midas2_48, Coog_48, Micasa_49
- Track 39 : Bluefalcon_48, SydNat_52, Ghoulboy_52, Zolita_51
- Track 40 : George_47, Milcery_49
- Track 41 : Jabiru_51
- Track 42 : Dublin_49, MarysWell_49
- Track 43 : LittleCherry_49, Bonamassa_49
- Track 44 : PetterN_54, Chadwick_53
- Track 45 : HuhtaEnerson15_49
- Track 46 : Scorpia_54
- Track 47 : UnionJack_51
- Track 48 : Cuco_49
- Track 49 : Airmid_50, EITiger69_52
- Track 50 : Theia_48
- Track 51 : Benedict_53
- Track 52 : Dixon_55
- Track 53 : Phillis_55
- Track 54 : Maminaiaina_56, BogosyJay_56
- Track 55 : Charm_55, DreamTeam1_55

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

The start number called the most often in the published annotations is 15, it was called in 114 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_51, Abbyshoes_56, Acme_55, Agaliana_49, AgentM_48, Airmid_50, Ajay_55, Alvin_53, Anglerfish_55, Anthony_52, Applejack_49, Aragog_48, Archetta_48, Arlo_51, Barriga_54, Beatrix_53, Benedict_53, Big3_53, BigMau_54, BigPaolini_53, Bircsak_52, BluSpix_53, Blue_53, Bluefalcon_48, BogosyJay_56, Bonamassa_49, Bones_54, Bruns_52, CRB1_61, Carlyle_52, Chadwick_53, Chanagan_50, Changeling_56, Charm_55, Colin_57, Conspiracy_49, Coog_48, Crispicious1_51, Cuco_49, Cueylyss_55, Discoknowium_47, Dixon_55, DrFeelGood_51, DreamTeam1_55, Dreamboat_55, Dublin_49, Dussy_55, Edtherson_53, EITiger69_52, Espresso_53, Euphoria_51, Eyeball_55, ForGetIt_49, Francis47_52, Froghopper_51, Fushigi_52, GageAP_54, George_47, Ghoulboy_52, Gompeii16_52, Graduation_57, Hami1_46, Herbertwm_55, HermioneGrange_53, HuhtaEnerson15_49, IgnatiusPatJac_54, Jabiru_51, Jasper_55, Jerm2_54, JoshKayV_59, Jovo_49, Kalpine_55, Kenmech_57, Lesedi_50, Lev2_49, LittleCherry_49, Lokk_54, MPlant7149_52, Magnar_53, Maminaiaina_56, Manatee_55, Marchy_47, MarysWell_49, Micasa_49, Michley_53, Midas2_48, Miko_54, Milcery_49, Monet_56, MrGordo_53, Naca_50, Niza_56, PSullivan_53,

PacerPaul_53, PainterBoy_58, Payneful_52, Pepe_50, Petruccio_53, PetterN_54, PherrisBueller_53, Phillis_55, Phlorence_47, PickleBack_49, Pita2_56, Rachaly_56, Rhynn_52, Rohr_54, Rufus_54, Rutherford_55, Scorpia_54, Scowl_54, Seanderson_55, Sibs6_55, SpikeBT_53, Steamy_53, SwirlSquare_62, SydNat_52, Teodoridan_52, Theia_48, Tiger_48, Treddle_54, Trip13t_53, Trixie_55, Trouble_56, TwoPeat_53, UnionJack_51, WeiHuaDA_59, Wheeler_54, Zeuska_52, Zolita_51,

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

- Bob3_51,

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

- Abrogate_520, Adahisdi_53, Aeneas_55, Ashballer_55, JC27_55, Makemake_53, Mule_50, Pelly_53, Perseus_53, PhrostyMug_52, Smairt_55, Violet_51, Zeeculate_51,

Summary by start number:

Start 13:

- Found in 13 of 144 (9.0%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Bob3_51 (A1),

Start 14:

- Found in 13 of 144 (9.0%) of genes in pham
- Manual Annotations of this start: 12 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abrogate_520 (A1), Adahisdi_53 (A1), Aeneas_55 (A1), Ashballer_55 (A1), JC27_55 (A1), Makemake_53 (A1), Mule_50 (A1), Pelly_53 (A1), Perseus_53 (A1), PhrostyMug_52 (A1), Smairt_55 (A1), Violet_51 (A1), Zeeculate_51 (A1),

Start 15:

- Found in 131 of 144 (91.0%) of genes in pham
- Manual Annotations of this start: 114 of 127
- Called 99.2% of time when present
- Phage (with cluster) where this start called: AFIS_51 (A1), Abbyshoes_56 (A1), Acme_55 (A1), Agaliana_49 (A1), AgentM_48 (A5), Airmid_50 (A5), Ajay_55 (A1), Alvin_53 (A1), Anglerfish_55 (A1), Anthony_52 (A20), Applejack_49 (A1), Aragog_48 (A5), Archetta_48 (A5), Arlo_51 (A1), Barriga_54 (A1), Beatrix_53 (A1), Benedict_53 (A5), Big3_53 (A1), BigMau_54 (A1), BigPaolini_53 (A1), Bircsak_52 (A1), BluSpix_53 (A1), Blue_53 (A1), Bluefalcon_48 (A5), BogosyJay_56 (A9), Bonamassa_49 (A5), Bones_54 (A1), Bruns_52 (A1), CRB1_61 (A2), Carlyle_52 (A1), Chadwick_53 (A5), Chanagan_50 (A1), Changeling_56 (A2), Charm_55 (A9), Colin_57 (A2), Conspiracy_49 (A5), Coog_48 (A5), Crispicous1_51 (A1), Cuco_49 (A5), Cueylyss_55 (A1), Discoknowium_47 (A5), Dixon_55 (A8), DrFeelGood_51 (A1), DreamTeam1_55 (A9), Dreamboat_55 (A1), Dublin_49 (A5), Dussy_55 (A1), Edtherson_53 (A1), ElTiger69_52 (A5), Espresso_53 (A1), Euphoria_51 (A1), Eyeball_55 (A1), ForGetIt_49 (A5), Francis47_52 (A1), FrogHopper_51 (A1), Fushigi_52 (A1), GageAP_54 (A1), George_47 (A5), Ghouboy_52 (A5), Gompeii16_52 (A1), Graduation_57 (A1), Hami1_46 (A1), Herbertwm_55 (A2), HermioneGrange_53 (A1), HuhtaEnerson15_49 (A5), IgnatiusPatJac_54 (A1), Jabiru_51 (A5), Jasper_55 (A1), Jerm2_54 (A1), JoshKayV_59 (A2), Jovo_49 (A5),

Kalpine_55 (A2), Kenmech_57 (A1), Lesedi_50 (A1), Lev2_49 (A5), LittleCherry_49 (A5), Lokk_54 (A2), MPlant7149_52 (A1), Magnar_53 (A1), Maminiaina_56 (A9), Manatee_55 (A1), Marchy_47 (A1), MarysWell_49 (A5), Micasa_49 (A5), Michley_53 (A1), Midas2_48 (A5), Miko_54 (A2), Milcery_49 (A5), Monet_56 (A1), MrGordo_53 (A1), Naca_50 (A5), Niza_56 (A1), PSullivan_53 (A1), PacerPaul_53 (A1), PainterBoy_58 (A16), Payneful_52 (A1), Pepe_50 (A1), Petruccio_53 (A1), PetterN_54 (A5), PherrisBueller_53 (A1), Phillis_55 (A8), Phlorence_47 (A5), PickleBack_49 (A5), Pita2_56 (A1), Rachaly_56 (A2), Rhynn_52 (A1), Rohr_54 (A1), Rufus_54 (A1), Rutherferd_55 (A1), Scorpia_54 (A5), Scowl_54 (A1), Seanderson_55 (A1), Sibs6_55 (A1), SpikeBT_53 (A1), Steamy_53 (A12), SwirlSquare_62 (A2), SydNat_52 (A5), Teodoridan_52 (A1), Theia_48 (A5), Tiger_48 (A5), Treddle_54 (A1), Trip13t_53 (A1), Trixie_55 (A2), Trouble_56 (A1), TwoPeat_53 (A1), UnionJack_51 (A5), WeiHuaDA_59 (A2), Wheeler_54 (A1), Zeuska_52 (A1), Zolita_51 (A5),

Summary by clusters:

There are 8 clusters represented in this pham: A20, A16, A12, A1, A2, A5, A9, A8,

Info for manual annotations of cluster A1:

- Start number 13 was manually annotated 1 time for cluster A1.
- Start number 14 was manually annotated 12 times for cluster A1.
- Start number 15 was manually annotated 62 times for cluster A1.

Info for manual annotations of cluster A12:

- Start number 15 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A16:

- Start number 15 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:

- Start number 15 was manually annotated 8 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 15 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A5:

- Start number 15 was manually annotated 35 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 15 was manually annotated 2 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 15 was manually annotated 4 times for cluster A9.

Gene Information:

Gene: AFIS_51 Start: 37581, Stop: 37183, Start Num: 15

Candidate Starts for AFIS_51:

(Start: 15 @37581 has 114 MA's), (20, 37482), (30, 37428), (34, 37413), (35, 37404), (75, 37269), (82, 37242), (89, 37215),

Gene: Abbysshoes_56 Start: 39189, Stop: 38779, Start Num: 15

Candidate Starts for Abbysshoes_56:

(Start: 15 @39189 has 114 MA's), (20, 39090), (30, 39036), (34, 39021), (35, 39012), (75, 38877), (89, 38811),

Gene: Abrogate_520 Start: 39189, Stop: 38791, Start Num: 14

Candidate Starts for Abrogate_520:

(9, 39240), (Start: 14 @39189 has 12 MA's), (17, 39156), (20, 39090), (30, 39036), (34, 39021), (35, 39012), (75, 38877), (89, 38823),

Gene: Acme_55 Start: 38115, Stop: 37717, Start Num: 15

Candidate Starts for Acme_55:

(Start: 15 @38115 has 114 MA's), (20, 38016), (30, 37962), (34, 37947), (35, 37938), (75, 37803), (89, 37749),

Gene: Adahisdi_53 Start: 38922, Stop: 38521, Start Num: 14

Candidate Starts for Adahisdi_53:

(7, 39033), (Start: 14 @38922 has 12 MA's), (20, 38820), (30, 38766), (34, 38751), (35, 38742), (75, 38607), (82, 38580), (89, 38553),

Gene: Aeneas_55 Start: 39139, Stop: 38738, Start Num: 14

Candidate Starts for Aeneas_55:

(9, 39190), (Start: 14 @39139 has 12 MA's), (20, 39037), (30, 38983), (34, 38968), (35, 38959), (75, 38824), (89, 38770),

Gene: Agaliana_49 Start: 35783, Stop: 35385, Start Num: 15

Candidate Starts for Agaliana_49:

(Start: 15 @35783 has 114 MA's), (20, 35684), (30, 35630), (34, 35615), (35, 35606), (75, 35471), (89, 35417),

Gene: AgentM_48 Start: 36508, Stop: 36041, Start Num: 15

Candidate Starts for AgentM_48:

(Start: 15 @36508 has 114 MA's), (20, 36409), (30, 36355), (31, 36352), (32, 36349), (79, 36112), (91, 36058),

Gene: Airmid_50 Start: 36667, Stop: 36200, Start Num: 15

Candidate Starts for Airmid_50:

(5, 36814), (Start: 15 @36667 has 114 MA's), (20, 36568), (26, 36526), (27, 36523), (30, 36514), (63, 36343), (74, 36292),

Gene: Ajay_55 Start: 39243, Stop: 38845, Start Num: 15

Candidate Starts for Ajay_55:

(Start: 15 @39243 has 114 MA's), (20, 39144), (30, 39090), (34, 39075), (35, 39066), (75, 38931), (89, 38877),

Gene: Alvin_53 Start: 38568, Stop: 38170, Start Num: 15

Candidate Starts for Alvin_53:

(Start: 15 @38568 has 114 MA's), (20, 38469), (30, 38415), (34, 38400), (35, 38391), (75, 38256), (89, 38202),

Gene: Anglerfish_55 Start: 39478, Stop: 38999, Start Num: 15

Candidate Starts for Anglerfish_55:

(Start: 15 @39478 has 114 MA's), (20, 39379), (30, 39325), (34, 39310), (35, 39301), (75, 39085), (89, 39031),

Gene: Anthony_52 Start: 35777, Stop: 35280, Start Num: 15

Candidate Starts for Anthony_52:

(Start: 15 @35777 has 114 MA's), (26, 35636), (29, 35627), (30, 35624), (31, 35621), (64, 35435), (83, 35339), (86, 35324), (92, 35297), (93, 35294),

Gene: Applejack_49 Start: 35405, Stop: 35007, Start Num: 15

Candidate Starts for Applejack_49:

(Start: 15 @35405 has 114 MA's), (20, 35306), (30, 35252), (34, 35237), (35, 35228), (75, 35093), (89, 35039),

Gene: Aragog_48 Start: 36528, Stop: 36061, Start Num: 15

Candidate Starts for Aragog_48:

(Start: 15 @36528 has 114 MA's), (20, 36429), (30, 36375), (31, 36372), (32, 36369), (79, 36132), (91, 36078),

Gene: Archetta_48 Start: 36938, Stop: 36471, Start Num: 15

Candidate Starts for Archetta_48:

(Start: 15 @36938 has 114 MA's), (20, 36839), (30, 36785), (31, 36782), (32, 36779), (79, 36542), (91, 36488),

Gene: Arlo_51 Start: 37427, Stop: 37029, Start Num: 15

Candidate Starts for Arlo_51:

(10, 37469), (Start: 13 @37439 has 1 MA's), (Start: 15 @37427 has 114 MA's), (20, 37328), (30, 37274), (34, 37259), (35, 37250), (75, 37115), (89, 37061),

Gene: Ashballer_55 Start: 39002, Stop: 38520, Start Num: 14

Candidate Starts for Ashballer_55:

(9, 39053), (Start: 14 @39002 has 12 MA's), (20, 38900), (30, 38846), (34, 38831), (35, 38822), (46, 38702), (75, 38606), (89, 38552),

Gene: Barriga_54 Start: 37755, Stop: 37276, Start Num: 15

Candidate Starts for Barriga_54:

(Start: 15 @37755 has 114 MA's), (20, 37656), (30, 37602), (34, 37587), (35, 37578), (46, 37458), (75, 37362), (89, 37308),

Gene: Beatrix_53 Start: 39461, Stop: 39000, Start Num: 15

Candidate Starts for Beatrix_53:

(Start: 15 @39461 has 114 MA's), (20, 39362), (30, 39308), (34, 39293), (35, 39284), (61, 39155), (72, 39110), (75, 39098), (89, 39032),

Gene: Benedict_53 Start: 36915, Stop: 36427, Start Num: 15

Candidate Starts for Benedict_53:

(5, 37062), (Start: 15 @36915 has 114 MA's), (20, 36816), (26, 36774), (27, 36771), (30, 36762), (66, 36558), (68, 36549), (93, 36441),

Gene: Big3_53 Start: 39260, Stop: 38862, Start Num: 15

Candidate Starts for Big3_53:

(Start: 15 @39260 has 114 MA's), (20, 39161), (30, 39107), (34, 39092), (35, 39083), (75, 38948), (82, 38921), (89, 38894),

Gene: BigMau_54 Start: 37762, Stop: 37283, Start Num: 15

Candidate Starts for BigMau_54:

(10, 37804), (Start: 13 @37774 has 1 MA's), (Start: 15 @37762 has 114 MA's), (20, 37663), (30, 37609), (34, 37594), (35, 37585), (46, 37465), (75, 37369), (89, 37315),

Gene: BigPaolini_53 Start: 36840, Stop: 36442, Start Num: 15

Candidate Starts for BigPaolini_53:

(Start: 15 @36840 has 114 MA's), (20, 36741), (30, 36687), (34, 36672), (35, 36663), (75, 36528), (82, 36501), (89, 36474),

Gene: Bircsak_52 Start: 39359, Stop: 38961, Start Num: 15

Candidate Starts for Bircsak_52:

(Start: 15 @39359 has 114 MA's), (20, 39260), (30, 39206), (34, 39191), (35, 39182), (75, 39047), (89, 38993),

Gene: BluSpix_53 Start: 34621, Stop: 34223, Start Num: 15

Candidate Starts for BluSpix_53:

(Start: 15 @34621 has 114 MA's), (20, 34522), (30, 34468), (34, 34453), (35, 34444), (75, 34309), (89, 34255),

Gene: Blue_53 Start: 39272, Stop: 38880, Start Num: 15

Candidate Starts for Blue_53:

(Start: 15 @39272 has 114 MA's), (20, 39173), (30, 39119), (34, 39104), (35, 39095), (75, 38960), (89, 38912),

Gene: Bluefalcon_48 Start: 37083, Stop: 36616, Start Num: 15

Candidate Starts for Bluefalcon_48:

(11, 37119), (Start: 15 @37083 has 114 MA's), (20, 36984), (30, 36930), (31, 36927), (32, 36924), (33, 36921), (79, 36687), (91, 36633),

Gene: Bob3_51 Start: 37043, Stop: 36633, Start Num: 13

Candidate Starts for Bob3_51:

(10, 37073), (Start: 13 @37043 has 1 MA's), (Start: 15 @37031 has 114 MA's), (20, 36932), (30, 36878), (34, 36863), (35, 36854), (75, 36719), (89, 36665),

Gene: BogosyJay_56 Start: 37976, Stop: 37491, Start Num: 15

Candidate Starts for BogosyJay_56:

(2, 38201), (3, 38192), (Start: 15 @37976 has 114 MA's), (26, 37838), (28, 37832), (29, 37829), (30, 37826), (36, 37799), (37, 37772), (41, 37733), (56, 37628), (77, 37526), (81, 37505), (84, 37496),

Gene: Bonamassa_49 Start: 36951, Stop: 36457, Start Num: 15

Candidate Starts for Bonamassa_49:

(12, 36981), (Start: 15 @36951 has 114 MA's), (20, 36852), (26, 36810), (27, 36807), (30, 36798), (69, 36579), (86, 36501), (93, 36471),

Gene: Bones_54 Start: 38722, Stop: 38324, Start Num: 15

Candidate Starts for Bones_54:

(Start: 15 @38722 has 114 MA's), (20, 38623), (30, 38569), (34, 38554), (35, 38545), (75, 38410), (89, 38356),

Gene: Bruns_52 Start: 37599, Stop: 37201, Start Num: 15

Candidate Starts for Bruns_52:

(10, 37641), (Start: 13 @37611 has 1 MA's), (Start: 15 @37599 has 114 MA's), (20, 37500), (30, 37446), (34, 37431), (35, 37422), (75, 37287), (89, 37233),

Gene: CRB1_61 Start: 39164, Stop: 38667, Start Num: 15

Candidate Starts for CRB1_61:

(Start: 15 @39164 has 114 MA's), (26, 39023), (28, 39017), (29, 39014), (30, 39011), (36, 38984), (37, 38957), (41, 38918), (48, 38867), (54, 38822), (58, 38807),

Gene: Carlyle_52 Start: 36053, Stop: 35655, Start Num: 15

Candidate Starts for Carlyle_52:

(Start: 15 @36053 has 114 MA's), (20, 35954), (30, 35900), (34, 35885), (35, 35876), (75, 35741), (89, 35687),

Gene: Chadwick_53 Start: 36756, Stop: 36268, Start Num: 15

Candidate Starts for Chadwick_53:

(Start: 15 @36756 has 114 MA's), (20, 36657), (26, 36615), (27, 36612), (30, 36603), (33, 36594), (68, 36390), (93, 36282),

Gene: Chanagan_50 Start: 36851, Stop: 36453, Start Num: 15

Candidate Starts for Chanagan_50:

(Start: 15 @36851 has 114 MA's), (20, 36752), (30, 36698), (34, 36683), (35, 36674), (75, 36539), (89, 36485),

Gene: Changeling_56 Start: 38803, Stop: 38336, Start Num: 15

Candidate Starts for Changeling_56:

(Start: 15 @38803 has 114 MA's), (26, 38665), (29, 38656), (30, 38653), (36, 38626), (37, 38599), (41, 38560), (55, 38503), (60, 38482), (87, 38356),

Gene: Charm_55 Start: 37821, Stop: 37384, Start Num: 15

Candidate Starts for Charm_55:

(Start: 15 @37821 has 114 MA's), (20, 37722), (30, 37668), (71, 37500), (94, 37389),

Gene: Colin_57 Start: 38509, Stop: 38060, Start Num: 15

Candidate Starts for Colin_57:

(Start: 15 @38509 has 114 MA's), (26, 38374), (28, 38368), (29, 38365), (30, 38362), (36, 38335), (37, 38308), (41, 38269), (51, 38230), (58, 38197), (60, 38188),

Gene: Conspiracy_49 Start: 36750, Stop: 36283, Start Num: 15

Candidate Starts for Conspiracy_49:

(Start: 15 @36750 has 114 MA's), (20, 36651), (30, 36597), (31, 36594), (32, 36591), (79, 36354), (91, 36300),

Gene: Coog_48 Start: 36935, Stop: 36441, Start Num: 15

Candidate Starts for Coog_48:

(Start: 15 @36935 has 114 MA's), (27, 36791), (29, 36785), (30, 36782), (69, 36563), (86, 36485), (93, 36455),

Gene: Crispicous1_51 Start: 37176, Stop: 36778, Start Num: 15

Candidate Starts for Crispicous1_51:

(Start: 15 @37176 has 114 MA's), (20, 37077), (30, 37023), (34, 37008), (35, 36999), (75, 36864), (82, 36837), (89, 36810),

Gene: Cuco_49 Start: 36807, Stop: 36313, Start Num: 15

Candidate Starts for Cuco_49:

(11, 36843), (Start: 15 @36807 has 114 MA's), (27, 36663), (29, 36657), (30, 36654), (69, 36435), (86, 36357), (93, 36327),

Gene: Cueylyss_55 Start: 39855, Stop: 39457, Start Num: 15

Candidate Starts for Cueylyss_55:

(Start: 15 @39855 has 114 MA's), (20, 39756), (30, 39702), (34, 39687), (35, 39678), (75, 39543), (89, 39489),

Gene: Discoknowium_47 Start: 36417, Stop: 35950, Start Num: 15

Candidate Starts for Discoknowium_47:

(Start: 15 @36417 has 114 MA's), (20, 36318), (30, 36264), (31, 36261), (32, 36258), (79, 36021), (91, 35967),

Gene: Dixon_55 Start: 36492, Stop: 36022, Start Num: 15

Candidate Starts for Dixon_55:

(1, 36777), (6, 36618), (Start: 15 @36492 has 114 MA's), (22, 36375), (26, 36339), (29, 36330), (30, 36327), (45, 36201), (73, 36084), (78, 36066), (85, 36033),

Gene: DrFeelGood_51 Start: 38016, Stop: 37618, Start Num: 15

Candidate Starts for DrFeelGood_51:

(Start: 15 @38016 has 114 MA's), (20, 37917), (30, 37863), (34, 37848), (35, 37839), (75, 37704), (89, 37650),

Gene: DreamTeam1_55 Start: 37653, Stop: 37216, Start Num: 15

Candidate Starts for DreamTeam1_55:

(Start: 15 @37653 has 114 MA's), (20, 37554), (30, 37500), (71, 37332), (94, 37221),

Gene: Dreamboat_55 Start: 37826, Stop: 37371, Start Num: 15

Candidate Starts for Dreamboat_55:

(Start: 15 @37826 has 114 MA's), (20, 37727), (30, 37673), (34, 37658), (35, 37649), (59, 37532), (66, 37502), (68, 37493), (70, 37481), (75, 37457), (89, 37403),

Gene: Dublin_49 Start: 36919, Stop: 36452, Start Num: 15

Candidate Starts for Dublin_49:

(11, 36955), (Start: 15 @36919 has 114 MA's), (20, 36820), (30, 36766), (31, 36763), (32, 36760), (79, 36523), (91, 36469),

Gene: Dussy_55 Start: 39209, Stop: 38799, Start Num: 15

Candidate Starts for Dussy_55:

(Start: 15 @39209 has 114 MA's), (20, 39110), (30, 39056), (34, 39041), (35, 39032), (75, 38897), (89, 38831),

Gene: Edtherson_53 Start: 38507, Stop: 38109, Start Num: 15

Candidate Starts for Edtherson_53:

(Start: 15 @38507 has 114 MA's), (20, 38408), (30, 38354), (34, 38339), (35, 38330), (75, 38195), (89, 38141),

Gene: EITiger69_52 Start: 36876, Stop: 36409, Start Num: 15

Candidate Starts for EITiger69_52:

(5, 37023), (Start: 15 @36876 has 114 MA's), (20, 36777), (26, 36735), (27, 36732), (30, 36723), (63, 36552), (74, 36501),

Gene: Espresso_53 Start: 39063, Stop: 38665, Start Num: 15
Candidate Starts for Espresso_53:
(Start: 15 @39063 has 114 MA's), (20, 38964), (30, 38910), (34, 38895), (35, 38886), (75, 38751), (89, 38697),

Gene: Euphoria_51 Start: 38314, Stop: 37916, Start Num: 15
Candidate Starts for Euphoria_51:
(Start: 15 @38314 has 114 MA's), (20, 38215), (30, 38161), (34, 38146), (35, 38137), (75, 38002), (89, 37948),

Gene: Eyeball_55 Start: 38602, Stop: 38204, Start Num: 15
Candidate Starts for Eyeball_55:
(Start: 15 @38602 has 114 MA's), (20, 38503), (30, 38449), (34, 38434), (35, 38425), (75, 38290), (89, 38236),

Gene: ForGetIt_49 Start: 36775, Stop: 36308, Start Num: 15
Candidate Starts for ForGetIt_49:
(Start: 15 @36775 has 114 MA's), (20, 36676), (30, 36622), (31, 36619), (32, 36616), (79, 36379), (91, 36325),

Gene: Francis47_52 Start: 39627, Stop: 39229, Start Num: 15
Candidate Starts for Francis47_52:
(Start: 15 @39627 has 114 MA's), (20, 39528), (30, 39474), (34, 39459), (35, 39450), (75, 39315), (89, 39261),

Gene: Froghopper_51 Start: 37352, Stop: 36957, Start Num: 15
Candidate Starts for Froghopper_51:
(Start: 15 @37352 has 114 MA's), (20, 37253), (30, 37199), (34, 37184), (35, 37175), (75, 37040), (89, 36986),

Gene: Fushigi_52 Start: 36313, Stop: 35915, Start Num: 15
Candidate Starts for Fushigi_52:
(Start: 15 @36313 has 114 MA's), (20, 36214), (30, 36160), (34, 36145), (35, 36136), (75, 36001), (89, 35947),

Gene: GageAP_54 Start: 39103, Stop: 38705, Start Num: 15
Candidate Starts for GageAP_54:
(Start: 15 @39103 has 114 MA's), (20, 39004), (30, 38950), (34, 38935), (35, 38926), (75, 38791), (82, 38764), (89, 38737),

Gene: George_47 Start: 36848, Stop: 36360, Start Num: 15
Candidate Starts for George_47:
(12, 36878), (Start: 15 @36848 has 114 MA's), (20, 36749), (26, 36707), (27, 36704), (30, 36695), (69, 36476),

Gene: Ghoulboy_52 Start: 37654, Stop: 37187, Start Num: 15
Candidate Starts for Ghoulboy_52:
(11, 37690), (Start: 15 @37654 has 114 MA's), (20, 37555), (30, 37501), (31, 37498), (32, 37495), (33, 37492), (79, 37258), (91, 37204),

Gene: Gompeii16_52 Start: 39360, Stop: 38962, Start Num: 15
Candidate Starts for Gompeii16_52:

(Start: 15 @39360 has 114 MA's), (20, 39261), (30, 39207), (34, 39192), (35, 39183), (75, 39048), (89, 38994),

Gene: Graduation_57 Start: 39927, Stop: 39529, Start Num: 15

Candidate Starts for Graduation_57:

(Start: 15 @39927 has 114 MA's), (20, 39828), (30, 39774), (34, 39759), (35, 39750), (75, 39615), (89, 39561),

Gene: Hami1_46 Start: 33410, Stop: 33012, Start Num: 15

Candidate Starts for Hami1_46:

(Start: 15 @33410 has 114 MA's), (20, 33311), (30, 33257), (34, 33242), (35, 33233), (75, 33098), (89, 33044),

Gene: Herbertwm_55 Start: 37937, Stop: 37377, Start Num: 15

Candidate Starts for Herbertwm_55:

(2, 38162), (Start: 15 @37937 has 114 MA's), (18, 37868), (30, 37772), (31, 37769), (33, 37763), (49, 37625), (52, 37601), (55, 37583), (81, 37448), (88, 37418),

Gene: HermioneGrange_53 Start: 38256, Stop: 37777, Start Num: 15

Candidate Starts for HermioneGrange_53:

(10, 38298), (Start: 13 @38268 has 1 MA's), (Start: 15 @38256 has 114 MA's), (20, 38157), (30, 38103), (34, 38088), (35, 38079), (46, 37959), (75, 37863), (89, 37809),

Gene: HuhtaEnerson15_49 Start: 36845, Stop: 36351, Start Num: 15

Candidate Starts for HuhtaEnerson15_49:

(4, 37010), (5, 36992), (Start: 15 @36845 has 114 MA's), (20, 36746), (26, 36704), (27, 36701), (30, 36692), (69, 36473), (86, 36395), (93, 36365),

Gene: IgnatiusPatJac_54 Start: 38566, Stop: 38168, Start Num: 15

Candidate Starts for IgnatiusPatJac_54:

(Start: 15 @38566 has 114 MA's), (20, 38467), (30, 38413), (34, 38398), (35, 38389), (75, 38254), (89, 38200),

Gene: JC27_55 Start: 38691, Stop: 38209, Start Num: 14

Candidate Starts for JC27_55:

(9, 38742), (Start: 14 @38691 has 12 MA's), (20, 38589), (30, 38535), (34, 38520), (35, 38511), (46, 38391), (75, 38295), (89, 38241),

Gene: Jabiru_51 Start: 36770, Stop: 36282, Start Num: 15

Candidate Starts for Jabiru_51:

(5, 36917), (Start: 15 @36770 has 114 MA's), (20, 36671), (26, 36629), (27, 36626), (30, 36617), (33, 36608), (66, 36413), (68, 36404), (93, 36296),

Gene: Jasper_55 Start: 37712, Stop: 37257, Start Num: 15

Candidate Starts for Jasper_55:

(Start: 15 @37712 has 114 MA's), (20, 37613), (30, 37559), (34, 37544), (35, 37535), (59, 37418), (66, 37388), (68, 37379), (70, 37367), (75, 37343), (89, 37289),

Gene: Jerm2_54 Start: 38511, Stop: 38032, Start Num: 15

Candidate Starts for Jerm2_54:

(10, 38553), (Start: 13 @38523 has 1 MA's), (Start: 15 @38511 has 114 MA's), (20, 38412), (30, 38358), (34, 38343), (35, 38334), (46, 38214), (75, 38118), (89, 38064),

Gene: JoshKayV_59 Start: 38828, Stop: 38325, Start Num: 15

Candidate Starts for JoshKayV_59:

(Start: 15 @38828 has 114 MA's), (26, 38687), (28, 38681), (29, 38678), (30, 38675), (36, 38648), (41, 38582), (48, 38531),

Gene: Jovo_49 Start: 37031, Stop: 36564, Start Num: 15

Candidate Starts for Jovo_49:

(Start: 15 @37031 has 114 MA's), (20, 36932), (30, 36878), (31, 36875), (32, 36872), (79, 36635), (91, 36581),

Gene: Kalpine_55 Start: 38383, Stop: 37931, Start Num: 15

Candidate Starts for Kalpine_55:

(Start: 15 @38383 has 114 MA's), (26, 38245), (28, 38239), (29, 38236), (30, 38233), (36, 38206), (37, 38179), (41, 38140), (60, 38059),

Gene: Kenmech_57 Start: 40335, Stop: 39925, Start Num: 15

Candidate Starts for Kenmech_57:

(Start: 15 @40335 has 114 MA's), (20, 40236), (30, 40182), (34, 40167), (35, 40158), (75, 40023), (89, 39957),

Gene: Lesedi_50 Start: 37197, Stop: 36799, Start Num: 15

Candidate Starts for Lesedi_50:

(Start: 15 @37197 has 114 MA's), (20, 37098), (30, 37044), (34, 37029), (35, 37020), (75, 36885), (82, 36858), (89, 36831),

Gene: Lev2_49 Start: 36663, Stop: 36196, Start Num: 15

Candidate Starts for Lev2_49:

(Start: 15 @36663 has 114 MA's), (20, 36564), (30, 36510), (31, 36507), (32, 36504), (79, 36267), (91, 36213),

Gene: LittleCherry_49 Start: 36865, Stop: 36371, Start Num: 15

Candidate Starts for LittleCherry_49:

(12, 36895), (Start: 15 @36865 has 114 MA's), (20, 36766), (26, 36724), (27, 36721), (30, 36712), (69, 36493), (86, 36415), (93, 36385),

Gene: Lokk_54 Start: 37531, Stop: 37127, Start Num: 15

Candidate Starts for Lokk_54:

(2, 37756), (3, 37747), (Start: 15 @37531 has 114 MA's), (26, 37396), (28, 37390), (29, 37387), (30, 37384), (36, 37357), (37, 37330), (41, 37291), (43, 37261), (57, 37192), (62, 37168),

Gene: MPlant7149_52 Start: 37293, Stop: 36895, Start Num: 15

Candidate Starts for MPlant7149_52:

(Start: 15 @37293 has 114 MA's), (20, 37194), (30, 37140), (34, 37125), (35, 37116), (75, 36981), (89, 36927),

Gene: Magnar_53 Start: 38738, Stop: 38340, Start Num: 15

Candidate Starts for Magnar_53:

(Start: 15 @38738 has 114 MA's), (20, 38639), (30, 38585), (34, 38570), (35, 38561), (75, 38426), (89, 38372),

Gene: Makemake_53 Start: 38800, Stop: 38399, Start Num: 14

Candidate Starts for Makemake_53:

(9, 38851), (Start: 14 @38800 has 12 MA's), (20, 38698), (30, 38644), (34, 38629), (35, 38620), (75, 38485), (89, 38431),

Gene: Maminiaina_56 Start: 37958, Stop: 37473, Start Num: 15

Candidate Starts for Maminiaina_56:

(2, 38183), (3, 38174), (Start: 15 @37958 has 114 MA's), (26, 37820), (28, 37814), (29, 37811), (30, 37808), (36, 37781), (37, 37754), (41, 37715), (56, 37610), (77, 37508), (81, 37487), (84, 37478),

Gene: Manatee_55 Start: 38824, Stop: 38426, Start Num: 15

Candidate Starts for Manatee_55:

(Start: 15 @38824 has 114 MA's), (20, 38725), (30, 38671), (34, 38656), (35, 38647), (75, 38512), (89, 38458),

Gene: Marchy_47 Start: 35728, Stop: 35330, Start Num: 15

Candidate Starts for Marchy_47:

(Start: 15 @35728 has 114 MA's), (20, 35629), (30, 35575), (34, 35560), (35, 35551), (75, 35416), (89, 35362),

Gene: MarysWell_49 Start: 37162, Stop: 36695, Start Num: 15

Candidate Starts for MarysWell_49:

(11, 37198), (Start: 15 @37162 has 114 MA's), (20, 37063), (30, 37009), (31, 37006), (32, 37003), (79, 36766), (91, 36712),

Gene: Micasa_49 Start: 37033, Stop: 36539, Start Num: 15

Candidate Starts for Micasa_49:

(Start: 15 @37033 has 114 MA's), (27, 36889), (29, 36883), (30, 36880), (69, 36661), (86, 36583), (93, 36553),

Gene: Michley_53 Start: 37767, Stop: 37369, Start Num: 15

Candidate Starts for Michley_53:

(Start: 15 @37767 has 114 MA's), (20, 37668), (21, 37659), (30, 37614), (34, 37599), (35, 37590), (75, 37455), (89, 37401),

Gene: Midas2_48 Start: 36935, Stop: 36441, Start Num: 15

Candidate Starts for Midas2_48:

(Start: 15 @36935 has 114 MA's), (27, 36791), (29, 36785), (30, 36782), (69, 36563), (86, 36485), (93, 36455),

Gene: Miko_54 Start: 38309, Stop: 37905, Start Num: 15

Candidate Starts for Miko_54:

(2, 38534), (3, 38525), (Start: 15 @38309 has 114 MA's), (26, 38174), (28, 38168), (29, 38165), (30, 38162), (36, 38135), (37, 38108), (41, 38069), (43, 38039), (47, 38024), (57, 37970), (62, 37946),

Gene: Milcery_49 Start: 36816, Stop: 36328, Start Num: 15

Candidate Starts for Milcery_49:

(12, 36846), (Start: 15 @36816 has 114 MA's), (20, 36717), (26, 36675), (27, 36672), (30, 36663), (69, 36444),

Gene: Monet_56 Start: 39466, Stop: 39068, Start Num: 15

Candidate Starts for Monet_56:

(Start: 15 @39466 has 114 MA's), (20, 39367), (30, 39313), (34, 39298), (35, 39289), (75, 39154), (89, 39100),

Gene: MrGordo_53 Start: 38500, Stop: 38102, Start Num: 15

Candidate Starts for MrGordo_53:

(Start: 15 @38500 has 114 MA's), (20, 38401), (30, 38347), (34, 38332), (35, 38323), (75, 38188), (82, 38161), (89, 38134),

Gene: Mule_50 Start: 36434, Stop: 36033, Start Num: 14

Candidate Starts for Mule_50:

(9, 36485), (Start: 14 @36434 has 12 MA's), (20, 36332), (30, 36278), (34, 36263), (35, 36254), (75, 36119), (89, 36065),

Gene: Naca_50 Start: 37309, Stop: 36818, Start Num: 15

Candidate Starts for Naca_50:

(5, 37456), (8, 37375), (12, 37339), (Start: 15 @37309 has 114 MA's), (20, 37210), (26, 37168), (27, 37165), (30, 37156), (66, 36952), (68, 36943), (80, 36886), (93, 36832),

Gene: Niza_56 Start: 40289, Stop: 39891, Start Num: 15

Candidate Starts for Niza_56:

(Start: 15 @40289 has 114 MA's), (20, 40190), (30, 40136), (34, 40121), (35, 40112), (75, 39977), (89, 39923),

Gene: PSullivan_53 Start: 37380, Stop: 36901, Start Num: 15

Candidate Starts for PSullivan_53:

(10, 37422), (Start: 13 @37392 has 1 MA's), (Start: 15 @37380 has 114 MA's), (20, 37281), (30, 37227), (34, 37212), (35, 37203), (46, 37083), (75, 36987), (89, 36933),

Gene: PacerPaul_53 Start: 38994, Stop: 38596, Start Num: 15

Candidate Starts for PacerPaul_53:

(Start: 15 @38994 has 114 MA's), (20, 38895), (30, 38841), (34, 38826), (35, 38817), (75, 38682), (89, 38628),

Gene: PainterBoy_58 Start: 38029, Stop: 37562, Start Num: 15

Candidate Starts for PainterBoy_58:

(Start: 15 @38029 has 114 MA's), (25, 37891), (30, 37873), (38, 37795), (39, 37777), (40, 37771), (53, 37735), (76, 37648), (86, 37600), (92, 37573),

Gene: Payneful_52 Start: 38445, Stop: 38047, Start Num: 15

Candidate Starts for Payneful_52:

(Start: 15 @38445 has 114 MA's), (20, 38346), (30, 38292), (34, 38277), (35, 38268), (75, 38133), (89, 38079),

Gene: Pelly_53 Start: 38399, Stop: 37998, Start Num: 14

Candidate Starts for Pelly_53:

(9, 38450), (Start: 14 @38399 has 12 MA's), (20, 38297), (30, 38243), (34, 38228), (35, 38219), (75, 38084), (89, 38030),

Gene: Pepe_50 Start: 37214, Stop: 36804, Start Num: 15

Candidate Starts for Pepe_50:

(Start: 15 @37214 has 114 MA's), (20, 37115), (30, 37061), (34, 37046), (35, 37037), (75, 36902), (89, 36836),

Gene: Perseus_53 Start: 39320, Stop: 38919, Start Num: 14

Candidate Starts for Perseus_53:

(9, 39371), (Start: 14 @39320 has 12 MA's), (20, 39218), (30, 39164), (34, 39149), (35, 39140), (75, 39005), (89, 38951),

Gene: Petruccio_53 Start: 38090, Stop: 37635, Start Num: 15

Candidate Starts for Petruccio_53:

(Start: 15 @38090 has 114 MA's), (20, 37991), (30, 37937), (34, 37922), (35, 37913), (59, 37796), (66, 37766), (68, 37757), (70, 37745), (75, 37721), (89, 37667),

Gene: PetterN_54 Start: 36924, Stop: 36436, Start Num: 15

Candidate Starts for PetterN_54:

(Start: 15 @36924 has 114 MA's), (20, 36825), (26, 36783), (27, 36780), (30, 36771), (33, 36762), (68, 36558), (93, 36450),

Gene: PherrisBueller_53 Start: 37363, Stop: 36890, Start Num: 15

Candidate Starts for PherrisBueller_53:

(Start: 15 @37363 has 114 MA's), (20, 37264), (30, 37210), (34, 37195), (35, 37186), (59, 37069), (66, 37021), (68, 37012), (70, 37000), (75, 36976), (89, 36922),

Gene: Phillis_55 Start: 36641, Stop: 36165, Start Num: 15

Candidate Starts for Phillis_55:

(Start: 15 @36641 has 114 MA's), (22, 36524), (26, 36488), (29, 36479), (30, 36476), (45, 36344), (78, 36209), (85, 36176),

Gene: Phlorence_47 Start: 36408, Stop: 35941, Start Num: 15

Candidate Starts for Phlorence_47:

(Start: 15 @36408 has 114 MA's), (20, 36309), (30, 36255), (31, 36252), (32, 36249), (79, 36012), (91, 35958),

Gene: PhrostyMug_52 Start: 38599, Stop: 38198, Start Num: 14

Candidate Starts for PhrostyMug_52:

(9, 38650), (Start: 14 @38599 has 12 MA's), (20, 38497), (30, 38443), (34, 38428), (35, 38419), (75, 38284), (89, 38230),

Gene: PickleBack_49 Start: 36655, Stop: 36188, Start Num: 15

Candidate Starts for PickleBack_49:

(Start: 15 @36655 has 114 MA's), (20, 36556), (30, 36502), (31, 36499), (32, 36496), (79, 36259), (91, 36205),

Gene: Pita2_56 Start: 38877, Stop: 38398, Start Num: 15

Candidate Starts for Pita2_56:

(10, 38919), (Start: 13 @38889 has 1 MA's), (Start: 15 @38877 has 114 MA's), (20, 38778), (30, 38724), (34, 38709), (35, 38700), (46, 38580), (75, 38484), (89, 38430),

Gene: Rachaly_56 Start: 38454, Stop: 38050, Start Num: 15

Candidate Starts for Rachaly_56:

(2, 38679), (3, 38670), (Start: 15 @38454 has 114 MA's), (26, 38319), (28, 38313), (29, 38310), (30, 38307), (36, 38280), (37, 38253), (41, 38214), (43, 38184), (57, 38115), (62, 38091),

Gene: Rhynn_52 Start: 37733, Stop: 37335, Start Num: 15

Candidate Starts for Rhynn_52:

(Start: 15 @37733 has 114 MA's), (20, 37634), (30, 37580), (34, 37565), (35, 37556), (75, 37421), (89, 37367),

Gene: Rohr_54 Start: 38557, Stop: 38078, Start Num: 15

Candidate Starts for Rohr_54:

(10, 38599), (Start: 13 @38569 has 1 MA's), (Start: 15 @38557 has 114 MA's), (20, 38458), (30, 38404), (34, 38389), (35, 38380), (46, 38260), (75, 38164), (89, 38110),

Gene: Rufus_54 Start: 38103, Stop: 37705, Start Num: 15

Candidate Starts for Rufus_54:

(10, 38145), (Start: 13 @38115 has 1 MA's), (Start: 15 @38103 has 114 MA's), (20, 38004), (30, 37950), (34, 37935), (35, 37926), (75, 37791), (89, 37737),

Gene: Rutherferd_55 Start: 38949, Stop: 38551, Start Num: 15

Candidate Starts for Rutherferd_55:

(Start: 15 @38949 has 114 MA's), (20, 38850), (30, 38796), (34, 38781), (35, 38772), (75, 38637), (82, 38610), (89, 38583),

Gene: Scorpia_54 Start: 36983, Stop: 36492, Start Num: 15

Candidate Starts for Scorpia_54:

(Start: 15 @36983 has 114 MA's), (20, 36884), (26, 36842), (27, 36839), (30, 36830), (33, 36821), (66, 36626), (68, 36617), (80, 36560), (93, 36506),

Gene: Scowl_54 Start: 38673, Stop: 38194, Start Num: 15

Candidate Starts for Scowl_54:

(Start: 15 @38673 has 114 MA's), (20, 38574), (30, 38520), (34, 38505), (35, 38496), (46, 38376), (75, 38280), (89, 38226),

Gene: Seanderson_55 Start: 40050, Stop: 39571, Start Num: 15

Candidate Starts for Seanderson_55:

(Start: 15 @40050 has 114 MA's), (20, 39951), (30, 39897), (34, 39882), (35, 39873), (46, 39753), (75, 39657), (89, 39603),

Gene: Sibs6_55 Start: 37137, Stop: 36739, Start Num: 15

Candidate Starts for Sibs6_55:

(10, 37179), (Start: 13 @37149 has 1 MA's), (Start: 15 @37137 has 114 MA's), (20, 37038), (30, 36984), (34, 36969), (35, 36960), (75, 36825), (89, 36771),

Gene: Smairt_55 Start: 39592, Stop: 39191, Start Num: 14

Candidate Starts for Smairt_55:

(9, 39643), (Start: 14 @39592 has 12 MA's), (20, 39490), (30, 39436), (34, 39421), (35, 39412), (75, 39277), (89, 39223),

Gene: SpikeBT_53 Start: 38361, Stop: 37963, Start Num: 15

Candidate Starts for SpikeBT_53:

(Start: 15 @38361 has 114 MA's), (20, 38262), (30, 38208), (34, 38193), (35, 38184), (75, 38049), (82, 38022), (89, 37995),

Gene: Steamy_53 Start: 37734, Stop: 37234, Start Num: 15

Candidate Starts for Steamy_53:

(2, 37959), (3, 37950), (Start: 15 @37734 has 114 MA's), (16, 37725), (23, 37611), (26, 37596), (29, 37587), (30, 37584), (36, 37557), (37, 37530), (41, 37491), (44, 37458), (50, 37428), (52, 37413),

Gene: SwirlSquare_62 Start: 37597, Stop: 37061, Start Num: 15

Candidate Starts for SwirlSquare_62:

(Start: 15 @37597 has 114 MA's), (19, 37522), (25, 37459), (26, 37453), (30, 37441), (40, 37339), (53, 37288), (65, 37240), (67, 37234), (80, 37168), (90, 37123), (95, 37066),

Gene: SydNat_52 Start: 37663, Stop: 37196, Start Num: 15

Candidate Starts for SydNat_52:

(11, 37699), (Start: 15 @37663 has 114 MA's), (20, 37564), (30, 37510), (31, 37507), (32, 37504), (33, 37501), (79, 37267), (91, 37213),

Gene: Teodoridan_52 Start: 37810, Stop: 37400, Start Num: 15

Candidate Starts for Teodoridan_52:

(Start: 15 @37810 has 114 MA's), (20, 37711), (30, 37657), (34, 37642), (35, 37633), (75, 37498), (89, 37432),

Gene: Theia_48 Start: 37140, Stop: 36673, Start Num: 15

Candidate Starts for Theia_48:

(11, 37176), (Start: 15 @37140 has 114 MA's), (20, 37041), (30, 36987), (31, 36984), (32, 36981), (34, 36972), (79, 36744), (91, 36690),

Gene: Tiger_48 Start: 36329, Stop: 35862, Start Num: 15

Candidate Starts for Tiger_48:

(Start: 15 @36329 has 114 MA's), (20, 36230), (30, 36176), (31, 36173), (32, 36170), (79, 35933), (91, 35879),

Gene: Treddle_54 Start: 38978, Stop: 38580, Start Num: 15

Candidate Starts for Treddle_54:

(Start: 15 @38978 has 114 MA's), (20, 38879), (30, 38825), (34, 38810), (35, 38801), (75, 38666), (89, 38612),

Gene: Tripl3t_53 Start: 39615, Stop: 39205, Start Num: 15

Candidate Starts for Tripl3t_53:

(Start: 13 @39627 has 1 MA's), (Start: 15 @39615 has 114 MA's), (20, 39516), (30, 39462), (34, 39447), (35, 39438), (75, 39303), (89, 39237),

Gene: Trixie_55 Start: 38251, Stop: 37799, Start Num: 15

Candidate Starts for Trixie_55:

(Start: 15 @38251 has 114 MA's), (26, 38113), (28, 38107), (29, 38104), (30, 38101), (36, 38074), (37, 38047), (41, 38008), (60, 37927),

Gene: Trouble_56 Start: 39709, Stop: 39311, Start Num: 15

Candidate Starts for Trouble_56:

(Start: 15 @39709 has 114 MA's), (20, 39610), (30, 39556), (34, 39541), (35, 39532), (75, 39397), (89, 39343),

Gene: TwoPeat_53 Start: 38091, Stop: 37693, Start Num: 15

Candidate Starts for TwoPeat_53:

(10, 38133), (Start: 13 @38103 has 1 MA's), (Start: 15 @38091 has 114 MA's), (20, 37992), (30, 37938), (34, 37923), (35, 37914), (75, 37779), (89, 37725),

Gene: UnionJack_51 Start: 36473, Stop: 35982, Start Num: 15

Candidate Starts for UnionJack_51:

(Start: 15 @36473 has 114 MA's), (20, 36374), (24, 36347), (26, 36332), (27, 36329), (30, 36320), (33, 36311), (42, 36209), (68, 36107), (93, 35996),

Gene: Violet_51 Start: 38989, Stop: 38588, Start Num: 14

Candidate Starts for Violet_51:

(9, 39040), (Start: 14 @38989 has 12 MA's), (20, 38887), (30, 38833), (34, 38818), (35, 38809), (75, 38674), (89, 38620),

Gene: WeiHuaDA_59 Start: 39056, Stop: 38604, Start Num: 15

Candidate Starts for WeiHuaDA_59:

(Start: 15 @39056 has 114 MA's), (26, 38918), (28, 38912), (29, 38909), (30, 38906), (36, 38879), (37, 38852), (41, 38813), (51, 38774), (58, 38741),

Gene: Wheeler_54 Start: 38471, Stop: 38073, Start Num: 15

Candidate Starts for Wheeler_54:

(Start: 15 @38471 has 114 MA's), (20, 38372), (30, 38318), (34, 38303), (35, 38294), (75, 38159), (89, 38105),

Gene: Zeeculate_51 Start: 39028, Stop: 38627, Start Num: 14

Candidate Starts for Zeeculate_51:

(9, 39079), (Start: 14 @39028 has 12 MA's), (20, 38926), (30, 38872), (34, 38857), (35, 38848), (75, 38713), (89, 38659),

Gene: Zeuska_52 Start: 38962, Stop: 38564, Start Num: 15

Candidate Starts for Zeuska_52:

(Start: 15 @38962 has 114 MA's), (20, 38863), (30, 38809), (34, 38794), (35, 38785), (75, 38650), (89, 38596),

Gene: Zolita_51 Start: 37667, Stop: 37200, Start Num: 15

Candidate Starts for Zolita_51:

(11, 37703), (Start: 15 @37667 has 114 MA's), (20, 37568), (30, 37514), (31, 37511), (32, 37508), (33, 37505), (79, 37271), (91, 37217),