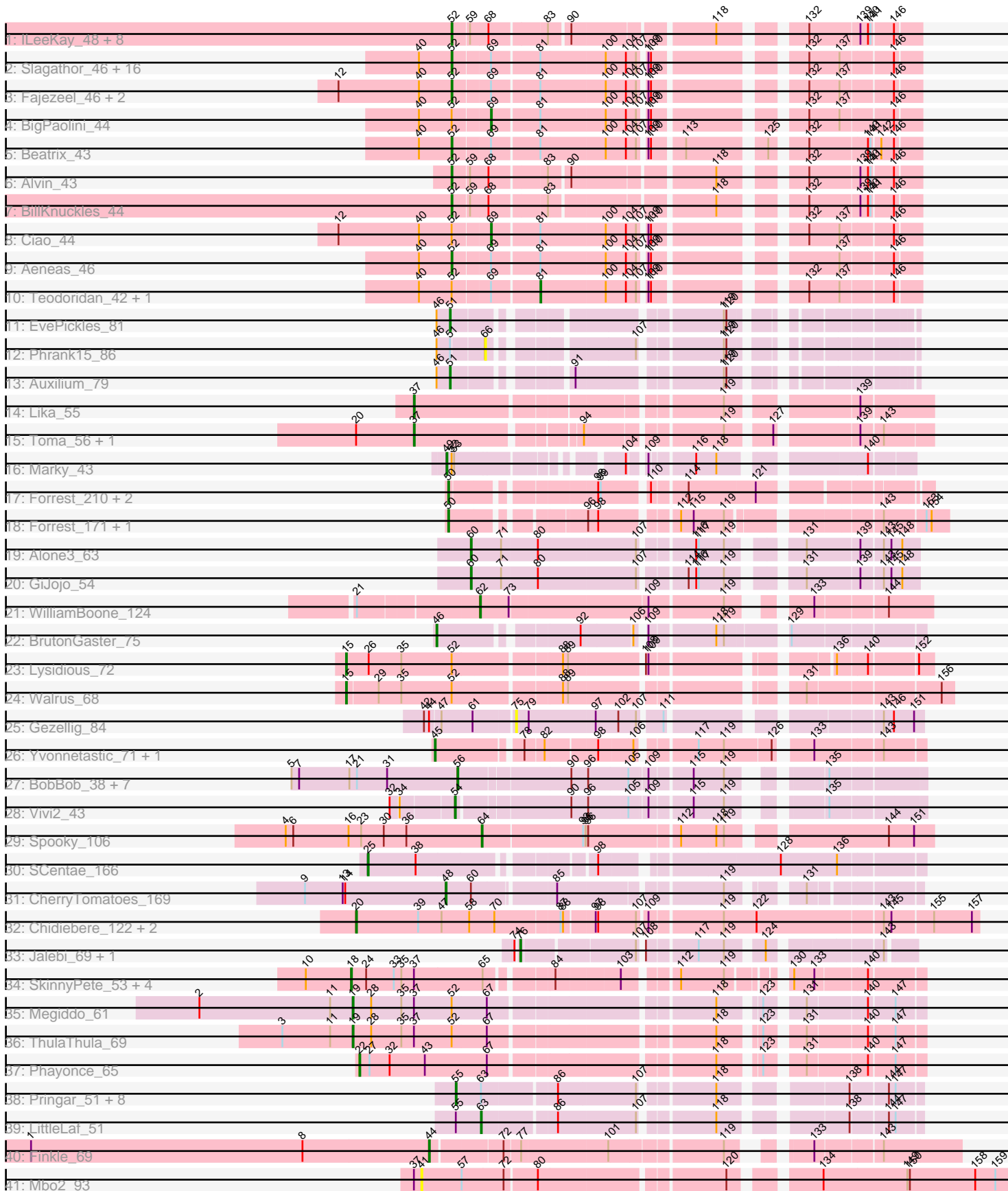


Pham 171368



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 171368 Report

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

Pham number 171368 has 95 members, 7 are drafts.

Phages represented in each track:

- Track 1 : ILeeKay_48, Seanderson_46, Fushigi_42, Trouble_45, BluSpix_42, IgnatiusPatJac_43, Petruccio_44, Ajay_44, Kykar_44
- Track 2 : Slagathor_46, Naira_45, Marge_44, StrongArm_43, Eyeball_45, Bexan_42, Dexes_44, TheloniousMonk_45, Fenn_45, Rajelicia_45, Arcanine_45, Niza_46, Bones_44, Licorice_47, Ruotula_47, Sagefire_47, Smairt_46
- Track 3 : Fajezeel_46, Greg_46, Pippin_46
- Track 4 : BigPaolini_44
- Track 5 : Beatrix_43
- Track 6 : Alvin_43
- Track 7 : BillKnuckles_44
- Track 8 : Ciao_44
- Track 9 : Aeneas_46
- Track 10 : Teodoridan_42, Ringer_45
- Track 11 : EvePickles_81
- Track 12 : Phrank15_86
- Track 13 : Auxilium_79
- Track 14 : Lika_55
- Track 15 : Toma_56, Goby_56
- Track 16 : Marky_43
- Track 17 : Forrest_210, Phredrick_212, Emma1919_210
- Track 18 : Forrest_171, Jada_168
- Track 19 : Alone3_63
- Track 20 : GiJojo_54
- Track 21 : WilliamBoone_124
- Track 22 : BrutonGaster_75
- Track 23 : Lysidious_72
- Track 24 : Walrus_68
- Track 25 : Gezellig_84
- Track 26 : Yvonnetastic_71, JonJames_73
- Track 27 : BobBob_38, Charming_41, Nordenberg_35, Tangent_41, Love_44, Brandonk123_42, Paries_43, Rofo_41
- Track 28 : Vivi2_43
- Track 29 : Spooky_106
- Track 30 : SCentae_166
- Track 31 : CherryTomatoes_169
- Track 32 : Chidiebere_122, Schomber_120, Kabocha_123
- Track 33 : Jalebi_69, Sampudon_70

- Track 34 : SkinnyPete_53, DocMcStuffins_73, Misha28_72, Awesomesauce_74, TootsiePop_72
- Track 35 : Megiddo_61
- Track 36 : ThulaThula_69
- Track 37 : Phayonce_65
- Track 38 : Pringar_51, Blackbeetle_51, Huphlepuuff_53, VasuNzinga_51, Raela_51, Beelzebub_55, Poise_51, Lilbit_52, Clarkson_52
- Track 39 : LittleLaf_51
- Track 40 : Finkle_69
- Track 41 : Mbo2_93

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

The start number called the most often in the published annotations is 52, it was called in 32 of the 88 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aeneas_46, Ajay_44, Alvin_43, Arcanine_45, Beatrix_43, Bexan_42, BillKnuckles_44, BluSpix_42, Bones_44, Dexes_44, Eyeball_45, Fajezeel_46, Fenn_45, Fushigi_42, Greg_46, ILeeKay_48, IgnatiusPatJac_43, Kykar_44, Licorice_47, Marge_44, Naira_45, Niza_46, Petruccio_44, Pippin_46, Rajelicia_45, Ruotula_47, Sagefire_47, Seanderson_46, Slagathor_46, Smairt_46, StrongArm_43, TheloniousMonk_45, Trouble_45,

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

- BigPaolini_44, Ciao_44, Lysidious_72, Marky_43, Megiddo_61, Ringer_45, Teodoridan_42, ThulaThula_69, Walrus_68,

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

- Alone3_63, Auxilium_79, Awesomesauce_74, Beelzebub_55, Blackbeetle_51, BobBob_38, Brandonk123_42, BrutonGaster_75, Charming_41, CherryTomatoes_169, Chidiebere_122, Clarkson_52, DocMcStuffins_73, Emma1919_210, EvePickles_81, Finkle_69, Forrest_171, Forrest_210, Gezellig_84, GiJojo_54, Goby_56, Huphlepuuff_53, Jada_168, Jalebi_69, JonJames_73, Kabocha_123, Lika_55, Lilbit_52, LittleLaf_51, Love_44, Mbo2_93, Misha28_72, Nordenberg_35, Paries_43, Phayonce_65, Phrank15_86, Phredrick_212, Poise_51, Pringar_51, Raela_51, Rofo_41, SCentae_166, Sampudon_70, Schomber_120, SkinnyPete_53, Spooky_106, Tangent_41, Toma_56, TootsiePop_72, VasuNzinga_51, Vivi2_43, WilliamBoone_124, Yvonnestic_71,

Summary by start number:

Start 15:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lysidious_72 (CV), Walrus_68 (CV),

Start 18:

- Found in 5 of 95 (5.3%) of genes in pham

- Manual Annotations of this start: 4 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Awesomesauce_74 (F1), DocMcStuffins_73 (F1), Misha28_72 (F1), SkinnyPete_53 (N), TootsiePop_72 (F1),

Start 19:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megiddo_61 (P1), ThulaThula_69 (P5),

Start 20:

- Found in 5 of 95 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 88
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Chidiebere_122 (DQ), Kabocha_123 (DQ), Schomber_120 (DQ),

Start 22:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phayonce_65 (P5),

Start 25:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SCentae_166 (DO),

Start 37:

- Found in 11 of 95 (11.6%) of genes in pham
- Manual Annotations of this start: 3 of 88
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Goby_56 (BD1), Lika_55 (BD1), Toma_56 (BD1),

Start 41:

- Found in 1 of 95 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2_93 (singleton),

Start 44:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Finkle_69 (singleton),

Start 45:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 100.0% of time when present

- Phage (with cluster) where this start called: JonJames_73 (DD), Yvonnetastic_71 (DD),

Start 46:

- Found in 4 of 95 (4.2%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 25.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster_75 (CQ2),

Start 48:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes_169 (DO),

Start 49:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marky_43 (BH),

Start 50:

- Found in 5 of 95 (5.3%) of genes in pham
- Manual Annotations of this start: 5 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emma1919_210 (BK1), Forrest_171 (BK1), Forrest_210 (BK1), Jada_168 (BK1), Phredrick_212 (BK1),

Start 51:

- Found in 3 of 95 (3.2%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Auxilium_79 (AY), EvePickles_81 (AY),

Start 52:

- Found in 42 of 95 (44.2%) of genes in pham
- Manual Annotations of this start: 32 of 88
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Aeneas_46 (A1), Ajay_44 (A1), Alvin_43 (A1), Arcanine_45 (A1), Beatrix_43 (A1), Bexan_42 (A1), BillKnuckles_44 (A1), BluSpix_42 (A1), Bones_44 (A1), Dexes_44 (A1), Eyeball_45 (A1), Fajezeel_46 (A1), Fenn_45 (A1), Fushigi_42 (A1), Greg_46 (A1), ILeeKay_48 (A1), IgnatiusPatJac_43 (A1), Kykar_44 (A1), Licorice_47 (A1), Marge_44 (A1), Naira_45 (A1), Niza_46 (A1), Petruccio_44 (A1), Pippin_46 (A1), Rajelicia_45 (A1), Ruotula_47 (A1), Sagefire_47 (A1), Seanderson_46 (A1), Slagathor_46 (A1), Smairt_46 (A1), StrongArm_43 (A1), TheloniousMonk_45 (A1), Trouble_45 (A1),

Start 54:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Vivi2_43 (DE1),

Start 55:

- Found in 10 of 95 (10.5%) of genes in pham
- Manual Annotations of this start: 8 of 88
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Beelzebub_55 (S), Blackbeetle_51 (S), Clarkson_52 (S), Huphlepuuff_53 (S), Lilbit_52 (S), Poise_51 (S), Pringar_51 (S), Raela_51 (S), VasuNzinga_51 (S),

Start 56:

- Found in 8 of 95 (8.4%) of genes in pham
- Manual Annotations of this start: 8 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobBob_38 (DE1), Brandonk123_42 (DE1), Charming_41 (DE1), Love_44 (DE1), Nordenberg_35 (DE1), Paries_43 (DE1), Rofo_41 (DE1), Tangent_41 (DE1),

Start 60:

- Found in 3 of 95 (3.2%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Alone3_63 (BS), GiJojo_54 (BS),

Start 62:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WilliamBoone_124 (CQ1),

Start 63:

- Found in 10 of 95 (10.5%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 10.0% of time when present
- Phage (with cluster) where this start called: LittleLaf_51 (S),

Start 64:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spooky_106 (DN2),

Start 66:

- Found in 1 of 95 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrank15_86 (AY),

Start 69:

- Found in 26 of 95 (27.4%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 7.7% of time when present
- Phage (with cluster) where this start called: BigPaolini_44 (A1), Ciao_44 (A1),

Start 75:

- Found in 1 of 95 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gezellig_84 (DC1),

Start 76:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jalebi_69 (DV), Sampudon_70 (DV),

Start 81:

- Found in 26 of 95 (27.4%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Ringer_45 (A1), Teodoridan_42 (A1),

Summary by clusters:

There are 22 clusters represented in this pham: DO, singleton, DD, BH, BS, DV, DQ, A1, BD1, DN2, CQ2, CQ1, P1, P5, N, S, BK1, AY, CV, DC1, F1, DE1,

Info for manual annotations of cluster A1:

- Start number 52 was manually annotated 32 times for cluster A1.
- Start number 69 was manually annotated 2 times for cluster A1.
- Start number 81 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster AY:

- Start number 51 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster BD1:

- Start number 37 was manually annotated 3 times for cluster BD1.

Info for manual annotations of cluster BH:

- Start number 49 was manually annotated 1 time for cluster BH.

Info for manual annotations of cluster BK1:

- Start number 50 was manually annotated 5 times for cluster BK1.

Info for manual annotations of cluster BS:

- Start number 60 was manually annotated 2 times for cluster BS.

Info for manual annotations of cluster CQ1:

- Start number 62 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 46 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CV:

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

Info for manual annotations of cluster DD:

- Start number 45 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DE1:

- Start number 54 was manually annotated 1 time for cluster DE1.
- Start number 56 was manually annotated 8 times for cluster DE1.

Info for manual annotations of cluster DN2:

- Start number 64 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster DO:

- Start number 25 was manually annotated 1 time for cluster DO.
- Start number 48 was manually annotated 1 time for cluster DO.

Info for manual annotations of cluster DQ:

- Start number 20 was manually annotated 3 times for cluster DQ.

Info for manual annotations of cluster DV:

- Start number 76 was manually annotated 2 times for cluster DV.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster N:

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

Info for manual annotations of cluster P1:

- Start number 19 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P5:

- Start number 19 was manually annotated 1 time for cluster P5.
- Start number 22 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster S:

- Start number 55 was manually annotated 8 times for cluster S.
- Start number 63 was manually annotated 1 time for cluster S.

Gene Information:

Gene: Aeneas_46 Start: 33206, Stop: 32721, Start Num: 52

Candidate Starts for Aeneas_46:

(40, 33245), (Start: 52 @33206 has 32 MA's), (Start: 69 @33164 has 2 MA's), (Start: 81 @33110 has 1 MA's), (100, 33035), (104, 33011), (107, 32999), (109, 32993), (110, 32990), (137, 32807), (146, 32750),

Gene: Ajay_44 Start: 32810, Stop: 32334, Start Num: 52

Candidate Starts for Ajay_44:

(Start: 52 @32810 has 32 MA's), (59, 32792), (68, 32771), (83, 32708), (90, 32687), (118, 32534), (132, 32456), (139, 32399), (140, 32390), (141, 32387), (146, 32363),

Gene: Alone3_63 Start: 21624, Stop: 22094, Start Num: 60

Candidate Starts for Alone3_63:

(Start: 60 @21624 has 2 MA's), (71, 21660), (80, 21702), (107, 21816), (116, 21870), (117, 21873), (119, 21903), (131, 21969), (139, 22029), (143, 22053), (145, 22062), (148, 22074),

Gene: Alvin_43 Start: 33331, Stop: 32855, Start Num: 52

Candidate Starts for Alvin_43:

(Start: 52 @33331 has 32 MA's), (59, 33313), (68, 33292), (83, 33229), (90, 33208), (118, 33055), (132, 32977), (139, 32920), (140, 32911), (141, 32908), (146, 32884),

Gene: Arcanine_45 Start: 32773, Stop: 32288, Start Num: 52

Candidate Starts for Arcanine_45:

(40, 32812), (Start: 52 @32773 has 32 MA's), (Start: 69 @32731 has 2 MA's), (Start: 81 @32677 has 1 MA's), (100, 32602), (104, 32578), (107, 32566), (109, 32560), (110, 32557), (132, 32410), (137, 32374), (146, 32317),

Gene: Auxilium_79 Start: 44205, Stop: 44636, Start Num: 51

Candidate Starts for Auxilium_79:

(Start: 46 @44190 has 1 MA's), (Start: 51 @44205 has 2 MA's), (91, 44313), (119, 44466), (120, 44469),

Gene: Awesomesauce_74 Start: 45209, Stop: 45796, Start Num: 18

Candidate Starts for Awesomesauce_74:

(10, 45155), (Start: 18 @45209 has 4 MA's), (24, 45227), (33, 45260), (35, 45269), (Start: 37 @45284 has 3 MA's), (65, 45365), (84, 45431), (103, 45503), (112, 45554), (119, 45605), (130, 45656), (133, 45680), (140, 45737),

Gene: Beatrix_43 Start: 34176, Stop: 33691, Start Num: 52

Candidate Starts for Beatrix_43:

(40, 34215), (Start: 52 @34176 has 32 MA's), (Start: 69 @34134 has 2 MA's), (Start: 81 @34080 has 1 MA's), (100, 34005), (104, 33981), (107, 33969), (109, 33963), (110, 33960), (113, 33927), (125, 33846), (132, 33813), (140, 33747), (141, 33744), (142, 33735), (146, 33720),

Gene: Beelzebub_55 Start: 29418, Stop: 29891, Start Num: 55

Candidate Starts for Beelzebub_55:

(Start: 55 @29418 has 8 MA's), (Start: 63 @29448 has 1 MA's), (86, 29529), (107, 29619), (118, 29694), (138, 29817), (144, 29856), (147, 29862),

Gene: Bexan_42 Start: 33854, Stop: 33369, Start Num: 52

Candidate Starts for Bexan_42:

(40, 33893), (Start: 52 @33854 has 32 MA's), (Start: 69 @33812 has 2 MA's), (Start: 81 @33758 has 1 MA's), (100, 33683), (104, 33659), (107, 33647), (109, 33641), (110, 33638), (132, 33491), (137, 33455), (146, 33398),

Gene: BigPaolini_44 Start: 31801, Stop: 31358, Start Num: 69

Candidate Starts for BigPaolini_44:

(40, 31882), (Start: 52 @31843 has 32 MA's), (Start: 69 @31801 has 2 MA's), (Start: 81 @31747 has 1 MA's), (100, 31672), (104, 31648), (107, 31636), (109, 31630), (110, 31627), (132, 31480), (137, 31444), (146, 31387),

Gene: BillKnuckles_44 Start: 33515, Stop: 33039, Start Num: 52

Candidate Starts for BillKnuckles_44:

(Start: 52 @33515 has 32 MA's), (59, 33497), (68, 33476), (83, 33413), (118, 33239), (132, 33161), (139, 33104), (140, 33095), (141, 33092), (146, 33068),

Gene: Blackbeetle_51 Start: 28464, Stop: 28937, Start Num: 55

Candidate Starts for Blackbeetle_51:

(Start: 55 @28464 has 8 MA's), (Start: 63 @28494 has 1 MA's), (86, 28575), (107, 28665), (118, 28740), (138, 28863), (144, 28902), (147, 28908),

Gene: BluSpix_42 Start: 28937, Stop: 28461, Start Num: 52

Candidate Starts for BluSpix_42:

(Start: 52 @28937 has 32 MA's), (59, 28919), (68, 28898), (83, 28835), (90, 28814), (118, 28661), (132, 28583), (139, 28526), (140, 28517), (141, 28514), (146, 28490),

Gene: BobBob_38 Start: 35578, Stop: 35108, Start Num: 56

Candidate Starts for BobBob_38:

(5, 35776), (7, 35767), (17, 35707), (21, 35698), (31, 35662), (Start: 56 @35578 has 8 MA's), (90, 35452), (96, 35434), (105, 35389), (109, 35371), (115, 35326), (119, 35290), (135, 35212),

Gene: Bones_44 Start: 33339, Stop: 32854, Start Num: 52

Candidate Starts for Bones_44:

(40, 33378), (Start: 52 @33339 has 32 MA's), (Start: 69 @33297 has 2 MA's), (Start: 81 @33243 has 1 MA's), (100, 33168), (104, 33144), (107, 33132), (109, 33126), (110, 33123), (132, 32976), (137, 32940), (146, 32883),

Gene: Brandonk123_42 Start: 36713, Stop: 36243, Start Num: 56

Candidate Starts for Brandonk123_42:

(5, 36911), (7, 36902), (17, 36842), (21, 36833), (31, 36797), (Start: 56 @36713 has 8 MA's), (90, 36587), (96, 36569), (105, 36524), (109, 36506), (115, 36461), (119, 36425), (135, 36347),

Gene: BrutonGaster_75 Start: 52573, Stop: 53064, Start Num: 46

Candidate Starts for BrutonGaster_75:

(Start: 46 @52573 has 1 MA's), (92, 52717), (106, 52774), (109, 52780), (118, 52852), (119, 52861), (129, 52921),

Gene: Charming_41 Start: 36214, Stop: 35744, Start Num: 56

Candidate Starts for Charming_41:

(5, 36412), (7, 36403), (17, 36343), (21, 36334), (31, 36298), (Start: 56 @36214 has 8 MA's), (90, 36088), (96, 36070), (105, 36025), (109, 36007), (115, 35962), (119, 35926), (135, 35848),

Gene: CherryTomatoes_169 Start: 123046, Stop: 122573, Start Num: 48

Candidate Starts for CherryTomatoes_169:

(9, 123214), (13, 123169), (14, 123166), (Start: 48 @123046 has 1 MA's), (Start: 60 @123016 has 2 MA's), (85, 122929), (119, 122755), (131, 122689),

Gene: Chidiebere_122 Start: 85918, Stop: 86616, Start Num: 20

Candidate Starts for Chidiebere_122:

(Start: 20 @85918 has 3 MA's), (39, 85990), (47, 86017), (58, 86050), (70, 86080), (87, 86152), (88, 86155), (97, 86188), (98, 86191), (107, 86236), (109, 86245), (119, 86326), (122, 86365), (143, 86509), (145, 86518), (155, 86563), (157, 86608),

Gene: Ciao_44 Start: 32944, Stop: 32501, Start Num: 69

Candidate Starts for Ciao_44:

(12, 33121), (40, 33025), (Start: 52 @32986 has 32 MA's), (Start: 69 @32944 has 2 MA's), (Start: 81 @32890 has 1 MA's), (100, 32815), (104, 32791), (107, 32779), (109, 32773), (110, 32770), (132, 32623), (137, 32587), (146, 32530),

Gene: Clarkson_52 Start: 29146, Stop: 29619, Start Num: 55

Candidate Starts for Clarkson_52:

(Start: 55 @29146 has 8 MA's), (Start: 63 @29176 has 1 MA's), (86, 29257), (107, 29347), (118, 29422), (138, 29545), (144, 29584), (147, 29590),

Gene: Dexes_44 Start: 33602, Stop: 33117, Start Num: 52

Candidate Starts for Dexes_44:

(40, 33641), (Start: 52 @33602 has 32 MA's), (Start: 69 @33560 has 2 MA's), (Start: 81 @33506 has 1 MA's), (100, 33431), (104, 33407), (107, 33395), (109, 33389), (110, 33386), (132, 33239), (137, 33203), (146, 33146),

Gene: DocMcStuffins_73 Start: 46126, Stop: 46713, Start Num: 18

Candidate Starts for DocMcStuffins_73:

(10, 46072), (Start: 18 @46126 has 4 MA's), (24, 46144), (33, 46177), (35, 46186), (Start: 37 @46201 has 3 MA's), (65, 46282), (84, 46348), (103, 46420), (112, 46471), (119, 46522), (130, 46573), (133, 46597), (140, 46654),

Gene: Emma1919_210 Start: 103175, Stop: 103651, Start Num: 50

Candidate Starts for Emma1919_210:

(Start: 50 @103175 has 5 MA's), (98, 103319), (99, 103322), (110, 103370), (114, 103406), (121, 103484),

Gene: EvePickles_81 Start: 47374, Stop: 47805, Start Num: 51

Candidate Starts for EvePickles_81:

(Start: 46 @47359 has 1 MA's), (Start: 51 @47374 has 2 MA's), (119, 47635), (120, 47638),

Gene: Eyeball_45 Start: 33249, Stop: 32764, Start Num: 52

Candidate Starts for Eyeball_45:

(40, 33288), (Start: 52 @33249 has 32 MA's), (Start: 69 @33207 has 2 MA's), (Start: 81 @33153 has 1 MA's), (100, 33078), (104, 33054), (107, 33042), (109, 33036), (110, 33033), (132, 32886), (137, 32850), (146, 32793),

Gene: Fajezeel_46 Start: 33359, Stop: 32874, Start Num: 52

Candidate Starts for Fajezeel_46:

(12, 33494), (40, 33398), (Start: 52 @33359 has 32 MA's), (Start: 69 @33317 has 2 MA's), (Start: 81 @33263 has 1 MA's), (100, 33188), (104, 33164), (107, 33152), (109, 33146), (110, 33143), (132, 32996), (137, 32960), (146, 32903),

Gene: Fenn_45 Start: 34680, Stop: 34195, Start Num: 52

Candidate Starts for Fenn_45:

(40, 34719), (Start: 52 @34680 has 32 MA's), (Start: 69 @34638 has 2 MA's), (Start: 81 @34584 has 1 MA's), (100, 34509), (104, 34485), (107, 34473), (109, 34467), (110, 34464), (132, 34317), (137, 34281), (146, 34224),

Gene: Finkle_69 Start: 42637, Stop: 43176, Start Num: 44

Candidate Starts for Finkle_69:

(1, 42163), (8, 42487), (Start: 44 @42637 has 1 MA's), (72, 42715), (77, 42733), (101, 42832), (119, 42955), (133, 43015), (143, 43087),

Gene: Forrest_210 Start: 104141, Stop: 104617, Start Num: 50

Candidate Starts for Forrest_210:

(Start: 50 @104141 has 5 MA's), (98, 104285), (99, 104288), (110, 104336), (114, 104372), (121, 104450),

Gene: Forrest_171 Start: 88900, Stop: 89394, Start Num: 50

Candidate Starts for Forrest_171:

(Start: 50 @88900 has 5 MA's), (96, 89029), (98, 89041), (112, 89119), (115, 89134), (119, 89170), (143, 89323), (153, 89368), (154, 89374),

Gene: Fushigi_42 Start: 30914, Stop: 30438, Start Num: 52

Candidate Starts for Fushigi_42:

(Start: 52 @30914 has 32 MA's), (59, 30896), (68, 30875), (83, 30812), (90, 30791), (118, 30638), (132, 30560), (139, 30503), (140, 30494), (141, 30491), (146, 30467),

Gene: Gezellig_84 Start: 55587, Stop: 55165, Start Num: 75

Candidate Starts for Gezellig_84:

(42, 55686), (Start: 44 @55680 has 1 MA's), (47, 55668), (61, 55632), (75, 55587), (79, 55572), (97, 55494), (102, 55467), (107, 55446), (111, 55422), (143, 55212), (146, 55200), (151, 55176),

Gene: GiJojo_54 Start: 20818, Stop: 21288, Start Num: 60

Candidate Starts for GiJojo_54:

(Start: 60 @20818 has 2 MA's), (71, 20854), (80, 20896), (107, 21010), (114, 21055), (116, 21064), (117, 21067), (119, 21097), (131, 21163), (139, 21223), (143, 21247), (145, 21256), (148, 21268),

Gene: Goby_56 Start: 42305, Stop: 41778, Start Num: 37

Candidate Starts for Goby_56:

(Start: 20 @42374 has 3 MA's), (Start: 37 @42305 has 3 MA's), (94, 42131), (119, 41987), (127, 41942), (139, 41858), (143, 41834),

Gene: Greg_46 Start: 33359, Stop: 32874, Start Num: 52

Candidate Starts for Greg_46:

(12, 33494), (40, 33398), (Start: 52 @33359 has 32 MA's), (Start: 69 @33317 has 2 MA's), (Start: 81 @33263 has 1 MA's), (100, 33188), (104, 33164), (107, 33152), (109, 33146), (110, 33143), (132, 32996), (137, 32960), (146, 32903),

Gene: Huphleuff_53 Start: 28951, Stop: 29424, Start Num: 55

Candidate Starts for Huphleuff_53:

(Start: 55 @28951 has 8 MA's), (Start: 63 @28981 has 1 MA's), (86, 29062), (107, 29152), (118, 29227), (138, 29350), (144, 29389), (147, 29395),

Gene: ILeeKay_48 Start: 33858, Stop: 33382, Start Num: 52

Candidate Starts for ILeeKay_48:

(Start: 52 @33858 has 32 MA's), (59, 33840), (68, 33819), (83, 33756), (90, 33735), (118, 33582), (132, 33504), (139, 33447), (140, 33438), (141, 33435), (146, 33411),

Gene: IgnatiusPatJac_43 Start: 32882, Stop: 32406, Start Num: 52

Candidate Starts for IgnatiusPatJac_43:

(Start: 52 @32882 has 32 MA's), (59, 32864), (68, 32843), (83, 32780), (90, 32759), (118, 32606), (132, 32528), (139, 32471), (140, 32462), (141, 32459), (146, 32435),

Gene: Jada_168 Start: 87596, Stop: 88090, Start Num: 50

Candidate Starts for Jada_168:

(Start: 50 @87596 has 5 MA's), (96, 87725), (98, 87737), (112, 87815), (115, 87830), (119, 87866), (143, 88019), (153, 88064), (154, 88070),

Gene: Jalebi_69 Start: 49016, Stop: 49408, Start Num: 76

Candidate Starts for Jalebi_69:

(74, 49013), (Start: 76 @49016 has 2 MA's), (107, 49139), (108, 49142), (117, 49196), (119, 49226), (124, 49262), (143, 49376),

Gene: JonJames_73 Start: 49905, Stop: 50405, Start Num: 45

Candidate Starts for JonJames_73:

(Start: 45 @49905 has 2 MA's), (78, 49998), (82, 50019), (98, 50073), (106, 50112), (117, 50169), (119, 50199), (126, 50253), (133, 50286), (143, 50361),

Gene: Kabocha_123 Start: 86731, Stop: 87429, Start Num: 20

Candidate Starts for Kabocha_123:

(Start: 20 @86731 has 3 MA's), (39, 86803), (47, 86830), (58, 86863), (70, 86893), (87, 86965), (88, 86968), (97, 87001), (98, 87004), (107, 87049), (109, 87058), (119, 87139), (122, 87178), (143, 87322), (145, 87331), (155, 87376), (157, 87421),

Gene: Kykar_44 Start: 32934, Stop: 32458, Start Num: 52

Candidate Starts for Kykar_44:

(Start: 52 @32934 has 32 MA's), (59, 32916), (68, 32895), (83, 32832), (90, 32811), (118, 32658), (132, 32580), (139, 32523), (140, 32514), (141, 32511), (146, 32487),

Gene: Licorice_47 Start: 34445, Stop: 33960, Start Num: 52

Candidate Starts for Licorice_47:

(40, 34484), (Start: 52 @34445 has 32 MA's), (Start: 69 @34403 has 2 MA's), (Start: 81 @34349 has 1 MA's), (100, 34274), (104, 34250), (107, 34238), (109, 34232), (110, 34229), (132, 34082), (137, 34046), (146, 33989),

Gene: Lika_55 Start: 42316, Stop: 41774, Start Num: 37

Candidate Starts for Lika_55:

(Start: 37 @42316 has 3 MA's), (119, 41986), (139, 41857),

Gene: Lilbit_52 Start: 29147, Stop: 29620, Start Num: 55

Candidate Starts for Lilbit_52:

(Start: 55 @29147 has 8 MA's), (Start: 63 @29177 has 1 MA's), (86, 29258), (107, 29348), (118, 29423), (138, 29546), (144, 29585), (147, 29591),

Gene: LittleLaf_51 Start: 28906, Stop: 29349, Start Num: 63

Candidate Starts for LittleLaf_51:

(Start: 55 @28876 has 8 MA's), (Start: 63 @28906 has 1 MA's), (86, 28987), (107, 29077), (118, 29152), (138, 29275), (144, 29314), (147, 29320),

Gene: Love_44 Start: 37647, Stop: 37177, Start Num: 56

Candidate Starts for Love_44:

(5, 37845), (7, 37836), (17, 37776), (21, 37767), (31, 37731), (Start: 56 @37647 has 8 MA's), (90, 37521), (96, 37503), (105, 37458), (109, 37440), (115, 37395), (119, 37359), (135, 37281),

Gene: Lysidious_72 Start: 45013, Stop: 45621, Start Num: 15

Candidate Starts for Lysidious_72:

(Start: 15 @45013 has 2 MA's), (26, 45040), (35, 45079), (Start: 52 @45139 has 32 MA's), (88, 45256), (89, 45262), (108, 45343), (109, 45346), (136, 45520), (140, 45553), (152, 45604),

Gene: Marge_44 Start: 33477, Stop: 32992, Start Num: 52

Candidate Starts for Marge_44:

(40, 33516), (Start: 52 @33477 has 32 MA's), (Start: 69 @33435 has 2 MA's), (Start: 81 @33381 has 1 MA's), (100, 33306), (104, 33282), (107, 33270), (109, 33264), (110, 33261), (132, 33114), (137, 33078), (146, 33021),

Gene: Marky_43 Start: 31173, Stop: 31622, Start Num: 49

Candidate Starts for Marky_43:

(Start: 49 @31173 has 1 MA's), (Start: 52 @31179 has 32 MA's), (53, 31182), (104, 31344), (109, 31359), (116, 31404), (118, 31428), (140, 31572),

Gene: Mbo2_93 Start: 66190, Stop: 65546, Start Num: 41

Candidate Starts for Mbo2_93:

(Start: 37 @66199 has 3 MA's), (41, 66190), (57, 66142), (72, 66094), (80, 66058), (120, 65854), (134, 65770), (149, 65671), (150, 65668), (158, 65590), (159, 65566),

Gene: Megiddo_61 Start: 41199, Stop: 41795, Start Num: 19

Candidate Starts for Megiddo_61:

(2, 41016), (11, 41172), (Start: 19 @41199 has 2 MA's), (28, 41220), (35, 41256), (Start: 37 @41271 has 3 MA's), (Start: 52 @41316 has 32 MA's), (67, 41355), (118, 41595), (123, 41634), (131, 41670), (140, 41736), (147, 41763),

Gene: Misha28_72 Start: 45214, Stop: 45801, Start Num: 18

Candidate Starts for Misha28_72:

(10, 45160), (Start: 18 @45214 has 4 MA's), (24, 45232), (33, 45265), (35, 45274), (Start: 37 @45289 has 3 MA's), (65, 45370), (84, 45436), (103, 45508), (112, 45559), (119, 45610), (130, 45661), (133, 45685), (140, 45742),

Gene: Naira_45 Start: 34727, Stop: 34242, Start Num: 52

Candidate Starts for Naira_45:

(40, 34766), (Start: 52 @34727 has 32 MA's), (Start: 69 @34685 has 2 MA's), (Start: 81 @34631 has 1 MA's), (100, 34556), (104, 34532), (107, 34520), (109, 34514), (110, 34511), (132, 34364), (137, 34328), (146, 34271),

Gene: Niza_46 Start: 34104, Stop: 33619, Start Num: 52

Candidate Starts for Niza_46:

(40, 34143), (Start: 52 @34104 has 32 MA's), (Start: 69 @34062 has 2 MA's), (Start: 81 @34008 has 1 MA's), (100, 33933), (104, 33909), (107, 33897), (109, 33891), (110, 33888), (132, 33741), (137, 33705), (146, 33648),

Gene: Nordenberg_35 Start: 35840, Stop: 35370, Start Num: 56

Candidate Starts for Nordenberg_35:

(5, 36038), (7, 36029), (17, 35969), (21, 35960), (31, 35924), (Start: 56 @35840 has 8 MA's), (90, 35714), (96, 35696), (105, 35651), (109, 35633), (115, 35588), (119, 35552), (135, 35474),

Gene: Paries_43 Start: 37309, Stop: 36839, Start Num: 56

Candidate Starts for Paries_43:

(5, 37507), (7, 37498), (17, 37438), (21, 37429), (31, 37393), (Start: 56 @37309 has 8 MA's), (90, 37183), (96, 37165), (105, 37120), (109, 37102), (115, 37057), (119, 37021), (135, 36943),

Gene: Petruccio_44 Start: 32947, Stop: 32471, Start Num: 52

Candidate Starts for Petruccio_44:

(Start: 52 @32947 has 32 MA's), (59, 32929), (68, 32908), (83, 32845), (90, 32824), (118, 32671), (132, 32593), (139, 32536), (140, 32527), (141, 32524), (146, 32500),

Gene: Phayonce_65 Start: 43286, Stop: 43876, Start Num: 22

Candidate Starts for Phayonce_65:

(Start: 22 @43286 has 1 MA's), (27, 43298), (32, 43322), (43, 43364), (67, 43436), (118, 43676), (123, 43715), (131, 43751), (140, 43817), (147, 43844),

Gene: Phrank15_86 Start: 46988, Stop: 47386, Start Num: 66

Candidate Starts for Phrank15_86:

(Start: 46 @46937 has 1 MA's), (Start: 51 @46952 has 2 MA's), (66, 46988), (107, 47129), (119, 47213), (120, 47216),

Gene: Phredrick_212 Start: 102971, Stop: 103447, Start Num: 50

Candidate Starts for Phredrick_212:

(Start: 50 @102971 has 5 MA's), (98, 103115), (99, 103118), (110, 103166), (114, 103202), (121, 103280),

Gene: Pippin_46 Start: 33403, Stop: 32918, Start Num: 52

Candidate Starts for Pippin_46:

(12, 33538), (40, 33442), (Start: 52 @33403 has 32 MA's), (Start: 69 @33361 has 2 MA's), (Start: 81 @33307 has 1 MA's), (100, 33232), (104, 33208), (107, 33196), (109, 33190), (110, 33187), (132, 33040), (137, 33004), (146, 32947),

Gene: Poise_51 Start: 28464, Stop: 28937, Start Num: 55

Candidate Starts for Poise_51:

(Start: 55 @28464 has 8 MA's), (Start: 63 @28494 has 1 MA's), (86, 28575), (107, 28665), (118, 28740), (138, 28863), (144, 28902), (147, 28908),

Gene: Pringar_51 Start: 28752, Stop: 29225, Start Num: 55

Candidate Starts for Pringar_51:

(Start: 55 @28752 has 8 MA's), (Start: 63 @28782 has 1 MA's), (86, 28863), (107, 28953), (118, 29028), (138, 29151), (144, 29190), (147, 29196),

Gene: Raela_51 Start: 29019, Stop: 29492, Start Num: 55

Candidate Starts for Raela_51:

(Start: 55 @29019 has 8 MA's), (Start: 63 @29049 has 1 MA's), (86, 29130), (107, 29220), (118, 29295), (138, 29418), (144, 29457), (147, 29463),

Gene: Rajelicia_45 Start: 33435, Stop: 32950, Start Num: 52

Candidate Starts for Rajelicia_45:

(40, 33474), (Start: 52 @33435 has 32 MA's), (Start: 69 @33393 has 2 MA's), (Start: 81 @33339 has 1 MA's), (100, 33264), (104, 33240), (107, 33228), (109, 33222), (110, 33219), (132, 33072), (137, 33036), (146, 32979),

Gene: Ringer_45 Start: 33671, Stop: 33282, Start Num: 81

Candidate Starts for Ringer_45:

(40, 33806), (Start: 52 @33767 has 32 MA's), (Start: 69 @33725 has 2 MA's), (Start: 81 @33671 has 1 MA's), (100, 33596), (104, 33572), (107, 33560), (109, 33554), (110, 33551), (132, 33404), (137, 33368), (146, 33311),

Gene: Rofo_41 Start: 36635, Stop: 36165, Start Num: 56

Candidate Starts for Rofo_41:

(5, 36833), (7, 36824), (17, 36764), (21, 36755), (31, 36719), (Start: 56 @36635 has 8 MA's), (90, 36509), (96, 36491), (105, 36446), (109, 36428), (115, 36383), (119, 36347), (135, 36269),

Gene: Ruotula_47 Start: 34572, Stop: 34078, Start Num: 52

Candidate Starts for Ruotula_47:

(40, 34611), (Start: 52 @34572 has 32 MA's), (Start: 69 @34530 has 2 MA's), (Start: 81 @34476 has 1 MA's), (100, 34401), (104, 34377), (107, 34365), (109, 34359), (110, 34356), (132, 34200), (137, 34164), (146, 34107),

Gene: SCentae_166 Start: 121636, Stop: 122217, Start Num: 25

Candidate Starts for SCentae_166:

(Start: 25 @121636 has 1 MA's), (38, 121693), (98, 121873), (128, 122059), (136, 122125),

Gene: Sagefire_47 Start: 34321, Stop: 33836, Start Num: 52

Candidate Starts for Sagefire_47:

(40, 34360), (Start: 52 @34321 has 32 MA's), (Start: 69 @34279 has 2 MA's), (Start: 81 @34225 has 1 MA's), (100, 34150), (104, 34126), (107, 34114), (109, 34108), (110, 34105), (132, 33958), (137, 33922), (146, 33865),

Gene: Sampudon_70 Start: 49016, Stop: 49408, Start Num: 76

Candidate Starts for Sampudon_70:

(74, 49013), (Start: 76 @49016 has 2 MA's), (107, 49139), (108, 49142), (117, 49196), (119, 49226), (124, 49262), (143, 49376),

Gene: Schomber_120 Start: 85119, Stop: 85817, Start Num: 20

Candidate Starts for Schomber_120:

(Start: 20 @85119 has 3 MA's), (39, 85191), (47, 85218), (58, 85251), (70, 85281), (87, 85353), (88, 85356), (97, 85389), (98, 85392), (107, 85437), (109, 85446), (119, 85527), (122, 85566), (143, 85710), (145, 85719), (155, 85764), (157, 85809),

Gene: Seanderson_46 Start: 33923, Stop: 33447, Start Num: 52

Candidate Starts for Seanderson_46:

(Start: 52 @33923 has 32 MA's), (59, 33905), (68, 33884), (83, 33821), (90, 33800), (118, 33647), (132, 33569), (139, 33512), (140, 33503), (141, 33500), (146, 33476),

Gene: SkinnyPete_53 Start: 35995, Stop: 36582, Start Num: 18

Candidate Starts for SkinnyPete_53:

(10, 35941), (Start: 18 @35995 has 4 MA's), (24, 36013), (33, 36046), (35, 36055), (Start: 37 @36070 has 3 MA's), (65, 36151), (84, 36217), (103, 36289), (112, 36340), (119, 36391), (130, 36442), (133, 36466), (140, 36523),

Gene: Slagathor_46 Start: 33360, Stop: 32875, Start Num: 52

Candidate Starts for Slagathor_46:

(40, 33399), (Start: 52 @33360 has 32 MA's), (Start: 69 @33318 has 2 MA's), (Start: 81 @33264 has 1 MA's), (100, 33189), (104, 33165), (107, 33153), (109, 33147), (110, 33144), (132, 32997), (137, 32961), (146, 32904),

Gene: Smairt_46 Start: 33659, Stop: 33174, Start Num: 52

Candidate Starts for Smairt_46:

(40, 33698), (Start: 52 @33659 has 32 MA's), (Start: 69 @33617 has 2 MA's), (Start: 81 @33563 has 1 MA's), (100, 33488), (104, 33464), (107, 33452), (109, 33446), (110, 33443), (132, 33296), (137, 33260), (146, 33203),

Gene: Spooky_106 Start: 55742, Stop: 56233, Start Num: 64

Candidate Starts for Spooky_106:

(4, 55508), (6, 55517), (16, 55583), (23, 55598), (30, 55625), (36, 55652), (Start: 64 @55742 has 1 MA's), (93, 55859), (95, 55862), (96, 55865), (112, 55967), (118, 56009), (119, 56018), (144, 56180), (151, 56210),

Gene: StrongArm_43 Start: 33982, Stop: 33497, Start Num: 52

Candidate Starts for StrongArm_43:

(40, 34021), (Start: 52 @33982 has 32 MA's), (Start: 69 @33940 has 2 MA's), (Start: 81 @33886 has 1 MA's), (100, 33811), (104, 33787), (107, 33775), (109, 33769), (110, 33766), (132, 33619), (137, 33583), (146, 33526),

Gene: Tangent_41 Start: 36226, Stop: 35756, Start Num: 56

Candidate Starts for Tangent_41:

(5, 36424), (7, 36415), (17, 36355), (21, 36346), (31, 36310), (Start: 56 @36226 has 8 MA's), (90, 36100), (96, 36082), (105, 36037), (109, 36019), (115, 35974), (119, 35938), (135, 35860),

Gene: Teodoridan_42 Start: 32338, Stop: 31949, Start Num: 81

Candidate Starts for Teodoridan_42:

(40, 32473), (Start: 52 @32434 has 32 MA's), (Start: 69 @32392 has 2 MA's), (Start: 81 @32338 has 1 MA's), (100, 32263), (104, 32239), (107, 32227), (109, 32221), (110, 32218), (132, 32071), (137, 32035), (146, 31978),

Gene: TheloniousMonk_45 Start: 34368, Stop: 33883, Start Num: 52

Candidate Starts for TheloniousMonk_45:

(40, 34407), (Start: 52 @34368 has 32 MA's), (Start: 69 @34326 has 2 MA's), (Start: 81 @34272 has 1 MA's), (100, 34197), (104, 34173), (107, 34161), (109, 34155), (110, 34152), (132, 34005), (137, 33969), (146, 33912),

Gene: ThulaThula_69 Start: 44706, Stop: 45302, Start Num: 19

Candidate Starts for ThulaThula_69:

(3, 44622), (11, 44679), (Start: 19 @44706 has 2 MA's), (28, 44727), (35, 44763), (Start: 37 @44778 has 3 MA's), (Start: 52 @44823 has 32 MA's), (67, 44862), (118, 45102), (123, 45141), (131, 45177), (140, 45243), (147, 45270),

Gene: Toma_56 Start: 42308, Stop: 41778, Start Num: 37

Candidate Starts for Toma_56:

(Start: 20 @42377 has 3 MA's), (Start: 37 @42308 has 3 MA's), (94, 42131), (119, 41987), (127, 41942), (139, 41858), (143, 41834),

Gene: TootsiePop_72 Start: 45214, Stop: 45801, Start Num: 18

Candidate Starts for TootsiePop_72:

(10, 45160), (Start: 18 @45214 has 4 MA's), (24, 45232), (33, 45265), (35, 45274), (Start: 37 @45289 has 3 MA's), (65, 45370), (84, 45436), (103, 45508), (112, 45559), (119, 45610), (130, 45661), (133, 45685), (140, 45742),

Gene: Trouble_45 Start: 34048, Stop: 33572, Start Num: 52

Candidate Starts for Trouble_45:

(Start: 52 @34048 has 32 MA's), (59, 34030), (68, 34009), (83, 33946), (90, 33925), (118, 33772), (132, 33694), (139, 33637), (140, 33628), (141, 33625), (146, 33601),

Gene: VasuNzinga_51 Start: 28326, Stop: 28799, Start Num: 55

Candidate Starts for VasuNzinga_51:

(Start: 55 @28326 has 8 MA's), (Start: 63 @28356 has 1 MA's), (86, 28437), (107, 28527), (118, 28602), (138, 28725), (144, 28764), (147, 28770),

Gene: Vivi2_43 Start: 37381, Stop: 36914, Start Num: 54

Candidate Starts for Vivi2_43:

(32, 37450), (34, 37441), (Start: 54 @37381 has 1 MA's), (90, 37258), (96, 37240), (105, 37195), (109, 37177), (115, 37132), (119, 37096), (135, 37018),

Gene: Walrus_68 Start: 43422, Stop: 44057, Start Num: 15

Candidate Starts for Walrus_68:

(Start: 15 @43422 has 2 MA's), (29, 43458), (35, 43485), (Start: 52 @43545 has 32 MA's), (88, 43662), (89, 43668), (131, 43899), (156, 44043),

Gene: WilliamBoone_124 Start: 68689, Stop: 69156, Start Num: 62

Candidate Starts for WilliamBoone_124:

(21, 68554), (Start: 62 @68689 has 1 MA's), (73, 68722), (109, 68878), (119, 68962), (133, 69028), (144, 69106),

Gene: Yvonnetastic_71 Start: 47446, Stop: 47946, Start Num: 45

Candidate Starts for Yvonnetastic_71:

(Start: 45 @47446 has 2 MA's), (78, 47539), (82, 47560), (98, 47614), (106, 47653), (117, 47710), (119, 47740), (126, 47794), (133, 47827), (143, 47902),