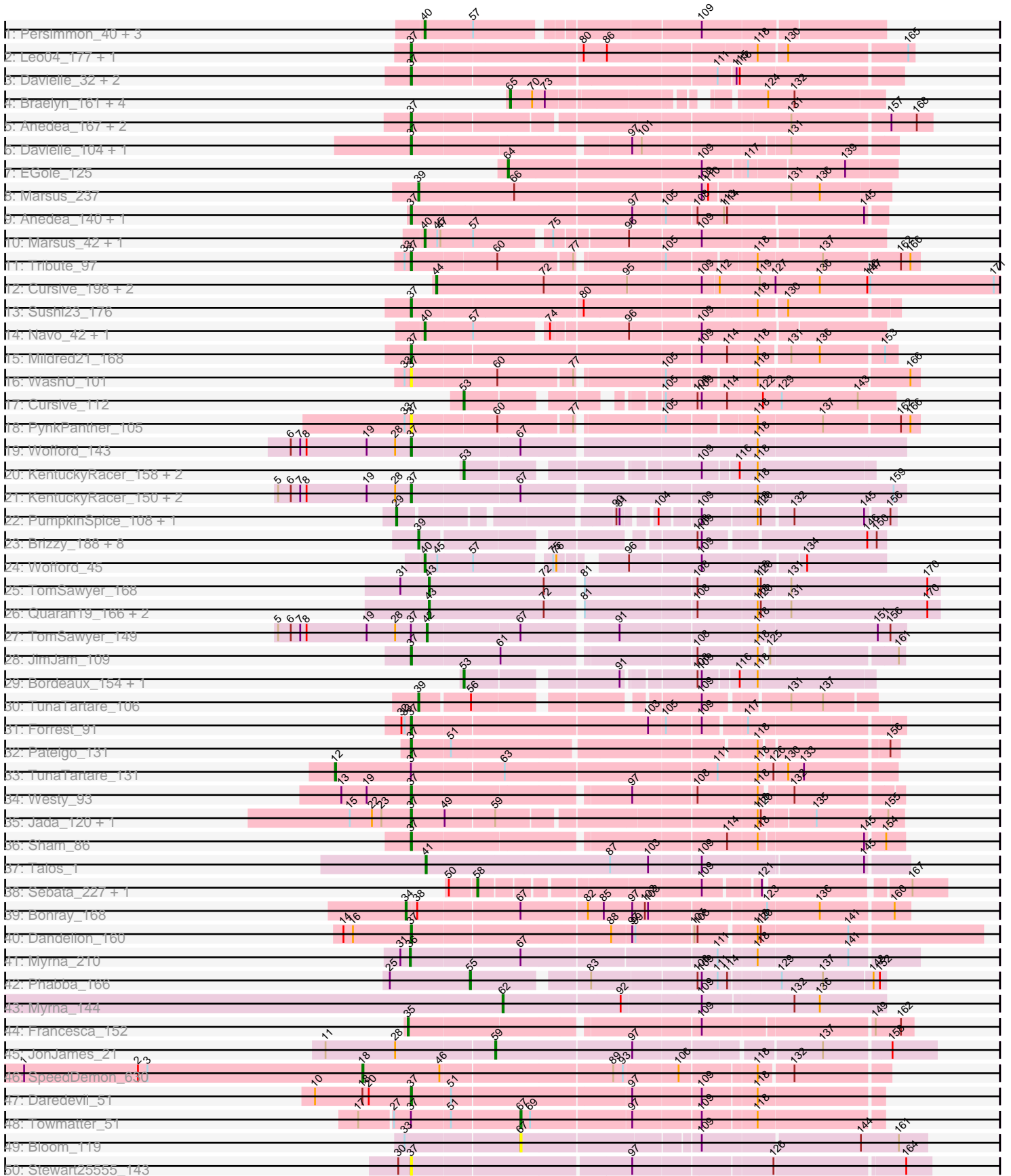
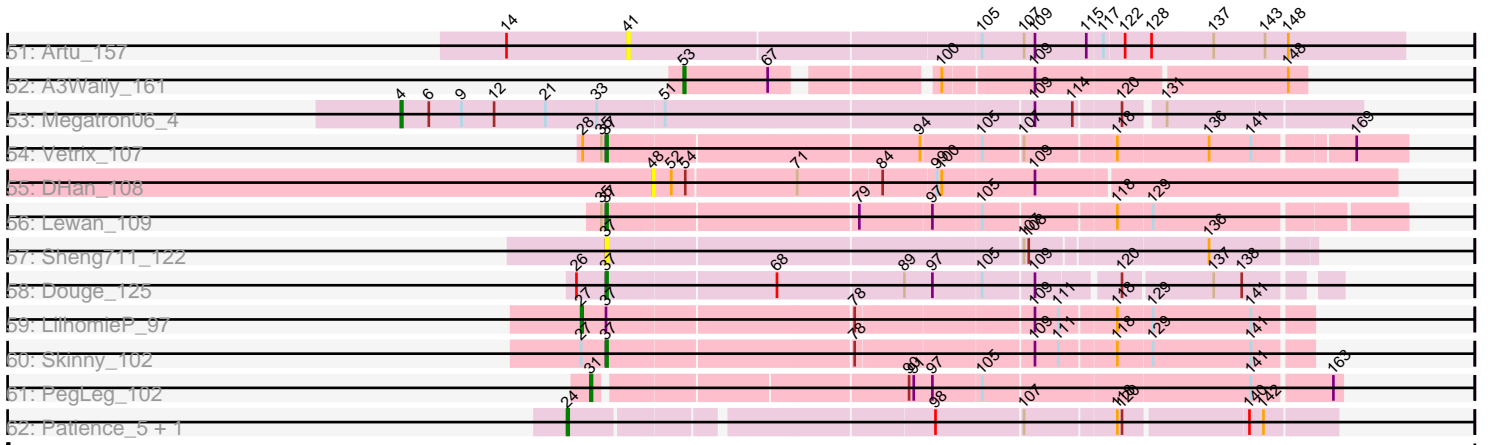


Pham 311433



Pham 311433



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 311433 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311433 has 99 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Persimmon_40, Davielle_41, WhereRU_41, Leo04_45
- Track 2 : Leo04_177, Paradiddles_170
- Track 3 : Davielle_32, PynkPanther_40, WhereRU_32
- Track 4 : Braelyn_161, Davielle_159, Persimmon_159, Navo_157, WhereRU_158
- Track 5 : Anedea_167, Riptide_160, Wofford_171
- Track 6 : Davielle_104, WhereRU_103
- Track 7 : EGole_125
- Track 8 : Marsus_237
- Track 9 : Anedea_140, Mildred21_142
- Track 10 : Marsus_42, Anedea_42
- Track 11 : Tribute_97
- Track 12 : Cursive_198, ArianaSWT_208, Cadmus_194
- Track 13 : Sushi23_176
- Track 14 : Navo_42, Braelyn_43
- Track 15 : Mildred21_168
- Track 16 : WashU_101
- Track 17 : Cursive_112
- Track 18 : PynkPanther_105
- Track 19 : Wofford_143
- Track 20 : KentuckyRacer_158, StarPlatinum_159, MulchMansion_147
- Track 21 : KentuckyRacer_150, CeilingFan_148, JimJam_152
- Track 22 : PumpkinSpice_108, Daisy123_112
- Track 23 : Brizzy_188, JimJam_195, Amabiko_192, KentuckyRacer_193, IchabodCrane_184, TomSawyer_193, Wipeout_181, Spilled_194, Mugiwara_190
- Track 24 : Wofford_45
- Track 25 : TomSawyer_168
- Track 26 : Quarant19_166, Brizzy_163, Enygma_167
- Track 27 : TomSawyer_149
- Track 28 : JimJam_109
- Track 29 : Bordeaux_154, AcciDwight_163
- Track 30 : TunaTartare_106
- Track 31 : Forrest_91
- Track 32 : Patelgo_131
- Track 33 : TunaTartare_131
- Track 34 : Westy_93
- Track 35 : Jada_120, Forrest_124
- Track 36 : Sham_86

- Track 37 : Talos_1
- Track 38 : Sebata_227, Salacia_226
- Track 39 : Bonray_168
- Track 40 : Dandelion_160
- Track 41 : Myrna_210
- Track 42 : Phabba_166
- Track 43 : Myrna_144
- Track 44 : Francesca_152
- Track 45 : JonJames_21
- Track 46 : SpeedDemon_630
- Track 47 : Daredevil_51
- Track 48 : Towmatter_51
- Track 49 : Bloom_119
- Track 50 : Stewart25555_143
- Track 51 : Artu_157
- Track 52 : A3Wally_161
- Track 53 : Megatron06_4
- Track 54 : Vetrix_107
- Track 55 : DHan_108
- Track 56 : Lewan_109
- Track 57 : Sheng711_122
- Track 58 : Douge_125
- Track 59 : LilhomieP_97
- Track 60 : Skinny_102
- Track 61 : PegLeg_102
- Track 62 : Patience_5, Labelle_5

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

The start number called the most often in the published annotations is 37, it was called in 31 of the 88 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_140, Anedea_167, CeilingFan_148, Dandelion_160, Daredevil_51, Davielle_104, Davielle_32, Douge_125, Forrest_124, Forrest_91, Jada_120, JimJam_109, JimJam_152, KentuckyRacer_150, Leo04_177, Lewan_109, Mildred21_142, Mildred21_168, Paradiddles_170, Patelgo_131, PynkPanther_105, PynkPanther_40, Riptide_160, Sham_86, Sheng711_122, Skinny_102, Stewart25555_143, Sushi23_176, Tribute_97, Vetrix_107, WashU_101, Westy_93, WhereRU_103, WhereRU_32, Wofford_143, Wofford_171,

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

- LilhomieP_97, TomSawyer_149, Towmatter_51, TunaTartare_131,

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

- A3Wally_161, AcciDwight_163, Amabiko_192, Anedea_42, ArianaSWT_208, Artu_157, Bloom_119, Bonray_168, Bordeaux_154, Braelyn_161, Braelyn_43, Brizzy_163, Brizzy_188, Cadmus_194, Cursive_112, Cursive_198, DHan_108, Daisy123_112, Davielle_159, Davielle_41, EGole_125, Enygma_167, Francesca_152, IchabodCrane_184, JimJam_195, JonJames_21,

KentuckyRacer_158, KentuckyRacer_193, Labelle_5, Leo04_45, Marsus_237, Marsus_42, Megatron06_4, Mugiwara_190, MulchMansion_147, Myrna_144, Myrna_210, Navo_157, Navo_42, Patience_5, PegLeg_102, Persimmon_159, Persimmon_40, Phabba_166, PumpkinSpice_108, Quaran19_166, Salacia_226, Sebata_227, SpeedDemon_630, Spilled_194, StarPlatinum_159, Talos_1, TomSawyer_168, TomSawyer_193, TunaTartare_106, WhereRU_158, WhereRU_41, Wipeout_181, Wofford_45,

Summary by start number:

Start 4:

- Found in 1 of 99 (1.0%) 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: Megatron06_4 (H1),

Start 12:

- Found in 2 of 99 (2.0%) 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: TunaTartare_131 (BK1),

Start 18:

- Found in 2 of 99 (2.0%) 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: SpeedDemon_630 (DL),

Start 24:

- Found in 2 of 99 (2.0%) 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: Labelle_5 (U), Patience_5 (U),

Start 27:

- Found in 3 of 99 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 33.3% of time when present
- Phage (with cluster) where this start called: LilhomieP_97 (M1),

Start 29:

- Found in 2 of 99 (2.0%) 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: Daisy123_112 (BE2), PumpkinSpice_108 (BE2),

Start 31:

- Found in 3 of 99 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 33.3% of time when present
- Phage (with cluster) where this start called: PegLeg_102 (M1),

Start 34:

- Found in 1 of 99 (1.0%) 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: Bonray_168 (C1),

Start 35:

- Found in 3 of 99 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Francesca_152 (CG),

Start 36:

- Found in 1 of 99 (1.0%) 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: Myrna_210 (C2),

Start 37:

- Found in 40 of 99 (40.4%) of genes in pham
- Manual Annotations of this start: 31 of 88
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Anedea_140 (BE1), Anedea_167 (BE1), CeilingFan_148 (BE2), Dandelion_160 (C1), Daredevil_51 (DL), Davielle_104 (BE1), Davielle_32 (BE1), Douge_125 (L4), Forrest_124 (BK1), Forrest_91 (BK1), Jada_120 (BK1), JimJam_109 (BE2), JimJam_152 (BE2), KentuckyRacer_150 (BE2), Leo04_177 (BE1), Lewan_109 (L2), Mildred21_142 (BE1), Mildred21_168 (BE1), Paradiddles_170 (BE1), Patelgo_131 (BK1), PynkPanther_105 (BE1), PynkPanther_40 (BE1), Riptide_160 (BE1), Sham_86 (BK1), Sheng711_122 (L4), Skinny_102 (M1), Stewart25555_143 (FC), Sushi23_176 (BE1), Tribute_97 (BE1), Vetrux_107 (L2), WashU_101 (BE1), Westy_93 (BK1), WhereRU_103 (BE1), WhereRU_32 (BE1), Wofford_143 (BE2), Wofford_171 (BE2),

Start 39:

- Found in 11 of 99 (11.1%) of genes in pham
- Manual Annotations of this start: 11 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_192 (BE2), Brizzy_188 (BE2), IchabodCrane_184 (BE2), JimJam_195 (BE2), KentuckyRacer_193 (BE2), Marsus_237 (BE1), Mugiwara_190 (BE2), Spilled_194 (BE2), TomSawyer_193 (BE2), TunaTartare_106 (BK1), Wipeout_181 (BE2),

Start 40:

- Found in 9 of 99 (9.1%) of genes in pham
- Manual Annotations of this start: 9 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anedea_42 (BE1), Braelyn_43 (BE1), Davielle_41 (BE1), Leo04_45 (BE1), Marsus_42 (BE1), Navo_42 (BE1), Persimmon_40 (BE1), WhereRU_41 (BE1), Wofford_45 (BE2),

Start 41:

- Found in 2 of 99 (2.0%) 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: Artu_157 (FC), Talos_1 (BS),

Start 42:

- Found in 1 of 99 (1.0%) 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: TomSawyer_149 (BE2),

Start 43:

- Found in 4 of 99 (4.0%) 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: Brizzy_163 (BE2), Enygma_167 (BE2), Quaran19_166 (BE2), TomSawyer_168 (BE2),

Start 44:

- Found in 3 of 99 (3.0%) 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: ArianaSWT_208 (BE1), Cadmus_194 (BE1), Cursive_198 (BE1),

Start 48:

- Found in 1 of 99 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DHan_108 (L2),

Start 53:

- Found in 7 of 99 (7.1%) of genes in pham
- Manual Annotations of this start: 6 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_161 (GD1), AcciDwight_163 (BE2), Bordeaux_154 (BE2), Cursive_112 (BE1), KentuckyRacer_158 (BE2), MulchMansion_147 (BE1), StarPlatinum_159 (BE2),

Start 55:

- Found in 1 of 99 (1.0%) 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: Phabba_166 (C2),

Start 58:

- Found in 2 of 99 (2.0%) 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: Salacia_226 (C1), Sebata_227 (C1),

Start 59:

- Found in 3 of 99 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 33.3% of time when present

- Phage (with cluster) where this start called: JonJames_21 (DD),

Start 62:

- Found in 1 of 99 (1.0%) 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: Myrna_144 (C2),

Start 64:

- Found in 1 of 99 (1.0%) 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: EGole_125 (BE1),

Start 65:

- Found in 5 of 99 (5.1%) 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: Braelyn_161 (BE1), Davielle_159 (BE1), Navo_157 (BE1), Persimmon_159 (BE1), WhereRU_158 (BE1),

Start 67:

- Found in 10 of 99 (10.1%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Bloom_119 (FC), Towmatter_51 (DL),

Summary by clusters:

There are 16 clusters represented in this pham: GD1, DL, DD, H1, CG, M1, L4, FC, L2, BK1, BS, BE2, C2, C1, BE1, U,

Info for manual annotations of cluster BE1:

- Start number 37 was manually annotated 13 times for cluster BE1.
- Start number 39 was manually annotated 1 time for cluster BE1.
- Start number 40 was manually annotated 8 times for cluster BE1.
- Start number 44 was manually annotated 2 times for cluster BE1.
- Start number 53 was manually annotated 2 times for cluster BE1.
- Start number 64 was manually annotated 1 time for cluster BE1.
- Start number 65 was manually annotated 5 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 29 was manually annotated 1 time for cluster BE2.
- Start number 37 was manually annotated 6 times for cluster BE2.
- Start number 39 was manually annotated 9 times for cluster BE2.
- Start number 40 was manually annotated 1 time for cluster BE2.
- Start number 42 was manually annotated 1 time for cluster BE2.
- Start number 43 was manually annotated 4 times for cluster BE2.
- Start number 53 was manually annotated 3 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 12 was manually annotated 1 time for cluster BK1.
- Start number 37 was manually annotated 6 times for cluster BK1.

- Start number 39 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BS:

- Start number 41 was manually annotated 1 time for cluster BS.

Info for manual annotations of cluster C1:

- Start number 34 was manually annotated 1 time for cluster C1.
- Start number 37 was manually annotated 1 time for cluster C1.
- Start number 58 was manually annotated 2 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 36 was manually annotated 1 time for cluster C2.
- Start number 55 was manually annotated 1 time for cluster C2.
- Start number 62 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CG:

- Start number 35 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster DD:

- Start number 59 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DL:

- Start number 18 was manually annotated 1 time for cluster DL.
- Start number 37 was manually annotated 1 time for cluster DL.
- Start number 67 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster GD1:

- Start number 53 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster H1:

- Start number 4 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster L2:

- Start number 37 was manually annotated 2 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 37 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster M1:

- Start number 27 was manually annotated 1 time for cluster M1.
- Start number 31 was manually annotated 1 time for cluster M1.
- Start number 37 was manually annotated 1 time for cluster M1.

Info for manual annotations of cluster U:

- Start number 24 was manually annotated 2 times for cluster U.

Gene Information:

Gene: A3Wally_161 Start: 93240, Stop: 93602, Start Num: 53

Candidate Starts for A3Wally_161:

(Start: 53 @93240 has 6 MA's), (Start: 67 @93294 has 1 MA's), (100, 93381), (109, 93435), (148, 93591),

Gene: AcciDwight_163 Start: 88123, Stop: 88467, Start Num: 53

Candidate Starts for AcciDwight_163:

(Start: 53 @88123 has 6 MA's), (91, 88252), (108, 88312), (109, 88315), (116, 88345), (118, 88360),

Gene: Amabiko_192 Start: 96212, Stop: 96601, Start Num: 39

Candidate Starts for Amabiko_192:

(Start: 39 @96212 has 11 MA's), (108, 96437), (109, 96440), (146, 96584), (150, 96593),

Gene: Anedea_167 Start: 92344, Stop: 92802, Start Num: 37

Candidate Starts for Anedea_167:

(Start: 37 @92344 has 31 MA's), (131, 92674), (157, 92764), (168, 92788),

Gene: Anedea_140 Start: 84644, Stop: 85069, Start Num: 37

Candidate Starts for Anedea_140:

(Start: 37 @84644 has 31 MA's), (97, 84845), (105, 84875), (108, 84902), (113, 84926), (114, 84929), (145, 85052),

Gene: Anedea_42 Start: 21646, Stop: 22047, Start Num: 40

Candidate Starts for Anedea_42:

(Start: 40 @21646 has 9 MA's), (45, 21658), (47, 21661), (57, 21691), (75, 21757), (96, 21820), (109, 21883),

Gene: ArianaSWT_208 Start: 104549, Stop: 105070, Start Num: 44

Candidate Starts for ArianaSWT_208:

(Start: 44 @104549 has 2 MA's), (72, 104651), (95, 104726), (109, 104792), (112, 104807), (119, 104843), (127, 104858), (136, 104900), (146, 104945), (147, 104948), (171, 105065),

Gene: Artu_157 Start: 108175, Stop: 108654, Start Num: 41

Candidate Starts for Artu_157:

(14, 108097), (Start: 41 @108175 has 1 MA's), (105, 108391), (107, 108418), (109, 108424), (115, 108457), (117, 108466), (122, 108478), (128, 108493), (137, 108532), (143, 108565), (148, 108580),

Gene: Bloom_119 Start: 91780, Stop: 92142, Start Num: 67

Candidate Starts for Bloom_119:

(33, 91675), (Start: 67 @91780 has 1 MA's), (109, 91936), (144, 92080), (161, 92116),

Gene: Bonray_168 Start: 94840, Stop: 95289, Start Num: 34

Candidate Starts for Bonray_168:

(Start: 34 @94840 has 1 MA's), (38, 94849), (Start: 67 @94942 has 1 MA's), (82, 95002), (85, 95017), (97, 95044), (102, 95056), (103, 95059), (123, 95161), (136, 95209), (160, 95275),

Gene: Bordeaux_154 Start: 87839, Stop: 88183, Start Num: 53

Candidate Starts for Bordeaux_154:

(Start: 53 @87839 has 6 MA's), (91, 87968), (108, 88028), (109, 88031), (116, 88061), (118, 88076),

Gene: Braelyn_161 Start: 91079, Stop: 91384, Start Num: 65

Candidate Starts for Braelyn_161:

(Start: 65 @91079 has 5 MA's), (70, 91100), (73, 91112), (124, 91277), (132, 91301),

Gene: Braelyn_43 Start: 22198, Stop: 22599, Start Num: 40

Candidate Starts for Braelyn_43:

(Start: 40 @22198 has 9 MA's), (57, 22243), (74, 22306), (96, 22372), (109, 22435),

Gene: Brizzy_188 Start: 96656, Stop: 97045, Start Num: 39

Candidate Starts for Brizzy_188:

(Start: 39 @96656 has 11 MA's), (108, 96881), (109, 96884), (146, 97028), (150, 97037),

Gene: Brizzy_163 Start: 90852, Stop: 91316, Start Num: 43

Candidate Starts for Brizzy_163:

(Start: 43 @90852 has 4 MA's), (72, 90960), (81, 90990), (108, 91092), (118, 91146), (120, 91149), (131, 91176), (170, 91305),

Gene: Cadmus_194 Start: 103833, Stop: 104354, Start Num: 44

Candidate Starts for Cadmus_194:

(Start: 44 @103833 has 2 MA's), (72, 103935), (95, 104010), (109, 104076), (112, 104091), (119, 104127), (127, 104142), (136, 104184), (146, 104229), (147, 104232), (171, 104349),

Gene: CeilingFan_148 Start: 86515, Stop: 86958, Start Num: 37

Candidate Starts for CeilingFan_148:

(5, 86389), (6, 86401), (7, 86410), (8, 86416), (19, 86473), (28, 86500), (Start: 37 @86515 has 31 MA's), (Start: 67 @86614 has 1 MA's), (118, 86821), (159, 86947),

Gene: Cursive_198 Start: 103181, Stop: 103702, Start Num: 44

Candidate Starts for Cursive_198:

(Start: 44 @103181 has 2 MA's), (72, 103283), (95, 103358), (109, 103424), (112, 103439), (119, 103475), (127, 103490), (136, 103532), (146, 103577), (147, 103580), (171, 103697),

Gene: Cursive_112 Start: 77217, Stop: 77573, Start Num: 53

Candidate Starts for Cursive_112:

(Start: 53 @77217 has 6 MA's), (105, 77361), (108, 77391), (109, 77394), (114, 77418), (122, 77448), (129, 77466), (143, 77538),

Gene: DHan_108 Start: 63363, Stop: 63818, Start Num: 48

Candidate Starts for DHan_108:

(48, 63363), (52, 63375), (54, 63384), (71, 63453), (84, 63501), (99, 63534), (100, 63537), (109, 63594),

Gene: Daisy123_112 Start: 73536, Stop: 73943, Start Num: 29

Candidate Starts for Daisy123_112:

(Start: 29 @73536 has 1 MA's), (90, 73713), (91, 73716), (104, 73740), (109, 73773), (118, 73821), (120, 73824), (132, 73851), (145, 73917), (156, 73938),

Gene: Dandelion_160 Start: 94845, Stop: 95354, Start Num: 37

Candidate Starts for Dandelion_160:

(14, 94782), (16, 94791), (Start: 37 @94845 has 31 MA's), (88, 95025), (97, 95043), (99, 95046), (107, 95097), (108, 95100), (118, 95148), (120, 95151), (141, 95232),

Gene: Daredevil_51 Start: 40951, Stop: 41370, Start Num: 37

Candidate Starts for Daredevil_51:

(10, 40861), (Start: 18 @40906 has 1 MA's), (20, 40912), (Start: 37 @40951 has 31 MA's), (51, 40987), (97, 41149), (109, 41209), (118, 41257),

Gene: Davielle_32 Start: 14821, Stop: 14384, Start Num: 37

Candidate Starts for Davielle_32:
(Start: 37 @14821 has 31 MA's), (111, 14548), (115, 14533), (116, 14530),

Gene: Davielle_104 Start: 73218, Stop: 73643, Start Num: 37
Candidate Starts for Davielle_104:
(Start: 37 @73218 has 31 MA's), (97, 73410), (101, 73419), (131, 73548),

Gene: Davielle_41 Start: 21615, Stop: 22016, Start Num: 40
Candidate Starts for Davielle_41:
(Start: 40 @21615 has 9 MA's), (57, 21660), (109, 21852),

Gene: Davielle_159 Start: 90528, Stop: 90833, Start Num: 65
Candidate Starts for Davielle_159:
(Start: 65 @90528 has 5 MA's), (70, 90549), (73, 90561), (124, 90726), (132, 90750),

Gene: Douge_125 Start: 66042, Stop: 66473, Start Num: 37
Candidate Starts for Douge_125:
(26, 66024), (Start: 37 @66042 has 31 MA's), (68, 66147), (89, 66225), (97, 66243), (105, 66273),
(109, 66303), (120, 66351), (137, 66405), (138, 66423),

Gene: EGole_125 Start: 82153, Stop: 82503, Start Num: 64
Candidate Starts for EGole_125:
(Start: 64 @82153 has 1 MA's), (109, 82330), (117, 82369), (139, 82456),

Gene: Enygma_167 Start: 93249, Stop: 93713, Start Num: 43
Candidate Starts for Enygma_167:
(Start: 43 @93249 has 4 MA's), (72, 93357), (81, 93387), (108, 93489), (118, 93543), (120, 93546),
(131, 93573), (170, 93702),

Gene: Forrest_91 Start: 63801, Stop: 64238, Start Num: 37
Candidate Starts for Forrest_91:
(32, 63792), (33, 63795), (Start: 37 @63801 has 31 MA's), (103, 64017), (105, 64032), (109, 64062),
(117, 64098),

Gene: Forrest_124 Start: 77019, Stop: 77447, Start Num: 37
Candidate Starts for Forrest_124:
(15, 76962), (22, 76983), (23, 76992), (Start: 37 @77019 has 31 MA's), (49, 77049), (Start: 59 @77094
has 1 MA's), (118, 77319), (120, 77322), (135, 77370), (155, 77433),

Gene: Francesca_152 Start: 89986, Stop: 90429, Start Num: 35
Candidate Starts for Francesca_152:
(Start: 35 @89986 has 1 MA's), (109, 90241), (149, 90394), (162, 90418),

Gene: IchabodCrane_184 Start: 95913, Stop: 96302, Start Num: 39
Candidate Starts for IchabodCrane_184:
(Start: 39 @95913 has 11 MA's), (108, 96138), (109, 96141), (146, 96285), (150, 96294),

Gene: Jada_120 Start: 75949, Stop: 76377, Start Num: 37
Candidate Starts for Jada_120:
(15, 75892), (22, 75913), (23, 75922), (Start: 37 @75949 has 31 MA's), (49, 75979), (Start: 59 @76024
has 1 MA's), (118, 76249), (120, 76252), (135, 76300), (155, 76363),

Gene: JimJam_195 Start: 97834, Stop: 98223, Start Num: 39

Candidate Starts for JimJam_195:

(Start: 39 @97834 has 11 MA's), (108, 98059), (109, 98062), (146, 98206), (150, 98215),

Gene: JimJam_152 Start: 87443, Stop: 87886, Start Num: 37

Candidate Starts for JimJam_152:

(5, 87317), (6, 87329), (7, 87338), (8, 87344), (19, 87401), (28, 87428), (Start: 37 @87443 has 31 MA's), (Start: 67 @87542 has 1 MA's), (118, 87749), (159, 87875),

Gene: JimJam_109 Start: 73736, Stop: 74164, Start Num: 37

Candidate Starts for JimJam_109:

(Start: 37 @73736 has 31 MA's), (61, 73817), (108, 73985), (118, 74039), (125, 74045), (161, 74159),

Gene: JonJames_21 Start: 7188, Stop: 7577, Start Num: 59

Candidate Starts for JonJames_21:

(11, 7032), (28, 7098), (Start: 59 @7188 has 1 MA's), (97, 7314), (137, 7476), (158, 7536),

Gene: KentuckyRacer_158 Start: 88711, Stop: 89055, Start Num: 53

Candidate Starts for KentuckyRacer_158:

(Start: 53 @88711 has 6 MA's), (109, 88903), (116, 88933), (118, 88948),

Gene: KentuckyRacer_150 Start: 87011, Stop: 87454, Start Num: 37

Candidate Starts for KentuckyRacer_150:

(5, 86885), (6, 86897), (7, 86906), (8, 86912), (19, 86969), (28, 86996), (Start: 37 @87011 has 31 MA's), (Start: 67 @87110 has 1 MA's), (118, 87317), (159, 87443),

Gene: KentuckyRacer_193 Start: 97580, Stop: 97969, Start Num: 39

Candidate Starts for KentuckyRacer_193:

(Start: 39 @97580 has 11 MA's), (108, 97805), (109, 97808), (146, 97952), (150, 97961),

Gene: Labelle_5 Start: 2590, Stop: 3042, Start Num: 24

Candidate Starts for Labelle_5:

(Start: 24 @2590 has 2 MA's), (98, 2803), (107, 2857), (118, 2911), (120, 2914), (140, 2989), (142, 2998),

Gene: Leo04_177 Start: 96224, Stop: 96667, Start Num: 37

Candidate Starts for Leo04_177:

(Start: 37 @96224 has 31 MA's), (80, 96377), (86, 96398), (118, 96530), (130, 96554), (165, 96662),

Gene: Leo04_45 Start: 23281, Stop: 23682, Start Num: 40

Candidate Starts for Leo04_45:

(Start: 40 @23281 has 9 MA's), (57, 23326), (109, 23518),

Gene: Lewan_109 Start: 63302, Stop: 63781, Start Num: 37

Candidate Starts for Lewan_109:

(Start: 35 @63299 has 1 MA's), (Start: 37 @63302 has 31 MA's), (79, 63455), (97, 63500), (105, 63530), (118, 63608), (129, 63629),

Gene: LilhomieP_97 Start: 57511, Stop: 57948, Start Num: 27

Candidate Starts for LilhomieP_97:

(Start: 27 @57511 has 1 MA's), (Start: 37 @57526 has 31 MA's), (78, 57676), (109, 57781), (111, 57796), (118, 57829), (129, 57850), (141, 57913),

Gene: Marsus_237 Start: 116691, Stop: 117125, Start Num: 39

Candidate Starts for Marsus_237:

(Start: 39 @116691 has 11 MA's), (66, 116781), (109, 116952), (110, 116958), (131, 117033), (136, 117060),

Gene: Marsus_42 Start: 21346, Stop: 21747, Start Num: 40

Candidate Starts for Marsus_42:

(Start: 40 @21346 has 9 MA's), (45, 21358), (47, 21361), (57, 21391), (75, 21457), (96, 21520), (109, 21583),

Gene: Megatron06_4 Start: 2094, Stop: 2681, Start Num: 4

Candidate Starts for Megatron06_4:

(Start: 4 @2094 has 1 MA's), (6, 2112), (9, 2133), (Start: 12 @2154 has 1 MA's), (21, 2187), (33, 2220), (51, 2262), (109, 2490), (114, 2514), (120, 2541), (131, 2562),

Gene: Mildred21_168 Start: 90931, Stop: 91365, Start Num: 37

Candidate Starts for Mildred21_168:

(Start: 37 @90931 has 31 MA's), (109, 91192), (114, 91216), (118, 91243), (131, 91270), (136, 91297), (153, 91354),

Gene: Mildred21_142 Start: 85401, Stop: 85826, Start Num: 37

Candidate Starts for Mildred21_142:

(Start: 37 @85401 has 31 MA's), (97, 85602), (105, 85632), (108, 85659), (113, 85683), (114, 85686), (145, 85809),

Gene: Mugiwara_190 Start: 97213, Stop: 97602, Start Num: 39

Candidate Starts for Mugiwara_190:

(Start: 39 @97213 has 11 MA's), (108, 97438), (109, 97441), (146, 97585), (150, 97594),

Gene: MulchMansion_147 Start: 87054, Stop: 87398, Start Num: 53

Candidate Starts for MulchMansion_147:

(Start: 53 @87054 has 6 MA's), (109, 87246), (116, 87276), (118, 87291),

Gene: Myrna_210 Start: 122711, Stop: 123163, Start Num: 36

Candidate Starts for Myrna_210:

(Start: 31 @122702 has 1 MA's), (Start: 36 @122711 has 1 MA's), (Start: 67 @122810 has 1 MA's), (111, 122984), (118, 123017), (141, 123101),

Gene: Myrna_144 Start: 92033, Stop: 92380, Start Num: 62

Candidate Starts for Myrna_144:

(Start: 62 @92033 has 1 MA's), (92, 92141), (109, 92213), (132, 92294), (136, 92318),

Gene: Navo_42 Start: 22093, Stop: 22494, Start Num: 40

Candidate Starts for Navo_42:

(Start: 40 @22093 has 9 MA's), (57, 22138), (74, 22201), (96, 22267), (109, 22330),

Gene: Navo_157 Start: 90460, Stop: 90765, Start Num: 65

Candidate Starts for Navo_157:

(Start: 65 @90460 has 5 MA's), (70, 90481), (73, 90493), (124, 90658), (132, 90682),

Gene: Paradiddles_170 Start: 96596, Stop: 97039, Start Num: 37

Candidate Starts for Paradiddles_170:

(Start: 37 @96596 has 31 MA's), (80, 96749), (86, 96770), (118, 96902), (130, 96926), (165, 97034),

Gene: Patelgo_131 Start: 78593, Stop: 79012, Start Num: 37
Candidate Starts for Patelgo_131:
(Start: 37 @78593 has 31 MA's), (51, 78629), (118, 78893), (156, 79004),

Gene: Patience_5 Start: 2590, Stop: 3042, Start Num: 24
Candidate Starts for Patience_5:
(Start: 24 @2590 has 2 MA's), (98, 2803), (107, 2857), (118, 2911), (120, 2914), (140, 2989), (142, 2998),

Gene: PegLeg_102 Start: 57809, Stop: 58258, Start Num: 31
Candidate Starts for PegLeg_102:
(Start: 31 @57809 has 1 MA's), (90, 57995), (91, 57998), (97, 58010), (105, 58040), (141, 58205), (163, 58253),

Gene: Persimmon_40 Start: 21025, Stop: 21426, Start Num: 40
Candidate Starts for Persimmon_40:
(Start: 40 @21025 has 9 MA's), (57, 21070), (109, 21262),

Gene: Persimmon_159 Start: 89776, Stop: 90081, Start Num: 65
Candidate Starts for Persimmon_159:
(Start: 65 @89776 has 5 MA's), (70, 89797), (73, 89809), (124, 89974), (132, 89998),

Gene: Phabba_166 Start: 92816, Stop: 93178, Start Num: 55
Candidate Starts for Phabba_166:
(25, 92741), (Start: 55 @92816 has 1 MA's), (83, 92915), (108, 93011), (109, 93014), (111, 93029), (114, 93038), (129, 93083), (137, 93122), (148, 93167), (152, 93173),

Gene: PumpkinSpice_108 Start: 73788, Stop: 74195, Start Num: 29
Candidate Starts for PumpkinSpice_108:
(Start: 29 @73788 has 1 MA's), (90, 73965), (91, 73968), (104, 73992), (109, 74025), (118, 74073), (120, 74076), (132, 74103), (145, 74169), (156, 74190),

Gene: PynkPanther_40 Start: 15348, Stop: 14911, Start Num: 37
Candidate Starts for PynkPanther_40:
(Start: 37 @15348 has 31 MA's), (111, 15075), (115, 15060), (116, 15057),

Gene: PynkPanther_105 Start: 72565, Stop: 73005, Start Num: 37
Candidate Starts for PynkPanther_105:
(33, 72559), (Start: 37 @72565 has 31 MA's), (60, 72643), (77, 72709), (105, 72784), (118, 72859), (137, 72919), (162, 72988), (166, 72997),

Gene: Quaran19_166 Start: 91061, Stop: 91525, Start Num: 43
Candidate Starts for Quaran19_166:
(Start: 43 @91061 has 4 MA's), (72, 91169), (81, 91199), (108, 91301), (118, 91355), (120, 91358), (131, 91385), (170, 91514),

Gene: Riptide_160 Start: 90983, Stop: 91441, Start Num: 37
Candidate Starts for Riptide_160:
(Start: 37 @90983 has 31 MA's), (131, 91313), (157, 91403), (168, 91427),

Gene: Salacia_226 Start: 127343, Stop: 126957, Start Num: 58
Candidate Starts for Salacia_226:
(50, 127367), (Start: 58 @127343 has 2 MA's), (109, 127157), (121, 127112), (167, 126989),

Gene: Sebata_227 Start: 127157, Stop: 126771, Start Num: 58

Candidate Starts for Sebata_227:

(50, 127181), (Start: 58 @127157 has 2 MA's), (109, 126971), (121, 126926), (167, 126803),

Gene: Sham_86 Start: 65422, Stop: 65853, Start Num: 37

Candidate Starts for Sham_86:

(Start: 37 @65422 has 31 MA's), (114, 65698), (118, 65725), (145, 65821), (154, 65836),

Gene: Sheng711_122 Start: 64965, Stop: 65390, Start Num: 37

Candidate Starts for Sheng711_122:

(Start: 37 @64965 has 31 MA's), (107, 65220), (108, 65223), (136, 65328),

Gene: Skinny_102 Start: 57955, Stop: 58377, Start Num: 37

Candidate Starts for Skinny_102:

(Start: 27 @57940 has 1 MA's), (Start: 37 @57955 has 31 MA's), (78, 58105), (109, 58210), (111, 58225), (118, 58258), (129, 58279), (141, 58342),

Gene: SpeedDemon_630 Start: 48321, Stop: 48788, Start Num: 18

Candidate Starts for SpeedDemon_630:

(1, 48000), (2, 48108), (3, 48117), (Start: 18 @48321 has 1 MA's), (46, 48393), (89, 48549), (93, 48558), (106, 48606), (118, 48672), (132, 48702),

Gene: Spilled_194 Start: 96766, Stop: 97155, Start Num: 39

Candidate Starts for Spilled_194:

(Start: 39 @96766 has 11 MA's), (108, 96991), (109, 96994), (146, 97138), (150, 97147),

Gene: StarPlatinum_159 Start: 89611, Stop: 89955, Start Num: 53

Candidate Starts for StarPlatinum_159:

(Start: 53 @89611 has 6 MA's), (109, 89803), (116, 89833), (118, 89848),

Gene: Stewart25555_143 Start: 101011, Stop: 101472, Start Num: 37

Candidate Starts for Stewart25555_143:

(30, 100999), (Start: 37 @101011 has 31 MA's), (97, 101209), (126, 101332), (164, 101449),

Gene: Sushi23_176 Start: 96586, Stop: 97014, Start Num: 37

Candidate Starts for Sushi23_176:

(Start: 37 @96586 has 31 MA's), (80, 96739), (118, 96892), (130, 96916),

Gene: Talos_1 Start: 667, Stop: 230, Start Num: 41

Candidate Starts for Talos_1:

(Start: 41 @667 has 1 MA's), (87, 496), (103, 460), (109, 415), (145, 268),

Gene: TomSawyer_168 Start: 92075, Stop: 92539, Start Num: 43

Candidate Starts for TomSawyer_168:

(Start: 31 @92048 has 1 MA's), (Start: 43 @92075 has 4 MA's), (72, 92183), (81, 92213), (108, 92315), (118, 92369), (120, 92372), (131, 92399), (170, 92528),

Gene: TomSawyer_193 Start: 97685, Stop: 98074, Start Num: 39

Candidate Starts for TomSawyer_193:

(Start: 39 @97685 has 11 MA's), (108, 97910), (109, 97913), (146, 98057), (150, 98066),

Gene: TomSawyer_149 Start: 86660, Stop: 87088, Start Num: 42

Candidate Starts for TomSawyer_149:

(5, 86519), (6, 86531), (7, 86540), (8, 86546), (19, 86603), (28, 86630), (Start: 37 @86645 has 31 MA's), (Start: 42 @86660 has 1 MA's), (Start: 67 @86744 has 1 MA's), (91, 86828), (118, 86951), (151, 87062), (156, 87074),

Gene: Towmatter_51 Start: 41131, Stop: 41451, Start Num: 67

Candidate Starts for Towmatter_51:

(17, 40987), (Start: 27 @41017 has 1 MA's), (Start: 37 @41032 has 31 MA's), (51, 41068), (Start: 67 @41131 has 1 MA's), (69, 41140), (97, 41230), (109, 41290), (118, 41338),

Gene: Tribute_97 Start: 71749, Stop: 72189, Start Num: 37

Candidate Starts for Tribute_97:

(33, 71743), (Start: 37 @71749 has 31 MA's), (60, 71827), (77, 71893), (105, 71968), (118, 72043), (137, 72103), (162, 72172), (166, 72181),

Gene: TunaTartare_106 Start: 73259, Stop: 73636, Start Num: 39

Candidate Starts for TunaTartare_106:

(Start: 39 @73259 has 11 MA's), (56, 73304), (109, 73487), (131, 73559), (137, 73589),

Gene: TunaTartare_131 Start: 79206, Stop: 79715, Start Num: 12

Candidate Starts for TunaTartare_131:

(Start: 12 @79206 has 1 MA's), (Start: 37 @79278 has 31 MA's), (63, 79362), (111, 79554), (118, 79590), (126, 79605), (130, 79617), (133, 79632),

Gene: Vetrrix_107 Start: 63521, Stop: 64000, Start Num: 37

Candidate Starts for Vetrrix_107:

(28, 63506), (Start: 35 @63518 has 1 MA's), (Start: 37 @63521 has 31 MA's), (94, 63713), (105, 63749), (107, 63773), (118, 63827), (136, 63884), (141, 63911), (169, 63968),

Gene: WashU_101 Start: 72058, Stop: 72498, Start Num: 37

Candidate Starts for WashU_101:

(33, 72052), (Start: 37 @72058 has 31 MA's), (60, 72136), (77, 72202), (105, 72277), (118, 72352), (166, 72490),

Gene: Westy_93 Start: 66532, Stop: 66957, Start Num: 37

Candidate Starts for Westy_93:

(13, 66466), (19, 66490), (Start: 37 @66532 has 31 MA's), (97, 66724), (108, 66781), (118, 66835), (132, 66862),

Gene: WhereRU_103 Start: 73218, Stop: 73643, Start Num: 37

Candidate Starts for WhereRU_103:

(Start: 37 @73218 has 31 MA's), (97, 73410), (101, 73419), (131, 73548),

Gene: WhereRU_32 Start: 14821, Stop: 14384, Start Num: 37

Candidate Starts for WhereRU_32:

(Start: 37 @14821 has 31 MA's), (111, 14548), (115, 14533), (116, 14530),

Gene: WhereRU_41 Start: 21615, Stop: 22016, Start Num: 40

Candidate Starts for WhereRU_41:

(Start: 40 @21615 has 9 MA's), (57, 21660), (109, 21852),

Gene: WhereRU_158 Start: 90528, Stop: 90833, Start Num: 65

Candidate Starts for WhereRU_158:

(Start: 65 @90528 has 5 MA's), (70, 90549), (73, 90561), (124, 90726), (132, 90750),

Gene: Wipeout_181 Start: 97029, Stop: 97418, Start Num: 39

Candidate Starts for Wipeout_181:

(Start: 39 @97029 has 11 MA's), (108, 97254), (109, 97257), (146, 97401), (150, 97410),

Gene: Wofford_143 Start: 88534, Stop: 88977, Start Num: 37

Candidate Starts for Wofford_143:

(6, 88420), (7, 88429), (8, 88435), (19, 88492), (28, 88519), (Start: 37 @88534 has 31 MA's), (Start: 67 @88633 has 1 MA's), (118, 88840),

Gene: Wofford_45 Start: 23131, Stop: 23520, Start Num: 40

Candidate Starts for Wofford_45:

(Start: 40 @23131 has 9 MA's), (45, 23143), (57, 23176), (75, 23242), (76, 23245), (96, 23293), (109, 23356), (134, 23446),

Gene: Wofford_171 Start: 96384, Stop: 96842, Start Num: 37

Candidate Starts for Wofford_171:

(Start: 37 @96384 has 31 MA's), (131, 96714), (157, 96804), (168, 96828),