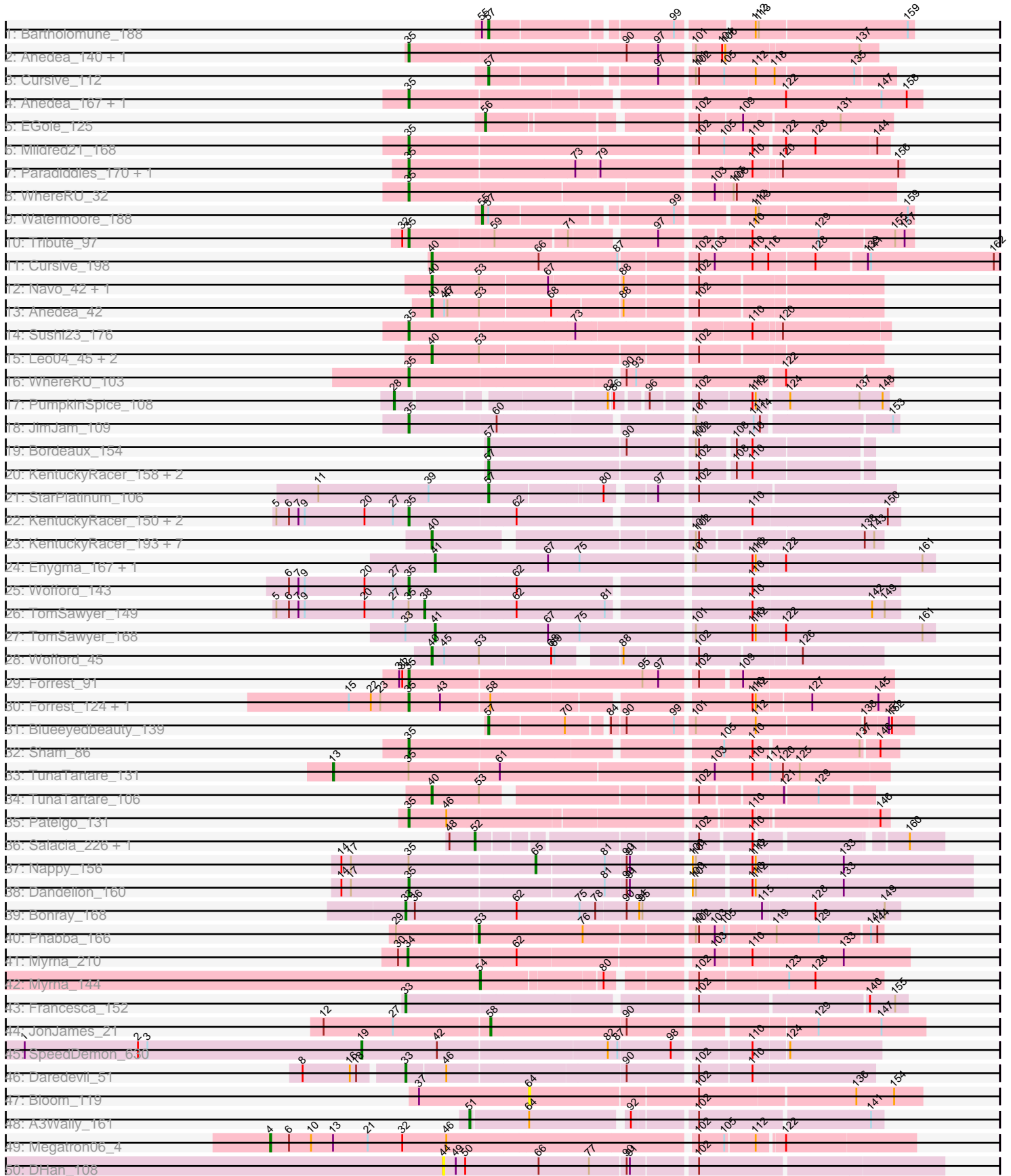
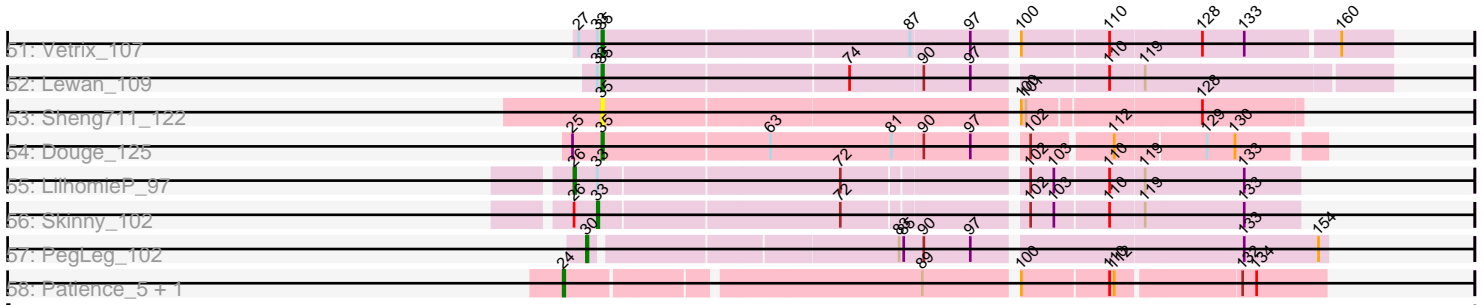


Pham 195566



Pham 195566



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 195566 Report

This analysis was run 12/09/24 on database version 580.

Pham number 195566 has 79 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Bartholomune_188
- Track 2 : Anedea_140, Mildred21_142
- Track 3 : Cursive_112
- Track 4 : Anedea_167, Wofford_171
- Track 5 : EGole_125
- Track 6 : Mildred21_168
- Track 7 : Paradiddles_170, Leo04_177
- Track 8 : WhereRU_32
- Track 9 : Watermoore_188
- Track 10 : Tribute_97
- Track 11 : Cursive_198
- Track 12 : Navo_42, Braelyn_43
- Track 13 : Anedea_42
- Track 14 : Sushi23_176
- Track 15 : Leo04_45, Persimmon_40, WhereRU_41
- Track 16 : WhereRU_103
- Track 17 : PumpkinSpice_108
- Track 18 : JimJam_109
- Track 19 : Bordeaux_154
- Track 20 : KentuckyRacer_158, StarPlatinum_159, MulchMansion_147
- Track 21 : StarPlatinum_106
- Track 22 : KentuckyRacer_150, CeilingFan_154, JimJam_152
- Track 23 : KentuckyRacer_193, Wipeout_181, IchabodCrane_184, Spilled_194, Amabiko_192, JimJam_195, Mugiwara_195, TomSawyer_193
- Track 24 : Enygma_167, Quaran19_166
- Track 25 : Wofford_143
- Track 26 : TomSawyer_149
- Track 27 : TomSawyer_168
- Track 28 : Wofford_45
- Track 29 : Forrest_91
- Track 30 : Forrest_124, Jada_120
- Track 31 : Blueeyedbeauty_139
- Track 32 : Sham_86
- Track 33 : TunaTartare_131
- Track 34 : TunaTartare_106
- Track 35 : Patelgo_131
- Track 36 : Salacia_226, Sebata_227

- Track 37 : Nappy_156
- Track 38 : Dandelion_160
- Track 39 : Bonray_168
- Track 40 : Phabba_166
- Track 41 : Myrna_210
- Track 42 : Myrna_144
- Track 43 : Francesca_152
- Track 44 : JonJames_21
- Track 45 : SpeedDemon_630
- Track 46 : Daredevil_51
- Track 47 : Bloom_119
- Track 48 : A3Wally_161
- Track 49 : Megatron06_4
- Track 50 : DHan_108
- Track 51 : Vetrix_107
- Track 52 : Lewan_109
- Track 53 : Sheng711_122
- Track 54 : Douge_125
- Track 55 : LilhomieP_97
- Track 56 : Skinny_102
- Track 57 : PegLeg_102
- Track 58 : 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 35, it was called in 24 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_140, Anedea_167, CeilingFan_154, Dandelion_160, 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, Sham_86, Sheng711_122, Sushi23_176, Tribute_97, Vetrix_107, WhereRU_103, WhereRU_32, Wofford_143, Wofford_171,

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

- Nappy_156, TomSawyer_149, TunaTartare_131,

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

- A3Wally_161, Amabiko_192, Anedea_42, Bartholomune_188, Bloom_119, Blueeyedbeauty_139, Bonray_168, Bordeaux_154, Braelyn_43, Cursive_112, Cursive_198, DHan_108, Daredevil_51, EGole_125, Enygma_167, Francesca_152, IchabodCrane_184, JimJam_195, JonJames_21, KentuckyRacer_158, KentuckyRacer_193, Labelle_5, Leo04_45, LilhomieP_97, Megatron06_4, Mugiwara_195, MulchMansion_147, Myrna_144, Myrna_210, Navo_42, Patience_5, PegLeg_102, Persimmon_40, Phabba_166, PumpkinSpice_108, Quaran19_166, Salacia_226, Sebata_227, Skinny_102, SpeedDemon_630, Spilled_194, StarPlatinum_106, StarPlatinum_159, TomSawyer_168, TomSawyer_193, TunaTartare_106, Watermoore_188, WhereRU_41, Wipeout_181, Wofford_45,

Summary by start number:

Start 4:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megatron06_4 (H1),

Start 13:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 50.0% of time when present
- Phage (with cluster) where this start called: TunaTartare_131 (BK1),

Start 19:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SpeedDemon_630 (DL),

Start 24:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Labelle_5 (U), Patience_5 (U),

Start 26:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 50.0% of time when present
- Phage (with cluster) where this start called: LilhomieP_97 (M1),

Start 28:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PumpkinSpice_108 (BE2),

Start 30:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 50.0% of time when present
- Phage (with cluster) where this start called: PegLeg_102 (M1),

Start 33:

- Found in 8 of 79 (10.1%) of genes in pham
- Manual Annotations of this start: 4 of 74
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bonray_168 (C1), Daredevil_51 (DL), Francesca_152 (CG), Skinny_102 (M1),

Start 34:

- Found in 1 of 79 (1.3%) of genes in pham

- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna_210 (C2),

Start 35:

- Found in 29 of 79 (36.7%) of genes in pham
- Manual Annotations of this start: 24 of 74
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Anedea_140 (BE1), Anedea_167 (BE1), CeilingFan_154 (BE2), Dandelion_160 (C1), 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), Sham_86 (BK1), Sheng711_122 (L4), Sushi23_176 (BE1), Tribute_97 (BE1), Vetric_107 (L2), WhereRU_103 (BE1), WhereRU_32 (BE1), Wofford_143 (BE2), Wofford_171 (BE2),

Start 38:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TomSawyer_149 (BE2),

Start 40:

- Found in 17 of 79 (21.5%) of genes in pham
- Manual Annotations of this start: 16 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_192 (BE2), Anedea_42 (BE1), Braelyn_43 (BE1), Cursive_198 (BE1), IchabodCrane_184 (BE2), JimJam_195 (BE2), KentuckyRacer_193 (BE2), Leo04_45 (BE1), Mugiwara_195 (BE2), Navo_42 (BE1), Persimmon_40 (BE1), Spilled_194 (BE2), TomSawyer_193 (BE2), TunaTartare_106 (BK1), WhereRU_41 (BE1), Wipeout_181 (BE2), Wofford_45 (BE2),

Start 41:

- Found in 3 of 79 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Enygma_167 (BE2), Quaran19_166 (BE2), TomSawyer_168 (BE2),

Start 44:

- Found in 1 of 79 (1.3%) 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 51:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_161 (GD1),

Start 52:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Salacia_226 (C1), Sebata_227 (C1),

Start 53:

- Found in 9 of 79 (11.4%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Phabba_166 (C2),

Start 54:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna_144 (C2),

Start 55:

- Found in 2 of 79 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Watermoore_188 (BE1),

Start 56:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EGole_125 (BE1),

Start 57:

- Found in 9 of 79 (11.4%) of genes in pham
- Manual Annotations of this start: 8 of 74
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Bartholomune_188 (BE1), Blueeyedbeauty_139 (BK1), Bordeaux_154 (BE2), Cursive_112 (BE1), KentuckyRacer_158 (BE2), MulchMansion_147 (BE1), StarPlatinum_106 (BE2), StarPlatinum_159 (BE2),

Start 58:

- Found in 3 of 79 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 33.3% of time when present
- Phage (with cluster) where this start called: JonJames_21 (DD),

Start 64:

- Found in 2 of 79 (2.5%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bloom_119 (FC),

Start 65:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 74

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nappy_156 (C1),

Summary by clusters:

There are 15 clusters represented in this pham: GD1, DL, CG, DD, H1, L2, L4, FC, M1, BK1, BE2, C2, C1, BE1, U,

Info for manual annotations of cluster BE1:

- Start number 35 was manually annotated 10 times for cluster BE1.
- Start number 40 was manually annotated 7 times for cluster BE1.
- Start number 55 was manually annotated 1 time for cluster BE1.
- Start number 56 was manually annotated 1 time for cluster BE1.
- Start number 57 was manually annotated 3 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 28 was manually annotated 1 time for cluster BE2.
- Start number 35 was manually annotated 5 times for cluster BE2.
- Start number 38 was manually annotated 1 time for cluster BE2.
- Start number 40 was manually annotated 8 times for cluster BE2.
- Start number 41 was manually annotated 3 times for cluster BE2.
- Start number 57 was manually annotated 4 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 13 was manually annotated 1 time for cluster BK1.
- Start number 35 was manually annotated 5 times for cluster BK1.
- Start number 40 was manually annotated 1 time for cluster BK1.
- Start number 57 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster C1:

- Start number 33 was manually annotated 1 time for cluster C1.
- Start number 35 was manually annotated 1 time for cluster C1.
- Start number 52 was manually annotated 2 times for cluster C1.
- Start number 65 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster C2:

- Start number 34 was manually annotated 1 time for cluster C2.
- Start number 53 was manually annotated 1 time for cluster C2.
- Start number 54 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CG:

- Start number 33 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster DD:

- Start number 58 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DL:

- Start number 19 was manually annotated 1 time for cluster DL.
- Start number 33 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster GD1:

- Start number 51 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 35 was manually annotated 2 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 35 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster M1:

- Start number 26 was manually annotated 1 time for cluster M1.
- Start number 30 was manually annotated 1 time for cluster M1.
- Start number 33 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: 51

Candidate Starts for A3Wally_161:

(Start: 51 @93240 has 1 MA's), (64, 93294), (92, 93381), (102, 93435), (141, 93591),

Gene: Amabiko_192 Start: 96212, Stop: 96601, Start Num: 40

Candidate Starts for Amabiko_192:

(Start: 40 @96212 has 16 MA's), (101, 96437), (102, 96440), (138, 96584), (143, 96593),

Gene: Anedea_140 Start: 84644, Stop: 85069, Start Num: 35

Candidate Starts for Anedea_140:

(Start: 35 @84644 has 24 MA's), (90, 84845), (97, 84875), (101, 84902), (104, 84926), (106, 84929), (137, 85052),

Gene: Anedea_167 Start: 92344, Stop: 92802, Start Num: 35

Candidate Starts for Anedea_167:

(Start: 35 @92344 has 24 MA's), (122, 92674), (147, 92764), (158, 92788),

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

Candidate Starts for Anedea_42:

(Start: 40 @21646 has 16 MA's), (45, 21658), (47, 21661), (Start: 53 @21691 has 1 MA's), (68, 21757), (88, 21820), (102, 21883),

Gene: Bartholomune_188 Start: 98185, Stop: 98556, Start Num: 57

Candidate Starts for Bartholomune_188:

(Start: 55 @98179 has 1 MA's), (Start: 57 @98185 has 8 MA's), (99, 98344), (112, 98410), (113, 98413), (159, 98551),

Gene: Bloom_119 Start: 91780, Stop: 92142, Start Num: 64

Candidate Starts for Bloom_119:

(37, 91675), (64, 91780), (102, 91936), (136, 92080), (154, 92116),

Gene: Blueeyedbeauty_139 Start: 79396, Stop: 79761, Start Num: 57

Candidate Starts for Blueeyedbeauty_139:

(Start: 57 @79396 has 8 MA's), (70, 79465), (84, 79498), (90, 79510), (99, 79555), (101, 79570), (112, 79621), (138, 79717), (151, 79738), (152, 79741),

Gene: Bonray_168 Start: 94840, Stop: 95289, Start Num: 33

Candidate Starts for Bonray_168:

(Start: 33 @94840 has 4 MA's), (36, 94849), (62, 94942), (75, 95002), (78, 95017), (90, 95044), (94, 95056), (95, 95059), (115, 95161), (128, 95209), (149, 95275),

Gene: Bordeaux_154 Start: 87839, Stop: 88183, Start Num: 57

Candidate Starts for Bordeaux_154:

(Start: 57 @87839 has 8 MA's), (90, 87968), (101, 88028), (102, 88031), (108, 88061), (110, 88076),

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

Candidate Starts for Braelyn_43:

(Start: 40 @22198 has 16 MA's), (Start: 53 @22243 has 1 MA's), (67, 22306), (88, 22372), (102, 22435),

Gene: CeilingFan_154 Start: 86515, Stop: 86958, Start Num: 35

Candidate Starts for CeilingFan_154:

(5, 86389), (6, 86401), (7, 86410), (9, 86416), (20, 86473), (27, 86500), (Start: 35 @86515 has 24 MA's), (62, 86614), (110, 86821), (150, 86947),

Gene: Cursive_112 Start: 77217, Stop: 77573, Start Num: 57

Candidate Starts for Cursive_112:

(Start: 57 @77217 has 8 MA's), (97, 77361), (101, 77391), (102, 77394), (105, 77418), (112, 77448), (118, 77466), (135, 77538),

Gene: Cursive_198 Start: 103181, Stop: 103702, Start Num: 40

Candidate Starts for Cursive_198:

(Start: 40 @103181 has 16 MA's), (66, 103283), (87, 103358), (102, 103424), (103, 103439), (110, 103475), (116, 103490), (128, 103532), (139, 103577), (141, 103580), (162, 103697),

Gene: DHan_108 Start: 63363, Stop: 63818, Start Num: 44

Candidate Starts for DHan_108:

(44, 63363), (49, 63375), (50, 63384), (66, 63453), (77, 63501), (90, 63534), (91, 63537), (102, 63594),

Gene: Dandelion_160 Start: 94845, Stop: 95354, Start Num: 35

Candidate Starts for Dandelion_160:

(14, 94782), (17, 94791), (Start: 35 @94845 has 24 MA's), (81, 95025), (90, 95043), (91, 95046), (100, 95097), (101, 95100), (110, 95148), (112, 95151), (133, 95232),

Gene: Daredevil_51 Start: 40951, Stop: 41370, Start Num: 33

Candidate Starts for Daredevil_51:

(8, 40861), (16, 40906), (18, 40912), (Start: 33 @40951 has 4 MA's), (46, 40987), (90, 41149), (102, 41209), (110, 41257),

Gene: Douge_125 Start: 66042, Stop: 66473, Start Num: 35

Candidate Starts for Douge_125:

(25, 66024), (Start: 35 @66042 has 24 MA's), (63, 66147), (81, 66225), (90, 66243), (97, 66273), (102, 66303), (112, 66351), (129, 66405), (130, 66423),

Gene: EGole_125 Start: 82153, Stop: 82503, Start Num: 56
Candidate Starts for EGole_125:
(Start: 56 @82153 has 1 MA's), (102, 82330), (109, 82369), (131, 82456),

Gene: Enygma_167 Start: 93249, Stop: 93713, Start Num: 41
Candidate Starts for Enygma_167:
(Start: 41 @93249 has 3 MA's), (67, 93357), (75, 93387), (101, 93489), (110, 93543), (112, 93546),
(122, 93573), (161, 93702),

Gene: Forrest_91 Start: 63801, Stop: 64238, Start Num: 35
Candidate Starts for Forrest_91:
(31, 63792), (32, 63795), (Start: 35 @63801 has 24 MA's), (95, 64017), (97, 64032), (102, 64062),
(109, 64098),

Gene: Forrest_124 Start: 77019, Stop: 77447, Start Num: 35
Candidate Starts for Forrest_124:
(15, 76962), (22, 76983), (23, 76992), (Start: 35 @77019 has 24 MA's), (43, 77049), (Start: 58
@77094 has 1 MA's), (110, 77319), (112, 77322), (127, 77370), (145, 77433),

Gene: Francesca_152 Start: 89986, Stop: 90429, Start Num: 33
Candidate Starts for Francesca_152:
(Start: 33 @89986 has 4 MA's), (102, 90241), (140, 90394), (155, 90418),

Gene: IchabodCrane_184 Start: 95913, Stop: 96302, Start Num: 40
Candidate Starts for IchabodCrane_184:
(Start: 40 @95913 has 16 MA's), (101, 96138), (102, 96141), (138, 96285), (143, 96294),

Gene: Jada_120 Start: 75949, Stop: 76377, Start Num: 35
Candidate Starts for Jada_120:
(15, 75892), (22, 75913), (23, 75922), (Start: 35 @75949 has 24 MA's), (43, 75979), (Start: 58
@76024 has 1 MA's), (110, 76249), (112, 76252), (127, 76300), (145, 76363),

Gene: JimJam_109 Start: 73736, Stop: 74164, Start Num: 35
Candidate Starts for JimJam_109:
(Start: 35 @73736 has 24 MA's), (60, 73817), (101, 73985), (111, 74039), (114, 74045), (153, 74159),

Gene: JimJam_152 Start: 87443, Stop: 87886, Start Num: 35
Candidate Starts for JimJam_152:
(5, 87317), (6, 87329), (7, 87338), (9, 87344), (20, 87401), (27, 87428), (Start: 35 @87443 has 24
MA's), (62, 87542), (110, 87749), (150, 87875),

Gene: JimJam_195 Start: 97834, Stop: 98223, Start Num: 40
Candidate Starts for JimJam_195:
(Start: 40 @97834 has 16 MA's), (101, 98059), (102, 98062), (138, 98206), (143, 98215),

Gene: JonJames_21 Start: 7188, Stop: 7577, Start Num: 58
Candidate Starts for JonJames_21:
(12, 7032), (27, 7098), (Start: 58 @7188 has 1 MA's), (90, 7314), (129, 7476), (147, 7536),

Gene: KentuckyRacer_158 Start: 88711, Stop: 89055, Start Num: 57
Candidate Starts for KentuckyRacer_158:
(Start: 57 @88711 has 8 MA's), (102, 88903), (108, 88933), (110, 88948),

Gene: KentuckyRacer_150 Start: 87011, Stop: 87454, Start Num: 35
Candidate Starts for KentuckyRacer_150:
(5, 86885), (6, 86897), (7, 86906), (9, 86912), (20, 86969), (27, 86996), (Start: 35 @87011 has 24 MA's), (62, 87110), (110, 87317), (150, 87443),

Gene: KentuckyRacer_193 Start: 97580, Stop: 97969, Start Num: 40
Candidate Starts for KentuckyRacer_193:
(Start: 40 @97580 has 16 MA's), (101, 97805), (102, 97808), (138, 97952), (143, 97961),

Gene: Labelle_5 Start: 2590, Stop: 3042, Start Num: 24
Candidate Starts for Labelle_5:
(Start: 24 @2590 has 2 MA's), (89, 2803), (100, 2857), (110, 2911), (112, 2914), (132, 2989), (134, 2998),

Gene: Leo04_177 Start: 96224, Stop: 96667, Start Num: 35
Candidate Starts for Leo04_177:
(Start: 35 @96224 has 24 MA's), (73, 96377), (79, 96398), (110, 96530), (120, 96554), (156, 96662),

Gene: Leo04_45 Start: 23281, Stop: 23682, Start Num: 40
Candidate Starts for Leo04_45:
(Start: 40 @23281 has 16 MA's), (Start: 53 @23326 has 1 MA's), (102, 23518),

Gene: Lewan_109 Start: 63302, Stop: 63781, Start Num: 35
Candidate Starts for Lewan_109:
(Start: 33 @63299 has 4 MA's), (Start: 35 @63302 has 24 MA's), (74, 63455), (90, 63500), (97, 63530), (110, 63608), (119, 63629),

Gene: LilhomieP_97 Start: 57511, Stop: 57948, Start Num: 26
Candidate Starts for LilhomieP_97:
(Start: 26 @57511 has 1 MA's), (Start: 33 @57526 has 4 MA's), (72, 57676), (102, 57781), (103, 57796), (110, 57829), (119, 57850), (133, 57913),

Gene: Megatron06_4 Start: 2094, Stop: 2681, Start Num: 4
Candidate Starts for Megatron06_4:
(Start: 4 @2094 has 1 MA's), (6, 2112), (10, 2133), (Start: 13 @2154 has 1 MA's), (21, 2187), (32, 2220), (46, 2262), (102, 2490), (105, 2514), (112, 2541), (122, 2562),

Gene: Mildred21_168 Start: 90931, Stop: 91365, Start Num: 35
Candidate Starts for Mildred21_168:
(Start: 35 @90931 has 24 MA's), (102, 91192), (105, 91216), (110, 91243), (122, 91270), (128, 91297), (144, 91354),

Gene: Mildred21_142 Start: 85401, Stop: 85826, Start Num: 35
Candidate Starts for Mildred21_142:
(Start: 35 @85401 has 24 MA's), (90, 85602), (97, 85632), (101, 85659), (104, 85683), (106, 85686), (137, 85809),

Gene: Mugiwara_195 Start: 97213, Stop: 97602, Start Num: 40
Candidate Starts for Mugiwara_195:
(Start: 40 @97213 has 16 MA's), (101, 97438), (102, 97441), (138, 97585), (143, 97594),

Gene: MulchMansion_147 Start: 87054, Stop: 87398, Start Num: 57

Candidate Starts for MulchMansion_147:

(Start: 57 @87054 has 8 MA's), (102, 87246), (108, 87276), (110, 87291),

Gene: Myrna_210 Start: 122711, Stop: 123163, Start Num: 34

Candidate Starts for Myrna_210:

(Start: 30 @122702 has 1 MA's), (Start: 34 @122711 has 1 MA's), (62, 122810), (103, 122984), (110, 123017), (133, 123101),

Gene: Myrna_144 Start: 92033, Stop: 92380, Start Num: 54

Candidate Starts for Myrna_144:

(Start: 54 @92033 has 1 MA's), (80, 92141), (102, 92213), (123, 92294), (128, 92318),

Gene: Nappy_156 Start: 92836, Stop: 93228, Start Num: 65

Candidate Starts for Nappy_156:

(14, 92656), (17, 92665), (Start: 35 @92719 has 24 MA's), (Start: 65 @92836 has 1 MA's), (81, 92899), (90, 92917), (91, 92920), (100, 92971), (101, 92974), (110, 93022), (112, 93025), (133, 93106),

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

Candidate Starts for Navo_42:

(Start: 40 @22093 has 16 MA's), (Start: 53 @22138 has 1 MA's), (67, 22201), (88, 22267), (102, 22330),

Gene: Paradiddles_170 Start: 96596, Stop: 97039, Start Num: 35

Candidate Starts for Paradiddles_170:

(Start: 35 @96596 has 24 MA's), (73, 96749), (79, 96770), (110, 96902), (120, 96926), (156, 97034),

Gene: Patelgo_131 Start: 78593, Stop: 79012, Start Num: 35

Candidate Starts for Patelgo_131:

(Start: 35 @78593 has 24 MA's), (46, 78629), (110, 78893), (146, 79004),

Gene: Patience_5 Start: 2590, Stop: 3042, Start Num: 24

Candidate Starts for Patience_5:

(Start: 24 @2590 has 2 MA's), (89, 2803), (100, 2857), (110, 2911), (112, 2914), (132, 2989), (134, 2998),

Gene: PegLeg_102 Start: 57809, Stop: 58258, Start Num: 30

Candidate Starts for PegLeg_102:

(Start: 30 @57809 has 1 MA's), (83, 57995), (85, 57998), (90, 58010), (97, 58040), (133, 58205), (154, 58253),

Gene: Persimmon_40 Start: 21025, Stop: 21426, Start Num: 40

Candidate Starts for Persimmon_40:

(Start: 40 @21025 has 16 MA's), (Start: 53 @21070 has 1 MA's), (102, 21262),

Gene: Phabba_166 Start: 92816, Stop: 93178, Start Num: 53

Candidate Starts for Phabba_166:

(29, 92741), (Start: 53 @92816 has 1 MA's), (76, 92915), (101, 93011), (102, 93014), (103, 93029), (105, 93038), (119, 93083), (129, 93122), (141, 93167), (144, 93173),

Gene: PumpkinSpice_108 Start: 73788, Stop: 74195, Start Num: 28

Candidate Starts for PumpkinSpice_108:

(Start: 28 @73788 has 1 MA's), (82, 73965), (86, 73968), (96, 73992), (102, 74025), (110, 74073), (112, 74076), (124, 74103), (137, 74169), (148, 74190),

Gene: Quaran19_166 Start: 91061, Stop: 91525, Start Num: 41

Candidate Starts for Quaran19_166:

(Start: 41 @91061 has 3 MA's), (67, 91169), (75, 91199), (101, 91301), (110, 91355), (112, 91358), (122, 91385), (161, 91514),

Gene: Salacia_226 Start: 127343, Stop: 126957, Start Num: 52

Candidate Starts for Salacia_226:

(48, 127367), (Start: 52 @127343 has 2 MA's), (102, 127157), (110, 127112), (160, 126989),

Gene: Sebata_227 Start: 127157, Stop: 126771, Start Num: 52

Candidate Starts for Sebata_227:

(48, 127181), (Start: 52 @127157 has 2 MA's), (102, 126971), (110, 126926), (160, 126803),

Gene: Sham_86 Start: 65422, Stop: 65853, Start Num: 35

Candidate Starts for Sham_86:

(Start: 35 @65422 has 24 MA's), (105, 65698), (110, 65725), (137, 65821), (146, 65836),

Gene: Sheng711_122 Start: 64965, Stop: 65390, Start Num: 35

Candidate Starts for Sheng711_122:

(Start: 35 @64965 has 24 MA's), (100, 65220), (101, 65223), (128, 65328),

Gene: Skinny_102 Start: 57955, Stop: 58377, Start Num: 33

Candidate Starts for Skinny_102:

(Start: 26 @57940 has 1 MA's), (Start: 33 @57955 has 4 MA's), (72, 58105), (102, 58210), (103, 58225), (110, 58258), (119, 58279), (133, 58342),

Gene: SpeedDemon_630 Start: 48321, Stop: 48788, Start Num: 19

Candidate Starts for SpeedDemon_630:

(1, 48000), (2, 48108), (3, 48117), (Start: 19 @48321 has 1 MA's), (42, 48393), (82, 48549), (87, 48558), (98, 48606), (110, 48672), (124, 48702),

Gene: Spilled_194 Start: 96766, Stop: 97155, Start Num: 40

Candidate Starts for Spilled_194:

(Start: 40 @96766 has 16 MA's), (101, 96991), (102, 96994), (138, 97138), (143, 97147),

Gene: StarPlatinum_106 Start: 73373, Stop: 73726, Start Num: 57

Candidate Starts for StarPlatinum_106:

(11, 73211), (39, 73316), (Start: 57 @73373 has 8 MA's), (80, 73475), (97, 73514), (102, 73547),

Gene: StarPlatinum_159 Start: 89611, Stop: 89955, Start Num: 57

Candidate Starts for StarPlatinum_159:

(Start: 57 @89611 has 8 MA's), (102, 89803), (108, 89833), (110, 89848),

Gene: Sushi23_176 Start: 96586, Stop: 97014, Start Num: 35

Candidate Starts for Sushi23_176:

(Start: 35 @96586 has 24 MA's), (73, 96739), (110, 96892), (120, 96916),

Gene: TomSawyer_149 Start: 86660, Stop: 87088, Start Num: 38

Candidate Starts for TomSawyer_149:

(5, 86519), (6, 86531), (7, 86540), (9, 86546), (20, 86603), (27, 86630), (Start: 35 @86645 has 24 MA's), (Start: 38 @86660 has 1 MA's), (62, 86744), (81, 86828), (110, 86951), (142, 87062), (149, 87074),

Gene: TomSawyer_168 Start: 92075, Stop: 92539, Start Num: 41

Candidate Starts for TomSawyer_168:

(Start: 33 @92048 has 4 MA's), (Start: 41 @92075 has 3 MA's), (67, 92183), (75, 92213), (101, 92315), (110, 92369), (112, 92372), (122, 92399), (161, 92528),

Gene: TomSawyer_193 Start: 97685, Stop: 98074, Start Num: 40

Candidate Starts for TomSawyer_193:

(Start: 40 @97685 has 16 MA's), (101, 97910), (102, 97913), (138, 98057), (143, 98066),

Gene: Tribute_97 Start: 71749, Stop: 72189, Start Num: 35

Candidate Starts for Tribute_97:

(32, 71743), (Start: 35 @71749 has 24 MA's), (59, 71827), (71, 71893), (97, 71968), (110, 72043), (129, 72103), (155, 72172), (157, 72181),

Gene: TunaTartare_131 Start: 79206, Stop: 79715, Start Num: 13

Candidate Starts for TunaTartare_131:

(Start: 13 @79206 has 1 MA's), (Start: 35 @79278 has 24 MA's), (61, 79362), (103, 79554), (110, 79590), (117, 79605), (120, 79617), (125, 79632),

Gene: TunaTartare_106 Start: 73259, Stop: 73636, Start Num: 40

Candidate Starts for TunaTartare_106:

(Start: 40 @73259 has 16 MA's), (Start: 53 @73304 has 1 MA's), (102, 73487), (121, 73559), (129, 73589),

Gene: Vetrrix_107 Start: 63521, Stop: 64000, Start Num: 35

Candidate Starts for Vetrrix_107:

(27, 63506), (Start: 33 @63518 has 4 MA's), (Start: 35 @63521 has 24 MA's), (87, 63713), (97, 63749), (100, 63773), (110, 63827), (128, 63884), (133, 63911), (160, 63968),

Gene: Watermoore_188 Start: 100639, Stop: 101016, Start Num: 55

Candidate Starts for Watermoore_188:

(Start: 55 @100639 has 1 MA's), (Start: 57 @100645 has 8 MA's), (99, 100804), (112, 100870), (113, 100873), (159, 101011),

Gene: WhereRU_32 Start: 14821, Stop: 14384, Start Num: 35

Candidate Starts for WhereRU_32:

(Start: 35 @14821 has 24 MA's), (103, 14548), (107, 14533), (108, 14530),

Gene: WhereRU_103 Start: 73218, Stop: 73643, Start Num: 35

Candidate Starts for WhereRU_103:

(Start: 35 @73218 has 24 MA's), (90, 73410), (93, 73419), (122, 73548),

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

Candidate Starts for WhereRU_41:

(Start: 40 @21615 has 16 MA's), (Start: 53 @21660 has 1 MA's), (102, 21852),

Gene: Wipeout_181 Start: 97029, Stop: 97418, Start Num: 40

Candidate Starts for Wipeout_181:

(Start: 40 @97029 has 16 MA's), (101, 97254), (102, 97257), (138, 97401), (143, 97410),

Gene: Wofford_143 Start: 88534, Stop: 88977, Start Num: 35

Candidate Starts for Wofford_143:

(6, 88420), (7, 88429), (9, 88435), (20, 88492), (27, 88519), (Start: 35 @88534 has 24 MA's), (62, 88633), (110, 88840),

Gene: Wofford_171 Start: 96384, Stop: 96842, Start Num: 35

Candidate Starts for Wofford_171:

(Start: 35 @96384 has 24 MA's), (122, 96714), (147, 96804), (158, 96828),

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

Candidate Starts for Wofford_45:

(Start: 40 @23131 has 16 MA's), (45, 23143), (Start: 53 @23176 has 1 MA's), (68, 23242), (69, 23245), (88, 23293), (102, 23356), (126, 23446),