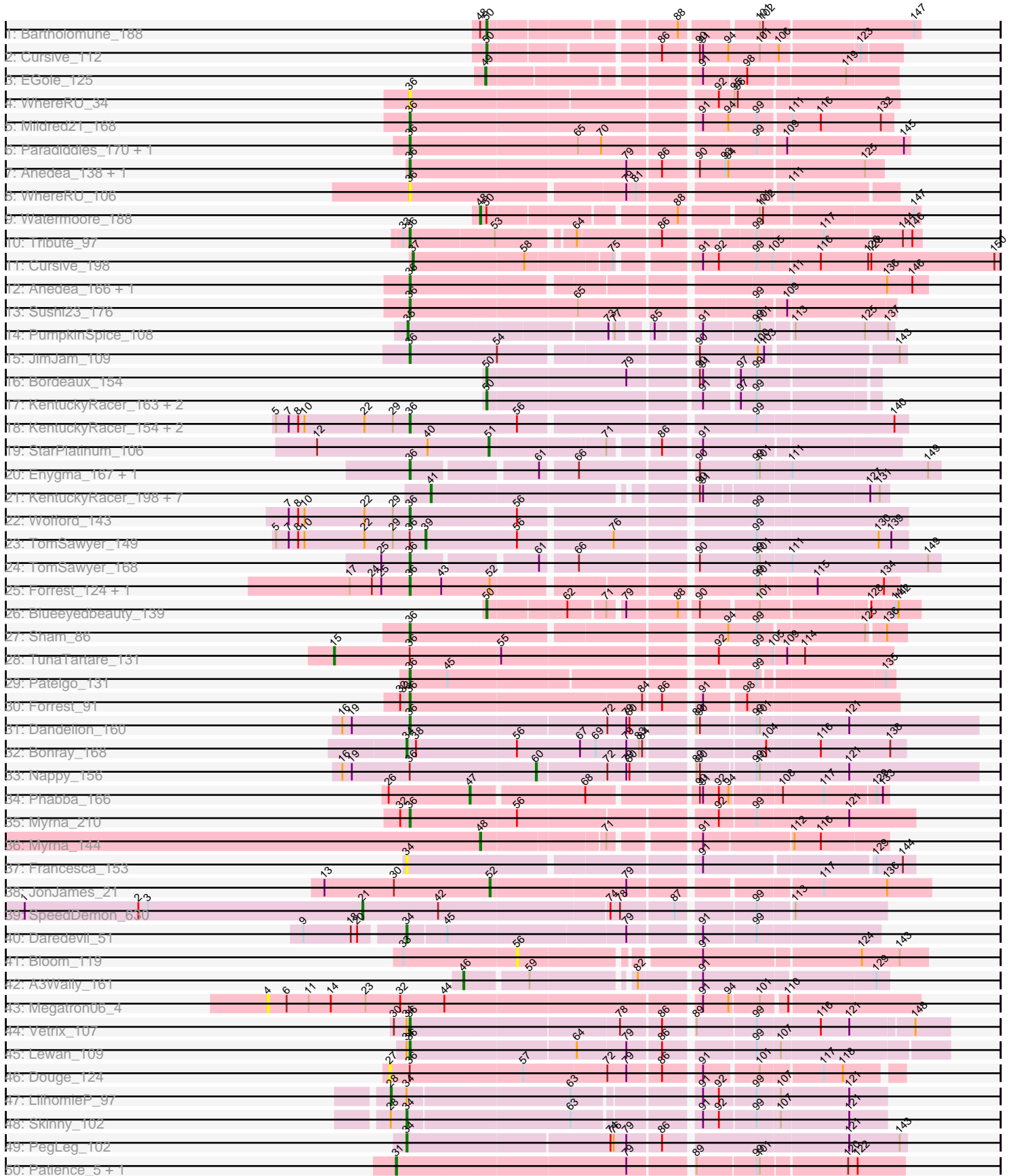


Pham 163597



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 163597 Report

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

Pham number 163597 has 67 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Bartholomune_188
- Track 2 : Cursive_112
- Track 3 : EGole_125
- Track 4 : WhereRU_34
- Track 5 : Mildred21_168
- Track 6 : Paradiddles_170, Leo04_177
- Track 7 : Anedea_138, Mildred21_142
- Track 8 : WhereRU_106
- Track 9 : Watermoore_188
- Track 10 : Tribute_97
- Track 11 : Cursive_198
- Track 12 : Anedea_166, Wofford_171
- Track 13 : Sushi23_176
- Track 14 : PumpkinSpice_108
- Track 15 : JimJam_109
- Track 16 : Bordeaux_154
- Track 17 : KentuckyRacer_163, StarPlatinum_159, MulchMansion_147
- Track 18 : KentuckyRacer_154, CeilingFan_154, JimJam_152
- Track 19 : StarPlatinum_106
- Track 20 : Enygma_167, Quaran19_166
- Track 21 : KentuckyRacer_198, Wipeout_181, IchabodCrane_184, Spilled_194, JimJam_195, Mugiwara_195, Amabiko_192, TomSawyer_193
- Track 22 : Wofford_143
- Track 23 : TomSawyer_149
- Track 24 : TomSawyer_168
- Track 25 : Forrest_124, Jada_120
- Track 26 : Blueeyedbeauty_139
- Track 27 : Sham_86
- Track 28 : TunaTartare_131
- Track 29 : Patelgo_131
- Track 30 : Forrest_91
- Track 31 : Dandelion_160
- Track 32 : Bonray_168
- Track 33 : Nappy_156
- Track 34 : Phabba_166
- Track 35 : Myrna_210
- Track 36 : Myrna_144

- Track 37 : Francesca_153
- Track 38 : JonJames_21
- Track 39 : SpeedDemon_630
- Track 40 : Daredevil_51
- Track 41 : Bloom_119
- Track 42 : A3Wally_161
- Track 43 : Megatron06_4
- Track 44 : Vetrix_107
- Track 45 : Lewan_109
- Track 46 : Douge_124
- Track 47 : LilhomieP_97
- Track 48 : Skinny_102
- Track 49 : PegLeg_102
- Track 50 : 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 36, it was called in 22 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_138, Anedea_166, CeilingFan_154, Dandelion_160, Enygma_167, Forrest_124, Forrest_91, Jada_120, JimJam_109, JimJam_152, KentuckyRacer_154, Leo04_177, Lewan_109, Mildred21_142, Mildred21_168, Myrna_210, Paradiddles_170, Patelgo_131, Quaran19_166, Sham_86, Sushi23_176, TomSawyer_168, Tribute_97, Vetrix_107, WhereRU_106, WhereRU_34, Wofford_143, Wofford_171,

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

- Douge_124, Nappy_156, TomSawyer_149, TunaTartare_131,

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

- A3Wally_161, Amabiko_192, Bartholomune_188, Bloom_119, Blueeyedbeauty_139, Bonray_168, Bordeaux_154, Cursive_112, Cursive_198, Daredevil_51, EGole_125, Francesca_153, IchabodCrane_184, JimJam_195, JonJames_21, KentuckyRacer_163, KentuckyRacer_198, Labelle_5, LilhomieP_97, Megatron06_4, Mugiwara_195, MulchMansion_147, Myrna_144, Patience_5, PegLeg_102, Phabba_166, PumpkinSpice_108, Skinny_102, SpeedDemon_630, Spilled_194, StarPlatinum_106, StarPlatinum_159, TomSawyer_193, Watermoore_188, Wipeout_181,

Summary by start number:

Start 4:

- Found in 1 of 67 (1.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megatron06_4 (H1),

Start 15:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TunaTartare_131 (BK1),

Start 21:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SpeedDemon_630 (DL),

Start 27:

- Found in 1 of 67 (1.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Douge_124 (L4),

Start 28:

- Found in 2 of 67 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 50.0% of time when present
- Phage (with cluster) where this start called: LilhomieP_97 (M1),

Start 31:

- Found in 2 of 67 (3.0%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Labelle_5 (U), Patience_5 (U),

Start 34:

- Found in 8 of 67 (11.9%) of genes in pham
- Manual Annotations of this start: 4 of 54
- Called 62.5% of time when present
- Phage (with cluster) where this start called: Bonray_168 (C1), Daredevil_51 (DL), Francesca_153 (CG), PegLeg_102 (M1), Skinny_102 (M1),

Start 35:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PumpkinSpice_108 (BE2),

Start 36:

- Found in 32 of 67 (47.8%) of genes in pham
- Manual Annotations of this start: 22 of 54
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Anedea_138 (BE1), Anedea_166 (BE1), CeilingFan_154 (BE2), Dandelion_160 (C1), Enygma_167 (BE2), Forrest_124 (BK1), Forrest_91 (BK1), Jada_120 (BK1), JimJam_109 (BE2), JimJam_152 (BE2), KentuckyRacer_154 (BE2), Leo04_177 (BE1), Lewan_109 (L2), Mildred21_142 (BE1), Mildred21_168 (BE1), Myrna_210 (C2), Paradiddles_170 (BE1), Patelgo_131 (BK1), Quaran19_166 (BE2), Sham_86 (BK1), Sushi23_176 (BE1), TomSawyer_168 (BE2), Tribute_97 (BE1), Vetrix_107 (L2), WhereRU_106 (BE1), WhereRU_34 (BE1),

Wofford_143 (BE2), Wofford_171 (BE2),

Start 37:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cursive_198 (BE1),

Start 39:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TomSawyer_149 (BE2),

Start 41:

- Found in 8 of 67 (11.9%) of genes in pham
- Manual Annotations of this start: 6 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_192 (BE2), IchabodCrane_184 (BE2), JimJam_195 (BE2), KentuckyRacer_198 (BE2), Mugiwara_195 (BE2), Spilled_194 (BE2), TomSawyer_193 (BE2), Wipeout_181 (BE2),

Start 46:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_161 (GD1),

Start 47:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phabba_166 (C2),

Start 48:

- Found in 3 of 67 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Myrna_144 (C2), Watermoore_188 (BE1),

Start 49:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EGole_125 (BE1),

Start 50:

- Found in 8 of 67 (11.9%) of genes in pham
- Manual Annotations of this start: 6 of 54
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Bartholomune_188 (BE1), Blueeyedbeauty_139 (BK1), Bordeaux_154 (BE2), Cursive_112 (BE1),

KentuckyRacer_163 (BE2), MulchMansion_147 (BE1), StarPlatinum_159 (BE2),

Start 51:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: StarPlatinum_106 (BE2),

Start 52:

- Found in 3 of 67 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 33.3% of time when present
- Phage (with cluster) where this start called: JonJames_21 (DD),

Start 56:

- Found in 8 of 67 (11.9%) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Bloom_119 (FC),

Start 60:

- Found in 1 of 67 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 54
- 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, DD, H1, CG, L4, FC, M1, BK1, BE2, C2, C1, BE1, U, L2,

Info for manual annotations of cluster BE1:

- Start number 36 was manually annotated 6 times for cluster BE1.
- Start number 37 was manually annotated 1 time for cluster BE1.
- Start number 48 was manually annotated 1 time for cluster BE1.
- Start number 49 was manually annotated 1 time for cluster BE1.
- Start number 50 was manually annotated 3 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 35 was manually annotated 1 time for cluster BE2.
- Start number 36 was manually annotated 7 times for cluster BE2.
- Start number 39 was manually annotated 1 time for cluster BE2.
- Start number 41 was manually annotated 6 times for cluster BE2.
- Start number 50 was manually annotated 2 times for cluster BE2.
- Start number 51 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 15 was manually annotated 1 time for cluster BK1.
- Start number 36 was manually annotated 5 times for cluster BK1.
- Start number 50 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster C1:

- Start number 34 was manually annotated 1 time for cluster C1.

- Start number 36 was manually annotated 1 time for cluster C1.
- Start number 60 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster C2:

- Start number 36 was manually annotated 1 time for cluster C2.
- Start number 47 was manually annotated 1 time for cluster C2.
- Start number 48 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster DD:

- Start number 52 was manually annotated 1 time for cluster DD.

Info for manual annotations of cluster DL:

- Start number 21 was manually annotated 1 time for cluster DL.
- Start number 34 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster GD1:

- Start number 46 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster L2:

- Start number 36 was manually annotated 2 times for cluster L2.

Info for manual annotations of cluster M1:

- Start number 28 was manually annotated 1 time for cluster M1.
- Start number 34 was manually annotated 2 times for cluster M1.

Info for manual annotations of cluster U:

- Start number 31 was manually annotated 2 times for cluster U.

Gene Information:

Gene: A3Wally_161 Start: 93240, Stop: 93602, Start Num: 46

Candidate Starts for A3Wally_161:

(Start: 46 @93240 has 1 MA's), (59, 93294), (82, 93381), (91, 93435), (129, 93591),

Gene: Amabiko_192 Start: 96212, Stop: 96601, Start Num: 41

Candidate Starts for Amabiko_192:

(Start: 41 @96212 has 6 MA's), (90, 96437), (91, 96440), (127, 96584), (131, 96593),

Gene: Anedea_138 Start: 84644, Stop: 85069, Start Num: 36

Candidate Starts for Anedea_138:

(Start: 36 @84644 has 22 MA's), (79, 84845), (86, 84875), (90, 84902), (93, 84926), (94, 84929), (125, 85052),

Gene: Anedea_166 Start: 92344, Stop: 92802, Start Num: 36

Candidate Starts for Anedea_166:

(Start: 36 @92344 has 22 MA's), (111, 92674), (136, 92764), (146, 92788),

Gene: Bartholomune_188 Start: 98185, Stop: 98556, Start Num: 50

Candidate Starts for Bartholomune_188:

(Start: 48 @98179 has 2 MA's), (Start: 50 @98185 has 6 MA's), (88, 98344), (101, 98410), (102, 98413), (147, 98551),

Gene: Bloom_119 Start: 91780, Stop: 92142, Start Num: 56

Candidate Starts for Bloom_119:

(33, 91675), (56, 91780), (91, 91936), (124, 92080), (143, 92116),

Gene: Blueeyedbeauty_139 Start: 79396, Stop: 79761, Start Num: 50

Candidate Starts for Blueeyedbeauty_139:

(Start: 50 @79396 has 6 MA's), (62, 79465), (71, 79498), (79, 79510), (88, 79555), (90, 79570), (101, 79621), (128, 79717), (141, 79738), (142, 79741),

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

Candidate Starts for Bonray_168:

(Start: 34 @94840 has 4 MA's), (38, 94849), (56, 94942), (67, 95002), (69, 95017), (79, 95044), (83, 95056), (84, 95059), (104, 95161), (116, 95209), (138, 95275),

Gene: Bordeaux_154 Start: 87839, Stop: 88183, Start Num: 50

Candidate Starts for Bordeaux_154:

(Start: 50 @87839 has 6 MA's), (79, 87968), (90, 88028), (91, 88031), (97, 88061), (99, 88076),

Gene: CeilingFan_154 Start: 86515, Stop: 86958, Start Num: 36

Candidate Starts for CeilingFan_154:

(5, 86389), (7, 86401), (8, 86410), (10, 86416), (22, 86473), (29, 86500), (Start: 36 @86515 has 22 MA's), (56, 86614), (99, 86821), (140, 86947),

Gene: Cursive_112 Start: 77217, Stop: 77573, Start Num: 50

Candidate Starts for Cursive_112:

(Start: 50 @77217 has 6 MA's), (86, 77361), (90, 77391), (91, 77394), (94, 77418), (101, 77448), (106, 77466), (123, 77538),

Gene: Cursive_198 Start: 103181, Stop: 103702, Start Num: 37

Candidate Starts for Cursive_198:

(Start: 37 @103181 has 1 MA's), (58, 103283), (75, 103358), (91, 103424), (92, 103439), (99, 103475), (105, 103490), (116, 103532), (126, 103577), (128, 103580), (150, 103697),

Gene: Dandelion_160 Start: 94845, Stop: 95354, Start Num: 36

Candidate Starts for Dandelion_160:

(16, 94782), (19, 94791), (Start: 36 @94845 has 22 MA's), (72, 95025), (79, 95043), (80, 95046), (89, 95097), (90, 95100), (99, 95148), (101, 95151), (121, 95232),

Gene: Daredevil_51 Start: 40951, Stop: 41370, Start Num: 34

Candidate Starts for Daredevil_51:

(9, 40861), (18, 40906), (20, 40912), (Start: 34 @40951 has 4 MA's), (45, 40987), (79, 41149), (91, 41209), (99, 41257),

Gene: Douge_124 Start: 66024, Stop: 66473, Start Num: 27

Candidate Starts for Douge_124:

(27, 66024), (Start: 36 @66042 has 22 MA's), (57, 66147), (72, 66225), (79, 66243), (86, 66273), (91, 66303), (101, 66351), (117, 66405), (118, 66423),

Gene: EGole_125 Start: 82153, Stop: 82503, Start Num: 49
Candidate Starts for EGole_125:
(Start: 49 @82153 has 1 MA's), (91, 82330), (98, 82369), (119, 82456),

Gene: Enygma_167 Start: 93249, Stop: 93713, Start Num: 36
Candidate Starts for Enygma_167:
(Start: 36 @93249 has 22 MA's), (61, 93357), (66, 93387), (90, 93489), (99, 93543), (101, 93546),
(111, 93573), (149, 93702),

Gene: Forrest_124 Start: 77019, Stop: 77447, Start Num: 36
Candidate Starts for Forrest_124:
(17, 76962), (24, 76983), (25, 76992), (Start: 36 @77019 has 22 MA's), (43, 77049), (Start: 52
@77094 has 1 MA's), (99, 77319), (101, 77322), (115, 77370), (134, 77433),

Gene: Forrest_91 Start: 63801, Stop: 64238, Start Num: 36
Candidate Starts for Forrest_91:
(32, 63792), (33, 63795), (Start: 36 @63801 has 22 MA's), (84, 64017), (86, 64032), (91, 64062), (98,
64098),

Gene: Francesca_153 Start: 89986, Stop: 90429, Start Num: 34
Candidate Starts for Francesca_153:
(Start: 34 @89986 has 4 MA's), (91, 90241), (129, 90394), (144, 90418),

Gene: IchabodCrane_184 Start: 95913, Stop: 96302, Start Num: 41
Candidate Starts for IchabodCrane_184:
(Start: 41 @95913 has 6 MA's), (90, 96138), (91, 96141), (127, 96285), (131, 96294),

Gene: Jada_120 Start: 75949, Stop: 76377, Start Num: 36
Candidate Starts for Jada_120:
(17, 75892), (24, 75913), (25, 75922), (Start: 36 @75949 has 22 MA's), (43, 75979), (Start: 52
@76024 has 1 MA's), (99, 76249), (101, 76252), (115, 76300), (134, 76363),

Gene: JimJam_109 Start: 73736, Stop: 74164, Start Num: 36
Candidate Starts for JimJam_109:
(Start: 36 @73736 has 22 MA's), (54, 73817), (90, 73985), (100, 74039), (103, 74045), (143, 74159),

Gene: JimJam_152 Start: 87443, Stop: 87886, Start Num: 36
Candidate Starts for JimJam_152:
(5, 87317), (7, 87329), (8, 87338), (10, 87344), (22, 87401), (29, 87428), (Start: 36 @87443 has 22
MA's), (56, 87542), (99, 87749), (140, 87875),

Gene: JimJam_195 Start: 97834, Stop: 98223, Start Num: 41
Candidate Starts for JimJam_195:
(Start: 41 @97834 has 6 MA's), (90, 98059), (91, 98062), (127, 98206), (131, 98215),

Gene: JonJames_21 Start: 7188, Stop: 7577, Start Num: 52
Candidate Starts for JonJames_21:
(13, 7032), (30, 7098), (Start: 52 @7188 has 1 MA's), (79, 7314), (117, 7476), (136, 7536),

Gene: KentuckyRacer_163 Start: 88711, Stop: 89055, Start Num: 50
Candidate Starts for KentuckyRacer_163:
(Start: 50 @88711 has 6 MA's), (91, 88903), (97, 88933), (99, 88948),

Gene: KentuckyRacer_154 Start: 87011, Stop: 87454, Start Num: 36
Candidate Starts for KentuckyRacer_154:
(5, 86885), (7, 86897), (8, 86906), (10, 86912), (22, 86969), (29, 86996), (Start: 36 @87011 has 22 MA's), (56, 87110), (99, 87317), (140, 87443),

Gene: KentuckyRacer_198 Start: 97580, Stop: 97969, Start Num: 41
Candidate Starts for KentuckyRacer_198:
(Start: 41 @97580 has 6 MA's), (90, 97805), (91, 97808), (127, 97952), (131, 97961),

Gene: Labelle_5 Start: 2590, Stop: 3042, Start Num: 31
Candidate Starts for Labelle_5:
(Start: 31 @2590 has 2 MA's), (79, 2803), (89, 2857), (99, 2911), (101, 2914), (120, 2989), (122, 2998),

Gene: Leo04_177 Start: 96224, Stop: 96667, Start Num: 36
Candidate Starts for Leo04_177:
(Start: 36 @96224 has 22 MA's), (65, 96377), (70, 96398), (99, 96530), (109, 96554), (145, 96662),

Gene: Lewan_109 Start: 63302, Stop: 63781, Start Num: 36
Candidate Starts for Lewan_109:
(Start: 34 @63299 has 4 MA's), (Start: 36 @63302 has 22 MA's), (64, 63455), (79, 63500), (86, 63530), (99, 63608), (107, 63629),

Gene: LilhomieP_97 Start: 57511, Stop: 57948, Start Num: 28
Candidate Starts for LilhomieP_97:
(Start: 28 @57511 has 1 MA's), (Start: 34 @57526 has 4 MA's), (63, 57676), (91, 57781), (92, 57796), (99, 57829), (107, 57850), (121, 57913),

Gene: Megatron06_4 Start: 2094, Stop: 2681, Start Num: 4
Candidate Starts for Megatron06_4:
(4, 2094), (6, 2112), (11, 2133), (14, 2154), (23, 2187), (32, 2220), (44, 2262), (91, 2490), (94, 2514), (101, 2541), (110, 2562),

Gene: Mildred21_168 Start: 90931, Stop: 91365, Start Num: 36
Candidate Starts for Mildred21_168:
(Start: 36 @90931 has 22 MA's), (91, 91192), (94, 91216), (99, 91243), (111, 91270), (116, 91297), (132, 91354),

Gene: Mildred21_142 Start: 85401, Stop: 85826, Start Num: 36
Candidate Starts for Mildred21_142:
(Start: 36 @85401 has 22 MA's), (79, 85602), (86, 85632), (90, 85659), (93, 85683), (94, 85686), (125, 85809),

Gene: Mugiwara_195 Start: 97213, Stop: 97602, Start Num: 41
Candidate Starts for Mugiwara_195:
(Start: 41 @97213 has 6 MA's), (90, 97438), (91, 97441), (127, 97585), (131, 97594),

Gene: MulchMansion_147 Start: 87054, Stop: 87398, Start Num: 50
Candidate Starts for MulchMansion_147:
(Start: 50 @87054 has 6 MA's), (91, 87246), (97, 87276), (99, 87291),

Gene: Myrna_210 Start: 122711, Stop: 123163, Start Num: 36
Candidate Starts for Myrna_210:

(32, 122702), (Start: 36 @122711 has 22 MA's), (56, 122810), (92, 122984), (99, 123017), (121, 123101),

Gene: Myrna_144 Start: 92033, Stop: 92380, Start Num: 48

Candidate Starts for Myrna_144:

(Start: 48 @92033 has 2 MA's), (71, 92141), (91, 92213), (112, 92294), (116, 92318),

Gene: Nappy_156 Start: 92836, Stop: 93228, Start Num: 60

Candidate Starts for Nappy_156:

(16, 92656), (19, 92665), (Start: 36 @92719 has 22 MA's), (Start: 60 @92836 has 1 MA's), (72, 92899), (79, 92917), (80, 92920), (89, 92971), (90, 92974), (99, 93022), (101, 93025), (121, 93106),

Gene: Paradiddles_170 Start: 96596, Stop: 97039, Start Num: 36

Candidate Starts for Paradiddles_170:

(Start: 36 @96596 has 22 MA's), (65, 96749), (70, 96770), (99, 96902), (109, 96926), (145, 97034),

Gene: Patelgo_131 Start: 78593, Stop: 79012, Start Num: 36

Candidate Starts for Patelgo_131:

(Start: 36 @78593 has 22 MA's), (45, 78629), (99, 78893), (135, 79004),

Gene: Patience_5 Start: 2590, Stop: 3042, Start Num: 31

Candidate Starts for Patience_5:

(Start: 31 @2590 has 2 MA's), (79, 2803), (89, 2857), (99, 2911), (101, 2914), (120, 2989), (122, 2998),

Gene: PegLeg_102 Start: 57809, Stop: 58258, Start Num: 34

Candidate Starts for PegLeg_102:

(Start: 34 @57809 has 4 MA's), (74, 57995), (76, 57998), (79, 58010), (86, 58040), (121, 58205), (143, 58253),

Gene: Phabba_166 Start: 92816, Stop: 93178, Start Num: 47

Candidate Starts for Phabba_166:

(26, 92741), (Start: 47 @92816 has 1 MA's), (68, 92915), (90, 93011), (91, 93014), (92, 93029), (94, 93038), (108, 93083), (117, 93122), (129, 93167), (133, 93173),

Gene: PumpkinSpice_108 Start: 73788, Stop: 74195, Start Num: 35

Candidate Starts for PumpkinSpice_108:

(Start: 35 @73788 has 1 MA's), (73, 73965), (77, 73968), (85, 73992), (91, 74025), (99, 74073), (101, 74076), (113, 74103), (125, 74169), (137, 74190),

Gene: Quaran19_166 Start: 91061, Stop: 91525, Start Num: 36

Candidate Starts for Quaran19_166:

(Start: 36 @91061 has 22 MA's), (61, 91169), (66, 91199), (90, 91301), (99, 91355), (101, 91358), (111, 91385), (149, 91514),

Gene: Sham_86 Start: 65422, Stop: 65853, Start Num: 36

Candidate Starts for Sham_86:

(Start: 36 @65422 has 22 MA's), (94, 65698), (99, 65725), (125, 65821), (136, 65836),

Gene: Skinny_102 Start: 57955, Stop: 58377, Start Num: 34

Candidate Starts for Skinny_102:

(Start: 28 @57940 has 1 MA's), (Start: 34 @57955 has 4 MA's), (63, 58105), (91, 58210), (92, 58225), (99, 58258), (107, 58279), (121, 58342),

Gene: SpeedDemon_630 Start: 48321, Stop: 48788, Start Num: 21
Candidate Starts for SpeedDemon_630:
(1, 48000), (2, 48108), (3, 48117), (Start: 21 @48321 has 1 MA's), (42, 48393), (74, 48549), (78, 48558), (87, 48606), (99, 48672), (113, 48702),

Gene: Spilled_194 Start: 96766, Stop: 97155, Start Num: 41
Candidate Starts for Spilled_194:
(Start: 41 @96766 has 6 MA's), (90, 96991), (91, 96994), (127, 97138), (131, 97147),

Gene: StarPlatinum_106 Start: 73373, Stop: 73726, Start Num: 51
Candidate Starts for StarPlatinum_106:
(12, 73211), (40, 73316), (Start: 51 @73373 has 1 MA's), (71, 73475), (86, 73514), (91, 73547),

Gene: StarPlatinum_159 Start: 89611, Stop: 89955, Start Num: 50
Candidate Starts for StarPlatinum_159:
(Start: 50 @89611 has 6 MA's), (91, 89803), (97, 89833), (99, 89848),

Gene: Sushi23_176 Start: 96586, Stop: 97014, Start Num: 36
Candidate Starts for Sushi23_176:
(Start: 36 @96586 has 22 MA's), (65, 96739), (99, 96892), (109, 96916),

Gene: TomSawyer_149 Start: 86660, Stop: 87088, Start Num: 39
Candidate Starts for TomSawyer_149:
(5, 86519), (7, 86531), (8, 86540), (10, 86546), (22, 86603), (29, 86630), (Start: 36 @86645 has 22 MA's), (Start: 39 @86660 has 1 MA's), (56, 86744), (76, 86828), (99, 86951), (130, 87062), (139, 87074),

Gene: TomSawyer_168 Start: 92075, Stop: 92539, Start Num: 36
Candidate Starts for TomSawyer_168:
(25, 92048), (Start: 36 @92075 has 22 MA's), (61, 92183), (66, 92213), (90, 92315), (99, 92369), (101, 92372), (111, 92399), (149, 92528),

Gene: TomSawyer_193 Start: 97685, Stop: 98074, Start Num: 41
Candidate Starts for TomSawyer_193:
(Start: 41 @97685 has 6 MA's), (90, 97910), (91, 97913), (127, 98057), (131, 98066),

Gene: Tribute_97 Start: 71749, Stop: 72189, Start Num: 36
Candidate Starts for Tribute_97:
(33, 71743), (Start: 36 @71749 has 22 MA's), (53, 71827), (64, 71893), (86, 71968), (99, 72043), (117, 72103), (144, 72172), (146, 72181),

Gene: TunaTartare_131 Start: 79206, Stop: 79715, Start Num: 15
Candidate Starts for TunaTartare_131:
(Start: 15 @79206 has 1 MA's), (Start: 36 @79278 has 22 MA's), (55, 79362), (92, 79554), (99, 79590), (105, 79605), (109, 79617), (114, 79632),

Gene: Vetrrix_107 Start: 63521, Stop: 64000, Start Num: 36
Candidate Starts for Vetrrix_107:
(30, 63506), (Start: 34 @63518 has 4 MA's), (Start: 36 @63521 has 22 MA's), (78, 63713), (86, 63749), (89, 63773), (99, 63827), (116, 63884), (121, 63911), (148, 63968),

Gene: Watermoore_188 Start: 100639, Stop: 101016, Start Num: 48

Candidate Starts for Watermoore_188:

(Start: 48 @100639 has 2 MA's), (Start: 50 @100645 has 6 MA's), (88, 100804), (101, 100870), (102, 100873), (147, 101011),

Gene: WhereRU_34 Start: 14821, Stop: 14384, Start Num: 36

Candidate Starts for WhereRU_34:

(Start: 36 @14821 has 22 MA's), (92, 14548), (95, 14533), (96, 14530),

Gene: WhereRU_106 Start: 73218, Stop: 73643, Start Num: 36

Candidate Starts for WhereRU_106:

(Start: 36 @73218 has 22 MA's), (79, 73410), (81, 73419), (111, 73548),

Gene: Wipeout_181 Start: 97029, Stop: 97418, Start Num: 41

Candidate Starts for Wipeout_181:

(Start: 41 @97029 has 6 MA's), (90, 97254), (91, 97257), (127, 97401), (131, 97410),

Gene: Wofford_143 Start: 88534, Stop: 88977, Start Num: 36

Candidate Starts for Wofford_143:

(7, 88420), (8, 88429), (10, 88435), (22, 88492), (29, 88519), (Start: 36 @88534 has 22 MA's), (56, 88633), (99, 88840),

Gene: Wofford_171 Start: 96384, Stop: 96842, Start Num: 36

Candidate Starts for Wofford_171:

(Start: 36 @96384 has 22 MA's), (111, 96714), (136, 96804), (146, 96828),