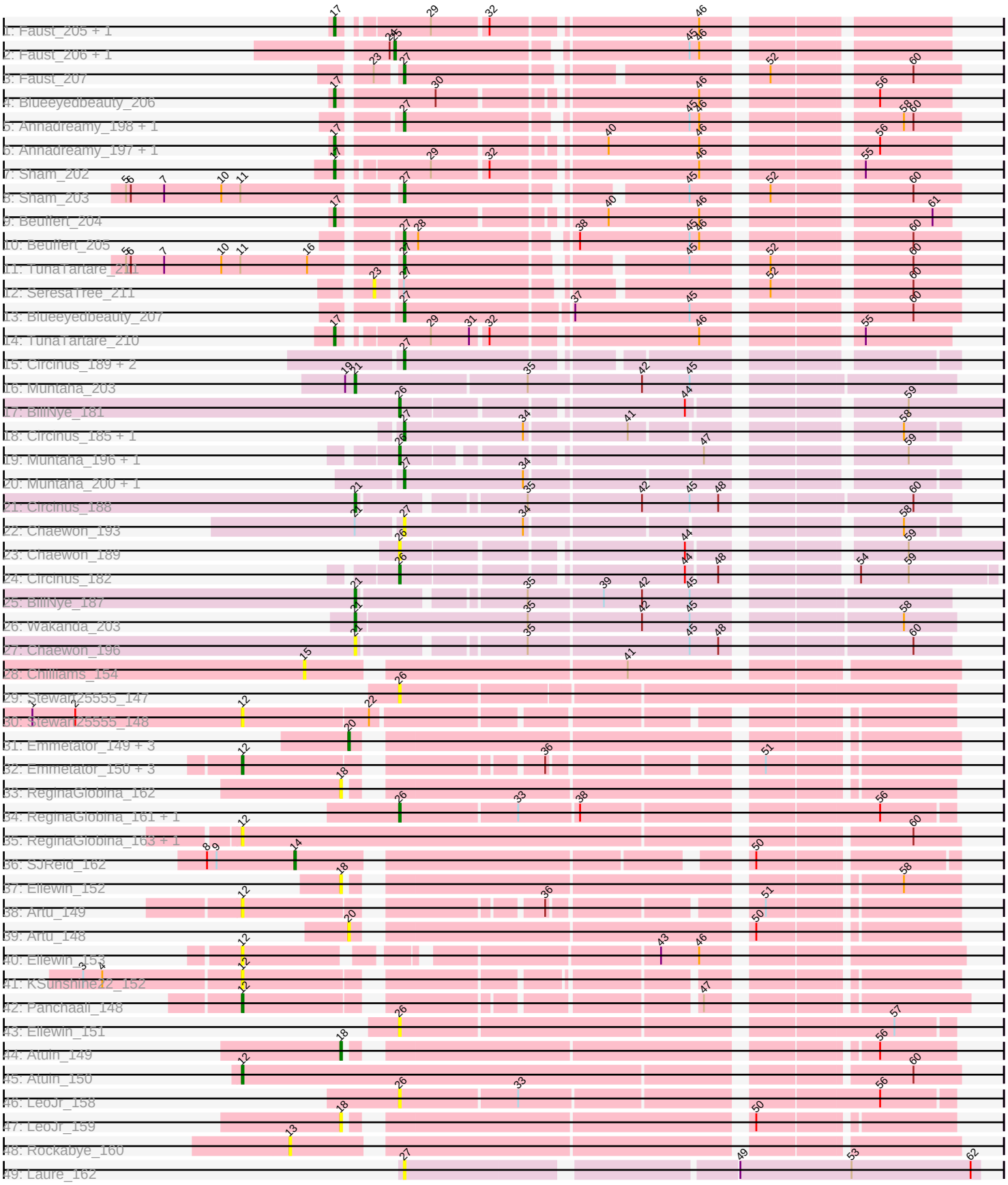
Pham 289393


1: Faust_205 + 1
2: Faust_206 + 1
3: Faust_207
4: Blueeyedbeauty_206
5: Annadreamy_198 + 1
6: Annadreamy_197 + 1
7: Sham_202
8: Sham_203
9: Beuffert_204
10: Beuffert_205
11: TunaTartare_211
12: SeresaTree_211
13: Blueeyedbeauty_207
14: TunaTartare_210
15: Circinus_189 + 2
16: Muntaha_203
17: BillNye_181
18: Circinus_185 + 1
19: Muntaha_196 + 1
20: Muntaha_200 + 1
21: Circinus_188
22: Chaewon_193
23: Chaewon_189
24: Circinus_182
25: BillNye_187
26: Wakanda_203
27: Chaewon_196
28: Chilliams_154
29: Stewart25555_147
30: Stewart25555_148
31: Emmetator_149 + 3
32: Emmetator_150 + 3
33: ReginaGlobina_162
34: ReginaGlobina_161 + 1
35: ReginaGlobina_163 + 1
36: SJReid_162
37: Ellewin_152
38: Artu_149
39: Artu_148
40: Ellewin_153
41: KSunshine22_152
42: Panchaali_148
43: Ellewin_151
44: Atuin_149
45: Atuin_150
46: LeoJr_158
47: LeoJr_159
48: Rockabye_160
49: Laure_162

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 289393 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289393 has 66 members, 28 are drafts.

Phages represented in each track:
- Track 1 : Faust_205, SeresaTree_209
- Track 2 : Faust_206, SeresaTree_210
- Track 3 : Faust_207
- Track 4 : Blueeyedbeauty_206
- Track 5 : Annadreamy_198, Limpid_205
- Track 6 : Annadreamy_197, Limpid_204
- Track 7 : Sham_202
- Track 8 : Sham_203
- Track 9 : Beuffert_204
- Track 10 : Beuffert_205
- Track 11 : TunaTartare_211
- Track 12 : SeresaTree_211
- Track 13 : Blueeyedbeauty_207
- Track 14 : TunaTartare_210
- Track 15 : Circinus_189, BillNye_188, Chaewon_197
- Track 16 : Muntaha_203
- Track 17 : BillNye_181
- Track 18 : Circinus_185, BillNye_184
- Track 19 : Muntaha_196, Wakanda_196
- Track 20 : Muntaha_200, Wakanda_200
- Track 21 : Circinus_188
- Track 22 : Chaewon_193
- Track 23 : Chaewon_189
- Track 24 : Circinus_182
- Track 25 : BillNye_187
- Track 26 : Wakanda_203
- Track 27 : Chaewon_196
- Track 28 : Chilliams_154
- Track 29 : Stewart25555_147
- Track 30 : Stewart25555_148
- Track 31 : Emmetator_149, WaddleDee_142, BooTeria_155, DunneganBoMo_146
- Track 32 : Emmetator_150, WaddleDee_143, BooTeria_156, DunneganBoMo_147
- Track 33 : ReginaGlobina_162
- Track 34 : ReginaGlobina_161, Atuin_148
- Track 35 : ReginaGlobina_163, LeoJr_160
- Track 36 : SJReid_162
- Track 37 : Ellewin_152

• Track 38 : Artu_149
• Track 39 : Artu_148
• Track 40 : Ellewin_153
• Track 41 : KSunshine22_152
• Track 42 : Panchaali_148
• Track 43 : Ellewin_151
• Track 44 : Atuin_149
• Track 45 : Atuin_150
• Track 46 : LeoJr_158
• Track 47 : LeoJr_159
• Track 48 : Rockabye_160
• Track 49 : Laure_162

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

The start number called the most often in the published annotations is 27, it was called in 13 of the 38 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Annadreamy_198, Beuffert_205, BillNye_184, BillNye_188, Blueeyedbeauty_207, Chaewon_193, Chaewon_197, Circinus_185, Circinus_189, Faust_207, Laure_162, Limpid_205, Muntaha_200, Sham_203, TunaTartare_211, Wakanda_200,

Genes that have the "Most Annotated" start but do not call it:
• SeresaTree_211,

Genes that do not have the "Most Annotated" start:
• Annadreamy_197, Artu_148, Artu_149, Atuin_148, Atuin_149, Atuin_150, Beuffert_204, BillNye_181, BillNye_187, Blueeyedbeauty_206, BooTeria_155, BooTeria_156, Chaewon_189, Chaewon_196, Chilliams_154, Circinus_182, Circinus_188, DunneganBoMo_146, DunneganBoMo_147, Ellewin_151, Ellewin_152, Ellewin_153, Emmetator_149, Emmetator_150, Faust_205, Faust_206, KSunshine22_152, LeoJr_158, LeoJr_159, LeoJr_160, Limpid_204, Muntaha_196, Muntaha_203, Panchaali_148, ReginaGlobina_161, ReginaGlobina_162, ReginaGlobina_163, Rockabye_160, SJReid_162, SeresaTree_209, SeresaTree_210, Sham_202, Stewart25555_147, Stewart25555_148, TunaTartare_210, WaddleDee_142, WaddleDee_143, Wakanda_196, Wakanda_203,

Summary by start number:

Start 12:
• Found in 12 of 66 (18.2%) of genes in pham
• Manual Annotations of this start: 4 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_149 (FC), Atuin_150 (FC), BooTeria_156 (FC), DunneganBoMo_147 (FC), Ellewin_153 (FC), Emmetator_150 (FC), KSunshine22_152 (FC), LeoJr_160 (FC), Panchaali_148 (FC), ReginaGlobina_163 (FC), Stewart25555_148 (FC), WaddleDee_143 (FC),

Start 13:

• Found in 1 of 66 (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: Rockabye_160 (FC),

Start 14:
• Found in 1 of 66 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: SJReid_162 (FC),

Start 15:
• Found in 1 of 66 (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: Chilliams_154 (FC),

Start 17:
• Found in 8 of 66 (12.1%) of genes in pham
• Manual Annotations of this start: 7 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Annadreamy_197 (BK1), Beuffert_204 (BK1), Blueeyedbeauty_206 (BK1), Faust_205 (BK1), Limpid_204 (BK1), SeresaTree_209 (BK1), Sham_202 (BK1), TunaTartare_210 (BK1),

Start 18:
• Found in 4 of 66 (6.1%) of genes in pham
• Manual Annotations of this start: 1 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Atuin_149 (FC), Ellewin_152 (FC), LeoJr_159 (FC), ReginaGlobina_162 (FC),

Start 20:
• Found in 5 of 66 (7.6%) of genes in pham
• Manual Annotations of this start: 2 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_148 (FC), BooTeria_155 (FC), DunneganBoMo_146 (FC), Emmetator_149 (FC), WaddleDee_142 (FC),

Start 21:
• Found in 6 of 66 (9.1%) of genes in pham
• Manual Annotations of this start: 4 of 38
• Called 83.3% of time when present
• Phage (with cluster) where this start called: BillNye_187 (BK2), Chaewon_196 (BK2), Circinus_188 (BK2), Muntaha_203 (BK2), Wakanda_203 (BK2),

Start 23:
• Found in 2 of 66 (3.0%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: SeresaTree_211 (BK1),

Start 25:

• Found in 2 of 66 (3.0%) of genes in pham
• Manual Annotations of this start: 1 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Faust_206 (BK1), SeresaTree_210 (BK1),

Start 26:
• Found in 10 of 66 (15.2%) of genes in pham
• Manual Annotations of this start: 5 of 38
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Atuin_148 (FC), BillNye_181 (BK2), Chaewon_189 (BK2), Circinus_182 (BK2), Ellewin_151 (FC), LeoJr_158 (FC), Muntaha_196 (BK2), ReginaGlobina_161 (FC), Stewart25555_147 (FC), Wakanda_196 (BK2),

Start 27:
• Found in 17 of 66 (25.8%) of genes in pham
• Manual Annotations of this start: 13 of 38
• Called 94.1% of time when present
• Phage (with cluster) where this start called: Annadreamy_198 (BK1), Beuffert_205 (BK1), BillNye_184 (BK2), BillNye_188 (BK2), Blueeyedbeauty_207 (BK1), Chaewon_193 (BK2), Chaewon_197 (BK2), Circinus_185 (BK2), Circinus_189 (BK2), Faust_207 (BK1), Laure_162 (UNK), Limpid_205 (BK1), Muntaha_200 (BK2), Sham_203 (BK1), TunaTartare_211 (BK1), Wakanda_200 (BK2),

Summary by clusters:

There are 4 clusters represented in this pham: UNK, FC, BK1, BK2,

Info for manual annotations of cluster BK1:
•Start number 17 was manually annotated 7 times for cluster BK1.
•Start number 25 was manually annotated 1 time for cluster BK1.
•Start number 27 was manually annotated 7 times for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 21 was manually annotated 4 times for cluster BK2.
•Start number 26 was manually annotated 4 times for cluster BK2.
•Start number 27 was manually annotated 6 times for cluster BK2.

Info for manual annotations of cluster FC:
•Start number 12 was manually annotated 4 times for cluster FC.
•Start number 14 was manually annotated 1 time for cluster FC.
•Start number 18 was manually annotated 1 time for cluster FC.
•Start number 20 was manually annotated 2 times for cluster FC.
•Start number 26 was manually annotated 1 time for cluster FC.

Gene Information:

Gene: Annadreamy_198 Start: 100559, Stop: 100870, Start Num: 27
Candidate Starts for Annadreamy_198:

(Start: 27 @100559 has 13 MA's), (45, 100724), (46, 100730), (58, 100835), (60, 100841),

Gene: Annadreamy_197 Start: 100178, Stop: 100516, Start Num: 17
Candidate Starts for Annadreamy_197:
(Start: 17 @100178 has 7 MA's), (40, 100325), (46, 100382), (56, 100472),

Gene: Artu_149 Start: 102382, Stop: 102765, Start Num: 12
Candidate Starts for Artu_149:
(Start: 12 @102382 has 4 MA's), (36, 102544), (51, 102655),

Gene: Artu_148 Start: 102038, Stop: 102379, Start Num: 20
Candidate Starts for Artu_148:
(Start: 20 @102038 has 2 MA's), (50, 102263),

Gene: Atuin_149 Start: 104650, Stop: 104988, Start Num: 18
Candidate Starts for Atuin_149:
(Start: 18 @104650 has 1 MA's), (56, 104941),

Gene: Atuin_148 Start: 104321, Stop: 104644, Start Num: 26
Candidate Starts for Atuin_148:
(Start: 26 @104321 has 5 MA's), (33, 104393), (38, 104429), (56, 104600),

Gene: Atuin_150 Start: 104992, Stop: 105420, Start Num: 12
Candidate Starts for Atuin_150:
(Start: 12 @104992 has 4 MA's), (60, 105391),

Gene: Beuffert_204 Start: 104170, Stop: 104508, Start Num: 17
Candidate Starts for Beuffert_204:
(Start: 17 @104170 has 7 MA's), (40, 104317), (46, 104374), (61, 104497),

Gene: Beuffert_205 Start: 104551, Stop: 104862, Start Num: 27
Candidate Starts for Beuffert_205:
(Start: 27 @104551 has 13 MA's), (28, 104560), (38, 104647), (45, 104716), (46, 104722), (60, 104833),

Gene: BillNye_181 Start: 99832, Stop: 100167, Start Num: 26
Candidate Starts for BillNye_181:
(Start: 26 @99832 has 5 MA's), (44, 99994), (59, 100108),

Gene: BillNye_184 Start: 100624, Stop: 100935, Start Num: 27
Candidate Starts for BillNye_184:
(Start: 27 @100624 has 13 MA's), (34, 100699), (41, 100759), (58, 100903),

Gene: BillNye_187 Start: 101461, Stop: 101799, Start Num: 21
Candidate Starts for BillNye_187:
(Start: 21 @101461 has 4 MA's), (35, 101554), (39, 101599), (42, 101623), (45, 101653),

Gene: BillNye_188 Start: 101849, Stop: 102151, Start Num: 27
Candidate Starts for BillNye_188:
(Start: 27 @101849 has 13 MA's),

Gene: Blueeyedbeauty_206 Start: 103898, Stop: 104236, Start Num: 17
Candidate Starts for Blueeyedbeauty_206:

(Start: 17 @103898 has 7 MA's), (30, 103955), (46, 104102), (56, 104192),

Gene: Blueeyedbeauty_207 Start: 104279, Stop: 104596, Start Num: 27
Candidate Starts for Blueeyedbeauty_207:
(Start: 27 @104279 has 13 MA's), (37, 104378), (45, 104450), (60, 104567),

Gene: BooTeria_156 Start: 102675, Stop: 103058, Start Num: 12
Candidate Starts for BooTeria_156:
(Start: 12 @102675 has 4 MA's), (36, 102837), (51, 102948),

Gene: BooTeria_155 Start: 102332, Stop: 102673, Start Num: 20
Candidate Starts for BooTeria_155:
(Start: 20 @102332 has 2 MA's),

Gene: Chaewon_193 Start: 102351, Stop: 102662, Start Num: 27
Candidate Starts for Chaewon_193:
(Start: 21 @102324 has 4 MA's), (Start: 27 @102351 has 13 MA's), (34, 102426), (58, 102630),

Gene: Chaewon_189 Start: 101363, Stop: 101698, Start Num: 26
Candidate Starts for Chaewon_189:
(Start: 26 @101363 has 5 MA's), (44, 101525), (59, 101639),

Gene: Chaewon_197 Start: 103586, Stop: 103888, Start Num: 27
Candidate Starts for Chaewon_197:
(Start: 27 @103586 has 13 MA's),

Gene: Chaewon_196 Start: 103198, Stop: 103536, Start Num: 21
Candidate Starts for Chaewon_196:
(Start: 21 @103198 has 4 MA's), (35, 103291), (45, 103390), (48, 103408), (60, 103513),

Gene: Chilliams_154 Start: 95980, Stop: 96354, Start Num: 15
Candidate Starts for Chilliams_154:
(15, 95980), (41, 96166),

Gene: Circinus_189 Start: 101656, Stop: 101958, Start Num: 27
Candidate Starts for Circinus_189:
(Start: 27 @101656 has 13 MA's),

Gene: Circinus_185 Start: 100431, Stop: 100742, Start Num: 27
Candidate Starts for Circinus_185:
(Start: 27 @100431 has 13 MA's), (34, 100506), (41, 100566), (58, 100710),

Gene: Circinus_188 Start: 101268, Stop: 101606, Start Num: 21
Candidate Starts for Circinus_188:
(Start: 21 @101268 has 4 MA's), (35, 101361), (42, 101430), (45, 101460), (48, 101478), (60, 101583),

Gene: Circinus_182 Start: 99644, Stop: 99973, Start Num: 26
Candidate Starts for Circinus_182:
(Start: 26 @99644 has 5 MA's), (44, 99806), (48, 99824), (54, 99890), (59, 99920),

Gene: DunneganBoMo_146 Start: 101601, Stop: 101942, Start Num: 20
Candidate Starts for DunneganBoMo_146:
(Start: 20 @101601 has 2 MA's),

Gene: DunneganBoMo_147 Start: 101944, Stop: 102327, Start Num: 12
Candidate Starts for DunneganBoMo_147:
(Start: 12 @101944 has 4 MA's), (36, 102106), (51, 102217),

Gene: Ellewin_152 Start: 101696, Stop: 102037, Start Num: 18
Candidate Starts for Ellewin_152:
(Start: 18 @101696 has 1 MA's), (58, 102002),

Gene: Ellewin_153 Start: 102039, Stop: 102437, Start Num: 12
Candidate Starts for Ellewin_153:
(Start: 12 @102039 has 4 MA's), (43, 102267), (46, 102291),

Gene: Ellewin_151 Start: 101365, Stop: 101691, Start Num: 26
Candidate Starts for Ellewin_151:
(Start: 26 @101365 has 5 MA's), (57, 101656),

Gene: Emmetator_149 Start: 101914, Stop: 102255, Start Num: 20
Candidate Starts for Emmetator_149:
(Start: 20 @101914 has 2 MA's),

Gene: Emmetator_150 Start: 102257, Stop: 102640, Start Num: 12
Candidate Starts for Emmetator_150:
(Start: 12 @102257 has 4 MA's), (36, 102419), (51, 102530),

Gene: Faust_205 Start: 105087, Stop: 105422, Start Num: 17
Candidate Starts for Faust_205:
(Start: 17 @105087 has 7 MA's), (29, 105135), (32, 105168), (46, 105288),

Gene: Faust_206 Start: 105463, Stop: 105774, Start Num: 25
Candidate Starts for Faust_206:
(24, 105460), (Start: 25 @105463 has 1 MA's), (45, 105634), (46, 105640),

Gene: Faust_207 Start: 105783, Stop: 106088, Start Num: 27
Candidate Starts for Faust_207:
(23, 105771), (Start: 27 @105783 has 13 MA's), (52, 105981), (60, 106059),

Gene: KSunshine22_152 Start: 103001, Stop: 103387, Start Num: 12
Candidate Starts for KSunshine22_152:
(3, 102905), (4, 102917), (Start: 12 @103001 has 4 MA's),

Gene: Laure_162 Start: 98082, Stop: 98423, Start Num: 27
Candidate Starts for Laure_162:
(Start: 27 @98082 has 13 MA's), (49, 98274), (53, 98343), (62, 98418),

Gene: LeoJr_158 Start: 104920, Stop: 105243, Start Num: 26
Candidate Starts for LeoJr_158:
(Start: 26 @104920 has 5 MA's), (33, 104992), (56, 105199),

Gene: LeoJr_160 Start: 105590, Stop: 106018, Start Num: 12
Candidate Starts for LeoJr_160:
(Start: 12 @105590 has 4 MA's), (60, 105989),

Gene: LeoJr_159 Start: 105249, Stop: 105587, Start Num: 18
Candidate Starts for LeoJr_159:
(Start: 18 @105249 has 1 MA's), (50, 105474),

Gene: Limpid_205 Start: 105872, Stop: 106183, Start Num: 27
Candidate Starts for Limpid_205:
(Start: 27 @105872 has 13 MA's), (45, 106037), (46, 106043), (58, 106148), (60, 106154),

Gene: Limpid_204 Start: 105491, Stop: 105829, Start Num: 17
Candidate Starts for Limpid_204:
(Start: 17 @105491 has 7 MA's), (40, 105638), (46, 105695), (56, 105785),

Gene: Muntaha_203 Start: 101500, Stop: 101853, Start Num: 21
Candidate Starts for Muntaha_203:
(19, 101494), (Start: 21 @101500 has 4 MA's), (35, 101605), (42, 101674), (45, 101704),

Gene: Muntaha_196 Start: 99557, Stop: 99856, Start Num: 26
Candidate Starts for Muntaha_196:
(Start: 26 @99557 has 5 MA's), (47, 99725), (59, 99830),

Gene: Muntaha_200 Start: 100611, Stop: 100922, Start Num: 27
Candidate Starts for Muntaha_200:
(Start: 27 @100611 has 13 MA's), (34, 100686),

Gene: Panchaali_148 Start: 102119, Stop: 102511, Start Num: 12
Candidate Starts for Panchaali_148:
(Start: 12 @102119 has 4 MA's), (47, 102368),

Gene: ReginaGlobina_162 Start: 106523, Stop: 106861, Start Num: 18
Candidate Starts for ReginaGlobina_162:
(Start: 18 @106523 has 1 MA's),

Gene: ReginaGlobina_161 Start: 106194, Stop: 106517, Start Num: 26
Candidate Starts for ReginaGlobina_161:
(Start: 26 @106194 has 5 MA's), (33, 106266), (38, 106302), (56, 106473),

Gene: ReginaGlobina_163 Start: 106864, Stop: 107292, Start Num: 12
Candidate Starts for ReginaGlobina_163:
(Start: 12 @106864 has 4 MA's), (60, 107263),

Gene: Rockabye_160 Start: 97547, Stop: 97930, Start Num: 13
Candidate Starts for Rockabye_160:
(13, 97547),

Gene: SJReid_162 Start: 96607, Stop: 96969, Start Num: 14
Candidate Starts for SJReid_162:
(8, 96553), (9, 96559), (Start: 14 @96607 has 1 MA's), (50, 96853),

Gene: SeresaTree_210 Start: 105448, Stop: 105759, Start Num: 25
Candidate Starts for SeresaTree_210:
(24, 105445), (Start: 25 @105448 has 1 MA's), (45, 105619), (46, 105625),

Gene: SeresaTree_211 Start: 105756, Stop: 106073, Start Num: 23

Candidate Starts for SeresaTree_211:
(23, 105756), (Start: 27 @105768 has 13 MA's), (52, 105966), (60, 106044),

Gene: SeresaTree_209 Start: 105072, Stop: 105407, Start Num: 17
Candidate Starts for SeresaTree_209:
(Start: 17 @105072 has 7 MA's), (29, 105120), (32, 105153), (46, 105273),

Gene: Sham_202 Start: 106470, Stop: 106805, Start Num: 17
Candidate Starts for Sham_202:
(Start: 17 @106470 has 7 MA's), (29, 106518), (32, 106551), (46, 106671), (55, 106752),

Gene: Sham_203 Start: 106846, Stop: 107148, Start Num: 27
Candidate Starts for Sham_203:
(5, 106684), (6, 106687), (7, 106708), (10, 106744), (11, 106756), (Start: 27 @106846 has 13 MA's), (45, 107002), (52, 107041), (60, 107119),

Gene: Stewart25555_147 Start: 102928, Stop: 103263, Start Num: 26
Candidate Starts for Stewart25555_147:
(Start: 26 @102928 has 5 MA's),

Gene: Stewart25555_148 Start: 103275, Stop: 103673, Start Num: 12
Candidate Starts for Stewart25555_148:
(1, 103143), (2, 103170), (Start: 12 @103275 has 4 MA's), (22, 103353),

Gene: TunaTartare_211 Start: 109144, Stop: 109446, Start Num: 27
Candidate Starts for TunaTartare_211:
(5, 108982), (6, 108985), (7, 109006), (10, 109042), (11, 109054), (16, 109096), (Start: 27 @109144 has 13 MA's), (45, 109300), (52, 109339), (60, 109417),

Gene: TunaTartare_210 Start: 108768, Stop: 109103, Start Num: 17
Candidate Starts for TunaTartare_210:
(Start: 17 @108768 has 7 MA's), (29, 108816), (31, 108840), (32, 108849), (46, 108969), (55, 109050),

Gene: WaddleDee_143 Start: 101130, Stop: 101513, Start Num: 12
Candidate Starts for WaddleDee_143:
(Start: 12 @101130 has 4 MA's), (36, 101292), (51, 101403),

Gene: WaddleDee_142 Start: 100787, Stop: 101128, Start Num: 20
Candidate Starts for WaddleDee_142:
(Start: 20 @100787 has 2 MA's),

Gene: Wakanda_203 Start: 101737, Stop: 102090, Start Num: 21
Candidate Starts for Wakanda_203:
(Start: 21 @101737 has 4 MA's), (35, 101842), (42, 101911), (45, 101941), (58, 102058),

Gene: Wakanda_200 Start: 100892, Stop: 101203, Start Num: 27
Candidate Starts for Wakanda_200:
(Start: 27 @100892 has 13 MA's), (34, 100967),

Gene: Wakanda_196 Start: 99838, Stop: 100137, Start Num: 26
Candidate Starts for Wakanda_196:
(Start: 26 @99838 has 5 MA's), (47, 100006), (59, 100111),