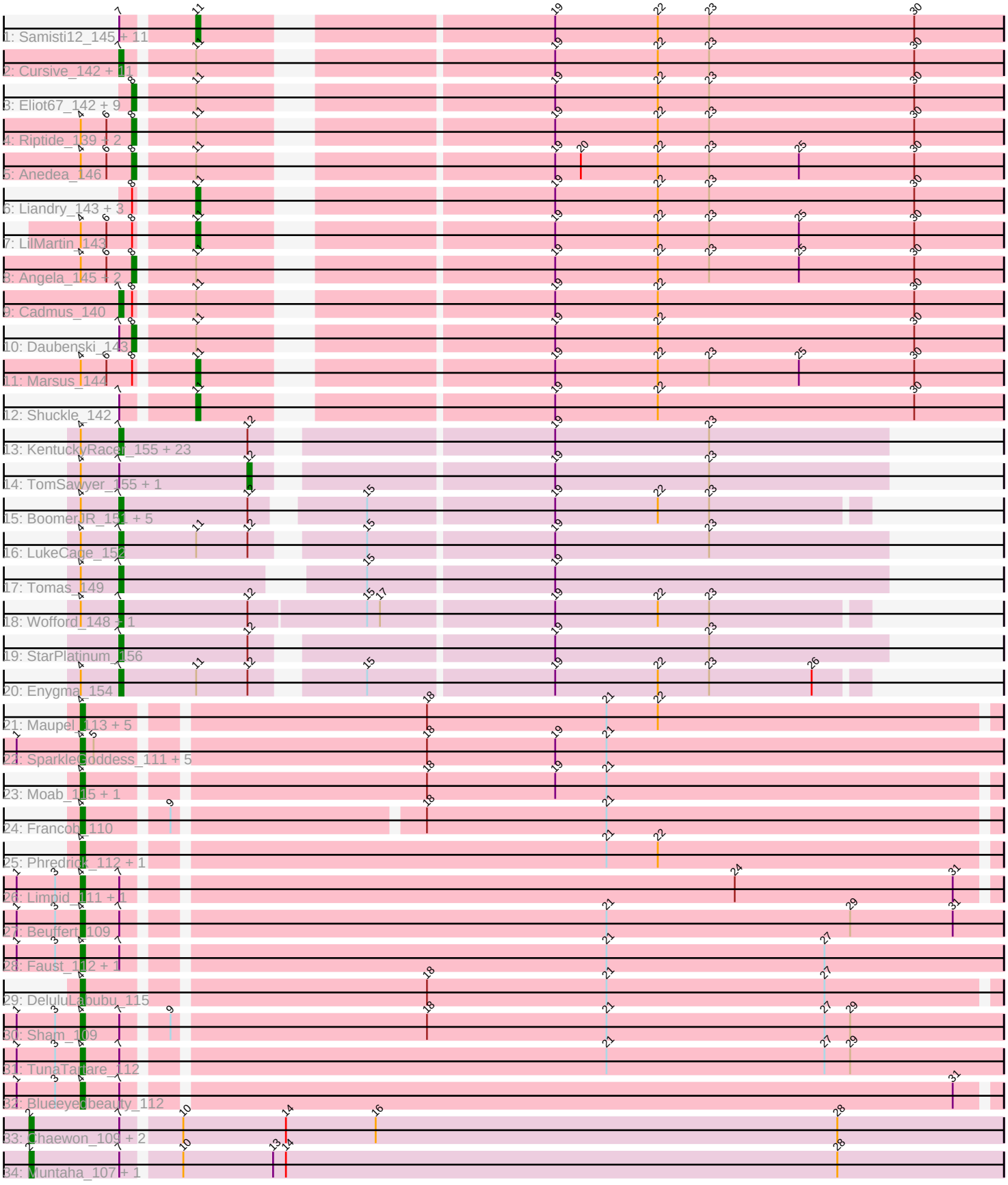
Pham 347407


1: Samisti12_145 + 11
2: Cursive_142 + 11
3: Eliot67_142 + 9
4: Riptide_139 + 2
5: Anedea_146
6: Liandry_143 + 3
7: LilMartin_143
8: Angela_145 + 2
9: Cadmus_140
10: Daubenski_143
11: Marsus_144
12: Shuckle_142
13: KentuckyRacer_155 + 23
14: TomSawyer_155 + 1
15: BoomerJR_151 + 5
16: LukeCage_152
17: Tomas_149
18: Wofford_148 + 1
19: StarPlatinum_156
20: Enygma_154
21: Maupel_113 + 5
22: SparkleGoddess_111 + 5
23: Moab_115 + 1
24: Francoh_110
25: Phredrick_112 + 1
26: Limpid_111 + 1
27: Beuffert_109
28: Faust_112 + 1
29: DeluluLabubu_115
30: Sham_109
31: TunaTartare_112
32: Blueeyedbeauty_112
33: Chaewon_109 + 2
34: Muntaha_107 + 1

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 347407 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347407 has 119 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Samisti12_145, Jay2Jay_148, Warpy_147, Pepperwood_143, Teutsch_143, Larnav_144, Sushi23_144, Watermoore_143, EGole_146, Scheme_145, Evy_140, Coogler_143
• Track 2 : Cursive_142, WashU_142, BlueOtter_143, ArianaSWT_145, Lululemon_143, Tribute_143, Cross_144, Targaryen_144, HangryHippo_143, PacManQ_143, Leo04_145, Peebs_141
• Track 3 : Eliot67_142, WhereRU_143, Braelyn_145, PinkiePie_140, Navo_142, Squillium_143, PynkPanther_144, Paradiddles_139, Davielle_144, NootNoot_140
• Track 4 : Riptide_139, LilSaint_143, Mildred21_150
• Track 5 : Anedea_146
• Track 6 : Liandry_143, FreddyDRoo_143, Bartholomune_143, Persimmon_144
• Track 7 : LilMartin_143
• Track 8 : Angela_145, Bmoc_147, MulchMansion_144
• Track 9 : Cadmus_140
• Track 10 : Daubenski_143
• Track 11 : Marsus_144
• Track 12 : Shuckle_142
• Track 13 : KentuckyRacer_155, Jollison_152, Wipeout_147, PumpkinSpice_155, Tuesday_157, Battuta_151, Spelly_154, MindFlayer_148, Karimac_151, CeilingFan_153, Brizzy_150, IchabodCrane_147, Quaran19_152, Birchlyn_151, Spilled_156, Mugiwara_155, Gibbi_159, JimJam_157, Amabiko_153, Bordeaux_151, Starbow_150, Rikishi_152, SaltySpitoon_152, Daisy123_154
• Track 14 : TomSawyer_155, AcciDwight_159
• Track 15 : BoomerJR_151, Yaboi_151, AngryGiraffe_148, Genie2_151, Sollertia_150, Stanimal_149
• Track 16 : LukeCage_152
• Track 17 : Tomas_149
• Track 18 : Wofford_148, Elmer_154
• Track 19 : StarPlatinum_156
• Track 20 : Enygma_154
• Track 21 : Maupel_113, MeganTheeKilla_113, Emma1919_114, Gilson_113, Jada_114, Forrest_118
• Track 22 : SparkleGoddess_111, Stigma_111, Belfort_113, Comrade_110, Karp_109, Westy_115
• Track 23 : Moab_115, Patelgo_116
• Track 24 : Francob_110
• Track 25 : Phredrick_112, Kenrey_116

• Track 26 : Limpid_111, Annadreamy_102
• Track 27 : Beuffert_109
• Track 28 : Faust_112, SeresaTree_112
• Track 29 : DeluluLabubu_115
• Track 30 : Sham_109
• Track 31 : TunaTartare_112
• Track 32 : Blueeyedbeauty_112
• Track 33 : Chaewon_109, BillNye_103, Circinus_104
• Track 34 : Muntaha_107, Wakanda_105

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

The start number called the most often in the published annotations is 7, it was called in 47 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Amabiko_153, AngryGiraffe_148, ArianaSWT_145, Battuta_151, Birchlyn_151, BlueOtter_143, BoomerJR_151, Bordeaux_151, Brizzy_150, Cadmus_140, CeilingFan_153, Cross_144, Cursive_142, Daisy123_154, Elmer_154, Enygma_154, Genie2_151, Gibbi_159, HangryHippo_143, IchabodCrane_147, JimJam_157, Jollison_152, Karimac_151, KentuckyRacer_155, Leo04_145, LukeCage_152, Lululemon_143, MindFlayer_148, Mugiwara_155, PacManQ_143, Peebs_141, PumpkinSpice_155, Quaran19_152, Rikishi_152, SaltySpitoon_152, Sollertia_150, Spelly_154, Spilled_156, Stanimal_149, StarPlatinum_156, Starbow_150, Targaryen_144, Tomas_149, Tribute_143, Tuesday_157, WashU_142, Wipeout_147, Wofford_148, Yaboi_151,

Genes that have the "Most Annotated" start but do not call it:
• AcciDwight_159, Annadreamy_102, Beuffert_109, BillNye_103, Blueeyedbeauty_112, Chaewon_109, Circinus_104, Coogler_143, Daubenski_143, EGole_146, Evy_140, Faust_112, Jay2Jay_148, Larnav_144, Limpid_111, Muntaha_107, Pepperwood_143, Samisti12_145, Scheme_145, SeresaTree_112, Sham_109, Shuckle_142, Sushi23_144, Teutsch_143, TomSawyer_155, TunaTartare_112, Wakanda_105, Warpy_147, Watermoore_143,

Genes that do not have the "Most Annotated" start:
• Anedea_146, Angela_145, Bartholomune_143, Belfort_113, Bmoc_147, Braelyn_145, Comrade_110, Davielle_144, DeluluLabubu_115, Eliot67_142, Emma1919_114, Forrest_118, Francob_110, FreddyDRoo_143, Gilson_113, Jada_114, Karp_109, Kenrey_116, Liandry_143, LilMartin_143, LilSaint_143, Marsus_144, Maupel_113, MeganTheeKilla_113, Mildred21_150, Moab_115, MulchMansion_144, Navo_142, NootNoot_140, Paradiddles_139, Patelgo_116, Persimmon_144, Phredrick_112, PinkiePie_140, PynkPanther_144, Riptide_139, SparkleGoddess_111, Squillium_143, Stigma_111, Westy_115, WhereRU_143,

Summary by start number:

Start 2:
• Found in 5 of 119 (4.2%) of genes in pham
• Manual Annotations of this start: 5 of 113

• Called 100.0% of time when present
• Phage (with cluster) where this start called: BillNye_103 (BK2), Chaewon_109 (BK2), Circinus_104 (BK2), Muntaha_107 (BK2), Wakanda_105 (BK2),

Start 4:
• Found in 72 of 119 (60.5%) of genes in pham
• Manual Annotations of this start: 24 of 113
• Called 36.1% of time when present
• Phage (with cluster) where this start called: Annadreamy_102 (BK1), Belfort_113 (BK1), Beuffert_109 (BK1), Blueeyedbeauty_112 (BK1), Comrade_110 (BK1), DeluluLababu_115 (BK1), Emma1919_114 (BK1), Faust_112 (BK1), Forrest_118 (BK1), Francob_110 (BK1), Gilson_113 (BK1), Jada_114 (BK1), Karp_109 (BK1), Kenrey_116 (BK1), Limpid_111 (BK1), Maupel_113 (BK1), MeganTheeKilla_113 (BK1), Moab_115 (BK1), Patelgo_116 (BK1), Phredrick_112 (BK1), SeresaTree_112 (BK1), Sham_109 (BK1), SparkleGoddess_111 (BK1), Stigma_111 (BK1), TunaTartare_112 (BK1), Westy_115 (BK1),

Start 7:
• Found in 78 of 119 (65.5%) of genes in pham
• Manual Annotations of this start: 47 of 113
• Called 62.8% of time when present
• Phage (with cluster) where this start called: Amabiko_153 (BE2), AngryGiraffe_148 (BE2), ArianaSWT_145 (BE1), Battuta_151 (BE2), Birchlyn_151 (BE2), BlueOtter_143 (BE1), BoomerJR_151 (BE2), Bordeaux_151 (BE2), Brizzy_150 (BE2), Cadmus_140 (BE1), CeilingFan_153 (BE2), Cross_144 (BE1), Cursive_142 (BE1), Daisy123_154 (BE2), Elmer_154 (BE2), Enygma_154 (BE2), Genie2_151 (BE2), Gibbi_159 (BE2), HangryHippo_143 (BE1), IchabodCrane_147 (BE2), JimJam_157 (BE2), Jollison_152 (BE2), Karimac_151 (BE2), KentuckyRacer_155 (BE2), Leo04_145 (BE1), LukeCage_152 (BE2), Lululemon_143 (BE1), MindFlayer_148 (BE2), Mugiwara_155 (BE2), PacManQ_143 (BE1), Peebs_141 (BE1), PumpkinSpice_155 (BE2), Quaran19_152 (BE2), Rikishi_152 (BE2), SaltySpitoon_152 (BE2), Sollertia_150 (BE2), Spelly_154 (BE2), Spilled_156 (BE2), Stanimal_149 (BE2), StarPlatinum_156 (BE2), Starbow_150 (BE2), Targaryen_144 (BE1), Tomas_149 (BE2), Tribute_143 (BE1), Tuesday_157 (BE2), WashU_142 (BE1), Wipeout_147 (BE2), Wofford_148 (BE2), Yaboi_151 (BE2),

Start 8:
• Found in 25 of 119 (21.0%) of genes in pham
• Manual Annotations of this start: 17 of 113
• Called 72.0% of time when present
• Phage (with cluster) where this start called: Anedea_146 (BE1), Angela_145 (BE1), Bmoc_147 (BE1), Braelyn_145 (BE1), Daubenski_143 (BE1), Davielle_144 (BE1), Eliot67_142 (BE1), LilSaint_143 (BE1), Mildred21_150 (BE1), MulchMansion_144 (BE1), Navo_142 (BE1), NootNoot_140 (BE1), Paradiddles_139 (BE1), PinkiePie_140 (BE1), PynkPanther_144 (BE1), Riptide_139 (BE1), Squillium_143 (BE1), WhereRU_143 (BE1),

Start 11:
• Found in 52 of 119 (43.7%) of genes in pham
• Manual Annotations of this start: 19 of 113
• Called 36.5% of time when present
• Phage (with cluster) where this start called: Bartholomune_143 (BE1), Coogler_143 (BE1), EGole_146 (BE1), Evy_140 (BE1), FreddyDRoo_143 (BE1), Jay2Jay_148

(BE1), Larnav_144 (BE1), Liandry_143 (BE1), LilMartin_143 (BE1), Marsus_144 (BE1), Pepperwood_143 (BE1), Persimmon_144 (BE1), Samisti12_145 (BE1), Scheme_145 (BE1), Shuckle_142 (BE1), Sushi23_144 (BE1), Teutsch_143 (BE1), Warpy_147 (BE1), Watermoore_143 (BE1),

Start 12:
• Found in 37 of 119 (31.1%) of genes in pham
• Manual Annotations of this start: 1 of 113
• Called 5.4% of time when present
• Phage (with cluster) where this start called: AcciDwight_159 (BE2), TomSawyer_155 (BE2),

Summary by clusters:

There are 4 clusters represented in this pham: BE2, BE1, BK1, BK2,

Info for manual annotations of cluster BE1:
•Start number 7 was manually annotated 13 times for cluster BE1.
•Start number 8 was manually annotated 17 times for cluster BE1.
•Start number 11 was manually annotated 19 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 7 was manually annotated 34 times for cluster BE2.
•Start number 12 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:
•Start number 4 was manually annotated 24 times for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 2 was manually annotated 5 times for cluster BK2.

Gene Information:

Gene: AcciDwight_159 Start: 87597, Stop: 87737, Start Num: 12
Candidate Starts for AcciDwight_159:
(Start: 4 @87558 has 24 MA's), (Start: 7 @87567 has 47 MA's), (Start: 12 @87597 has 1 MA's), (19, 87660), (23, 87696),

Gene: Amabiko_153 Start: 87154, Stop: 87324, Start Num: 7
Candidate Starts for Amabiko_153:
(Start: 4 @87145 has 24 MA's), (Start: 7 @87154 has 47 MA's), (Start: 12 @87184 has 1 MA's), (19, 87247), (23, 87283),

Gene: Anedea_146 Start: 86298, Stop: 86486, Start Num: 8
Candidate Starts for Anedea_146:
(Start: 4 @86286 has 24 MA's), (6, 86292), (Start: 8 @86298 has 17 MA's), (Start: 11 @86310 has 19 MA's), (19, 86382), (20, 86388), (22, 86406), (23, 86418), (25, 86439), (30, 86466),

Gene: Angela_145 Start: 86531, Stop: 86719, Start Num: 8
Candidate Starts for Angela_145:

(Start: 4 @86519 has 24 MA's), (6, 86525), (Start: 8 @86531 has 17 MA's), (Start: 11 @86543 has 19 MA's), (19, 86615), (22, 86639), (23, 86651), (25, 86672), (30, 86699),

Gene: AngryGiraffe_148 Start: 87117, Stop: 87281, Start Num: 7
Candidate Starts for AngryGiraffe_148:
(Start: 4 @87108 has 24 MA's), (Start: 7 @87117 has 47 MA's), (Start: 12 @87147 has 1 MA's), (15, 87168), (19, 87210), (22, 87234), (23, 87246),

Gene: Annadreamy_102 Start: 68342, Stop: 68548, Start Num: 4
Candidate Starts for Annadreamy_102:
(1, 68327), (3, 68336), (Start: 4 @68342 has 24 MA's), (Start: 7 @68351 has 47 MA's), (24, 68489), (31, 68540),

Gene: ArianaSWT_145 Start: 88083, Stop: 88274, Start Num: 7
Candidate Starts for ArianaSWT_145:
(Start: 7 @88083 has 47 MA's), (Start: 11 @88098 has 19 MA's), (19, 88170), (22, 88194), (23, 88206), (30, 88254),

Gene: Bartholomune_143 Start: 86181, Stop: 86357, Start Num: 11
Candidate Starts for Bartholomune_143:
(Start: 8 @86169 has 17 MA's), (Start: 11 @86181 has 19 MA's), (19, 86253), (22, 86277), (23, 86289), (30, 86337),

Gene: Battuta_151 Start: 87128, Stop: 87298, Start Num: 7
Candidate Starts for Battuta_151:
(Start: 4 @87119 has 24 MA's), (Start: 7 @87128 has 47 MA's), (Start: 12 @87158 has 1 MA's), (19, 87221), (23, 87257),

Gene: Belfort_113 Start: 74186, Stop: 74395, Start Num: 4
Candidate Starts for Belfort_113:
(1, 74171), (Start: 4 @74186 has 24 MA's), (5, 74189), (18, 74261), (19, 74291), (21, 74303),

Gene: Beuffert_109 Start: 73163, Stop: 73372, Start Num: 4
Candidate Starts for Beuffert_109:
(1, 73148), (3, 73157), (Start: 4 @73163 has 24 MA's), (Start: 7 @73172 has 47 MA's), (21, 73280), (29, 73337), (31, 73361),

Gene: BillNye_103 Start: 72582, Stop: 72806, Start Num: 2
Candidate Starts for BillNye_103:
(Start: 2 @72582 has 5 MA's), (Start: 7 @72603 has 47 MA's), (10, 72615), (14, 72639), (16, 72660), (28, 72768),

Gene: Birchlyn_151 Start: 85014, Stop: 85184, Start Num: 7
Candidate Starts for Birchlyn_151:
(Start: 4 @85005 has 24 MA's), (Start: 7 @85014 has 47 MA's), (Start: 12 @85044 has 1 MA's), (19, 85107), (23, 85143),

Gene: BlueOtter_143 Start: 88120, Stop: 88311, Start Num: 7
Candidate Starts for BlueOtter_143:
(Start: 7 @88120 has 47 MA's), (Start: 11 @88135 has 19 MA's), (19, 88207), (22, 88231), (23, 88243), (30, 88291),

Gene: Blueeyedbeauty_112 Start: 72259, Stop: 72465, Start Num: 4

Candidate Starts for Blueeyedbeauty_112:
(1, 72244), (3, 72253), (Start: 4 @72259 has 24 MA's), (Start: 7 @72268 has 47 MA's), (31, 72457),

Gene: Bmoc_147 Start: 86807, Stop: 86995, Start Num: 8
Candidate Starts for Bmoc_147:
(Start: 4 @86795 has 24 MA's), (6, 86801), (Start: 8 @86807 has 17 MA's), (Start: 11 @86819 has 19 MA's), (19, 86891), (22, 86915), (23, 86927), (25, 86948), (30, 86975),

Gene: BoomerJR_151 Start: 87532, Stop: 87696, Start Num: 7
Candidate Starts for BoomerJR_151:
(Start: 4 @87523 has 24 MA's), (Start: 7 @87532 has 47 MA's), (Start: 12 @87562 has 1 MA's), (15, 87583), (19, 87625), (22, 87649), (23, 87661),

Gene: Bordeaux_151 Start: 87283, Stop: 87453, Start Num: 7
Candidate Starts for Bordeaux_151:
(Start: 4 @87274 has 24 MA's), (Start: 7 @87283 has 47 MA's), (Start: 12 @87313 has 1 MA's), (19, 87376), (23, 87412),

Gene: Braelyn_145 Start: 87192, Stop: 87380, Start Num: 8
Candidate Starts for Braelyn_145:
(Start: 8 @87192 has 17 MA's), (Start: 11 @87204 has 19 MA's), (19, 87276), (22, 87300), (23, 87312), (30, 87360),

Gene: Brizzy_150 Start: 86936, Stop: 87106, Start Num: 7
Candidate Starts for Brizzy_150:
(Start: 4 @86927 has 24 MA's), (Start: 7 @86936 has 47 MA's), (Start: 12 @86966 has 1 MA's), (19, 87029), (23, 87065),

Gene: Cadmus_140 Start: 86597, Stop: 86788, Start Num: 7
Candidate Starts for Cadmus_140:
(Start: 7 @86597 has 47 MA's), (Start: 8 @86600 has 17 MA's), (Start: 11 @86612 has 19 MA's), (19, 86684), (22, 86708), (30, 86768),

Gene: CeilingFan_153 Start: 87660, Stop: 87830, Start Num: 7
Candidate Starts for CeilingFan_153:
(Start: 4 @87651 has 24 MA's), (Start: 7 @87660 has 47 MA's), (Start: 12 @87690 has 1 MA's), (19, 87753), (23, 87789),

Gene: Chaewon_109 Start: 72498, Stop: 72722, Start Num: 2
Candidate Starts for Chaewon_109:
(Start: 2 @72498 has 5 MA's), (Start: 7 @72519 has 47 MA's), (10, 72531), (14, 72555), (16, 72576), (28, 72684),

Gene: Circinus_104 Start: 72572, Stop: 72796, Start Num: 2
Candidate Starts for Circinus_104:
(Start: 2 @72572 has 5 MA's), (Start: 7 @72593 has 47 MA's), (10, 72605), (14, 72629), (16, 72650), (28, 72758),

Gene: Comrade_110 Start: 73503, Stop: 73712, Start Num: 4
Candidate Starts for Comrade_110:
(1, 73488), (Start: 4 @73503 has 24 MA's), (5, 73506), (18, 73578), (19, 73608), (21, 73620),

Gene: Coogler_143 Start: 88160, Stop: 88336, Start Num: 11

Candidate Starts for Coogler_143:
(Start: 7 @88145 has 47 MA's), (Start: 11 @88160 has 19 MA's), (19, 88232), (22, 88256), (23, 88268), (30, 88316),

Gene: Cross_144 Start: 88121, Stop: 88312, Start Num: 7
Candidate Starts for Cross_144:
(Start: 7 @88121 has 47 MA's), (Start: 11 @88136 has 19 MA's), (19, 88208), (22, 88232), (23, 88244), (30, 88292),

Gene: Cursive_142 Start: 86330, Stop: 86521, Start Num: 7
Candidate Starts for Cursive_142:
(Start: 7 @86330 has 47 MA's), (Start: 11 @86345 has 19 MA's), (19, 86417), (22, 86441), (23, 86453), (30, 86501),

Gene: Daisy123_154 Start: 87924, Stop: 88094, Start Num: 7
Candidate Starts for Daisy123_154:
(Start: 4 @87915 has 24 MA's), (Start: 7 @87924 has 47 MA's), (Start: 12 @87954 has 1 MA's), (19, 88017), (23, 88053),

Gene: Daubenski_143 Start: 87837, Stop: 88025, Start Num: 8
Candidate Starts for Daubenski_143:
(Start: 7 @87834 has 47 MA's), (Start: 8 @87837 has 17 MA's), (Start: 11 @87849 has 19 MA's), (19, 87921), (22, 87945), (30, 88005),

Gene: Davielle_144 Start: 86844, Stop: 87032, Start Num: 8
Candidate Starts for Davielle_144:
(Start: 8 @86844 has 17 MA's), (Start: 11 @86856 has 19 MA's), (19, 86928), (22, 86952), (23, 86964), (30, 87012),

Gene: DeluluLabubu_115 Start: 73633, Stop: 73839, Start Num: 4
Candidate Starts for DeluluLabubu_115:
(Start: 4 @73633 has 24 MA's), (18, 73708), (21, 73750), (27, 73801),

Gene: EGole_146 Start: 89408, Stop: 89584, Start Num: 11
Candidate Starts for EGole_146:
(Start: 7 @89393 has 47 MA's), (Start: 11 @89408 has 19 MA's), (19, 89480), (22, 89504), (23, 89516), (30, 89564),

Gene: Eliot67_142 Start: 86205, Stop: 86393, Start Num: 8
Candidate Starts for Eliot67_142:
(Start: 8 @86205 has 17 MA's), (Start: 11 @86217 has 19 MA's), (19, 86289), (22, 86313), (23, 86325), (30, 86373),

Gene: Elmer_154 Start: 90156, Stop: 90326, Start Num: 7
Candidate Starts for Elmer_154:
(Start: 4 @90147 has 24 MA's), (Start: 7 @90156 has 47 MA's), (Start: 12 @90186 has 1 MA's), (15, 90213), (17, 90216), (19, 90255), (22, 90279), (23, 90291),

Gene: Emma1919_114 Start: 72964, Stop: 73170, Start Num: 4
Candidate Starts for Emma1919_114:
(Start: 4 @72964 has 24 MA's), (18, 73039), (21, 73081), (22, 73093),

Gene: Enygma_154 Start: 89406, Stop: 89570, Start Num: 7

Candidate Starts for Enygma_154:
(Start: 4 @89397 has 24 MA's), (Start: 7 @89406 has 47 MA's), (Start: 11 @89424 has 19 MA's), (Start: 12 @89436 has 1 MA's), (15, 89457), (19, 89499), (22, 89523), (23, 89535), (26, 89559),

Gene: Evy_140 Start: 88041, Stop: 88217, Start Num: 11
Candidate Starts for Evy_140:
(Start: 7 @88026 has 47 MA's), (Start: 11 @88041 has 19 MA's), (19, 88113), (22, 88137), (23, 88149), (30, 88197),

Gene: Faust_112 Start: 73810, Stop: 74019, Start Num: 4
Candidate Starts for Faust_112:
(1, 73795), (3, 73804), (Start: 4 @73810 has 24 MA's), (Start: 7 @73819 has 47 MA's), (21, 73927), (27, 73978),

Gene: Forrest_118 Start: 75277, Stop: 75483, Start Num: 4
Candidate Starts for Forrest_118:
(Start: 4 @75277 has 24 MA's), (18, 75352), (21, 75394), (22, 75406),

Gene: Francob_110 Start: 72996, Stop: 73199, Start Num: 4
Candidate Starts for Francob_110:
(Start: 4 @72996 has 24 MA's), (9, 73014), (18, 73068), (21, 73110),

Gene: FreddyDRoo_143 Start: 86217, Stop: 86393, Start Num: 11
Candidate Starts for FreddyDRoo_143:
(Start: 8 @86205 has 17 MA's), (Start: 11 @86217 has 19 MA's), (19, 86289), (22, 86313), (23, 86325), (30, 86373),

Gene: Genie2_151 Start: 87646, Stop: 87810, Start Num: 7
Candidate Starts for Genie2_151:
(Start: 4 @87637 has 24 MA's), (Start: 7 @87646 has 47 MA's), (Start: 12 @87676 has 1 MA's), (15, 87697), (19, 87739), (22, 87763), (23, 87775),

Gene: Gibbi_159 Start: 87724, Stop: 87894, Start Num: 7
Candidate Starts for Gibbi_159:
(Start: 4 @87715 has 24 MA's), (Start: 7 @87724 has 47 MA's), (Start: 12 @87754 has 1 MA's), (19, 87817), (23, 87853),

Gene: Gilson_113 Start: 72926, Stop: 73132, Start Num: 4
Candidate Starts for Gilson_113:
(Start: 4 @72926 has 24 MA's), (18, 73001), (21, 73043), (22, 73055),

Gene: HangryHippo_143 Start: 88120, Stop: 88311, Start Num: 7
Candidate Starts for HangryHippo_143:
(Start: 7 @88120 has 47 MA's), (Start: 11 @88135 has 19 MA's), (19, 88207), (22, 88231), (23, 88243), (30, 88291),

Gene: IchabodCrane_147 Start: 86855, Stop: 87025, Start Num: 7
Candidate Starts for IchabodCrane_147:
(Start: 4 @86846 has 24 MA's), (Start: 7 @86855 has 47 MA's), (Start: 12 @86885 has 1 MA's), (19, 86948), (23, 86984),

Gene: Jada_114 Start: 74207, Stop: 74413, Start Num: 4
Candidate Starts for Jada_114:

(Start: 4 @74207 has 24 MA's), (18, 74282), (21, 74324), (22, 74336),

Gene: Jay2Jay_148 Start: 89036, Stop: 89212, Start Num: 11
Candidate Starts for Jay2Jay_148:
(Start: 7 @89021 has 47 MA's), (Start: 11 @89036 has 19 MA's), (19, 89108), (22, 89132), (23, 89144), (30, 89192),

Gene: JimJam_157 Start: 88490, Stop: 88660, Start Num: 7
Candidate Starts for JimJam_157:
(Start: 4 @88481 has 24 MA's), (Start: 7 @88490 has 47 MA's), (Start: 12 @88520 has 1 MA's), (19, 88583), (23, 88619),

Gene: Jollison_152 Start: 87568, Stop: 87738, Start Num: 7
Candidate Starts for Jollison_152:
(Start: 4 @87559 has 24 MA's), (Start: 7 @87568 has 47 MA's), (Start: 12 @87598 has 1 MA's), (19, 87661), (23, 87697),

Gene: Karimac_151 Start: 87394, Stop: 87564, Start Num: 7
Candidate Starts for Karimac_151:
(Start: 4 @87385 has 24 MA's), (Start: 7 @87394 has 47 MA's), (Start: 12 @87424 has 1 MA's), (19, 87487), (23, 87523),

Gene: Karp_109 Start: 73474, Stop: 73683, Start Num: 4
Candidate Starts for Karp_109:
(1, 73459), (Start: 4 @73474 has 24 MA's), (5, 73477), (18, 73549), (19, 73579), (21, 73591),

Gene: Kenrey_116 Start: 73966, Stop: 74172, Start Num: 4
Candidate Starts for Kenrey_116:
(Start: 4 @73966 has 24 MA's), (21, 74083), (22, 74095),

Gene: KentuckyRacer_155 Start: 88156, Stop: 88326, Start Num: 7
Candidate Starts for KentuckyRacer_155:
(Start: 4 @88147 has 24 MA's), (Start: 7 @88156 has 47 MA's), (Start: 12 @88186 has 1 MA's), (19, 88249), (23, 88285),

Gene: Larnav_144 Start: 88119, Stop: 88295, Start Num: 11
Candidate Starts for Larnav_144:
(Start: 7 @88104 has 47 MA's), (Start: 11 @88119 has 19 MA's), (19, 88191), (22, 88215), (23, 88227), (30, 88275),

Gene: Leo04_145 Start: 88620, Stop: 88811, Start Num: 7
Candidate Starts for Leo04_145:
(Start: 7 @88620 has 47 MA's), (Start: 11 @88635 has 19 MA's), (19, 88707), (22, 88731), (23, 88743), (30, 88791),

Gene: Liandry_143 Start: 86924, Stop: 87100, Start Num: 11
Candidate Starts for Liandry_143:
(Start: 8 @86912 has 17 MA's), (Start: 11 @86924 has 19 MA's), (19, 86996), (22, 87020), (23, 87032), (30, 87080),

Gene: LilMartin_143 Start: 86193, Stop: 86369, Start Num: 11
Candidate Starts for LilMartin_143:

(Start: 4 @86169 has 24 MA's), (6, 86175), (Start: 8 @86181 has 17 MA's), (Start: 11 @86193 has 19 MA's), (19, 86265), (22, 86289), (23, 86301), (25, 86322), (30, 86349),

Gene: LilSaint_143 Start: 85443, Stop: 85631, Start Num: 8
Candidate Starts for LilSaint_143:
(Start: 4 @85431 has 24 MA's), (6, 85437), (Start: 8 @85443 has 17 MA's), (Start: 11 @85455 has 19 MA's), (19, 85527), (22, 85551), (23, 85563), (30, 85611),

Gene: Limpid_111 Start: 73585, Stop: 73791, Start Num: 4
Candidate Starts for Limpid_111:
(1, 73570), (3, 73579), (Start: 4 @73585 has 24 MA's), (Start: 7 @73594 has 47 MA's), (24, 73732), (31, 73783),

Gene: LukeCage_152 Start: 88516, Stop: 88686, Start Num: 7
Candidate Starts for LukeCage_152:
(Start: 4 @88507 has 24 MA's), (Start: 7 @88516 has 47 MA's), (Start: 11 @88534 has 19 MA's), (Start: 12 @88546 has 1 MA's), (15, 88567), (19, 88609), (23, 88645),

Gene: Lululemon_143 Start: 87501, Stop: 87692, Start Num: 7
Candidate Starts for Lululemon_143:
(Start: 7 @87501 has 47 MA's), (Start: 11 @87516 has 19 MA's), (19, 87588), (22, 87612), (23, 87624), (30, 87672),

Gene: Marsus_144 Start: 86468, Stop: 86644, Start Num: 11
Candidate Starts for Marsus_144:
(Start: 4 @86444 has 24 MA's), (6, 86450), (Start: 8 @86456 has 17 MA's), (Start: 11 @86468 has 19 MA's), (19, 86540), (22, 86564), (23, 86576), (25, 86597), (30, 86624),

Gene: Maupel_113 Start: 72926, Stop: 73132, Start Num: 4
Candidate Starts for Maupel_113:
(Start: 4 @72926 has 24 MA's), (18, 73001), (21, 73043), (22, 73055),

Gene: MeganTheeKilla_113 Start: 73132, Stop: 73338, Start Num: 4
Candidate Starts for MeganTheeKilla_113:
(Start: 4 @73132 has 24 MA's), (18, 73207), (21, 73249), (22, 73261),

Gene: Mildred21_150 Start: 86878, Stop: 87066, Start Num: 8
Candidate Starts for Mildred21_150:
(Start: 4 @86866 has 24 MA's), (6, 86872), (Start: 8 @86878 has 17 MA's), (Start: 11 @86890 has 19 MA's), (19, 86962), (22, 86986), (23, 86998), (30, 87046),

Gene: MindFlayer_148 Start: 86762, Stop: 86932, Start Num: 7
Candidate Starts for MindFlayer_148:
(Start: 4 @86753 has 24 MA's), (Start: 7 @86762 has 47 MA's), (Start: 12 @86792 has 1 MA's), (19, 86855), (23, 86891),

Gene: Moab_115 Start: 75623, Stop: 75829, Start Num: 4
Candidate Starts for Moab_115:
(Start: 4 @75623 has 24 MA's), (18, 75698), (19, 75728), (21, 75740),

Gene: Mugiwara_155 Start: 88293, Stop: 88466, Start Num: 7
Candidate Starts for Mugiwara_155:

(Start: 4 @88284 has 24 MA's), (Start: 7 @88293 has 47 MA's), (Start: 12 @88323 has 1 MA's), (19, 88386), (23, 88422),

Gene: MulchMansion_144 Start: 86479, Stop: 86667, Start Num: 8
Candidate Starts for MulchMansion_144:
(Start: 4 @86467 has 24 MA's), (6, 86473), (Start: 8 @86479 has 17 MA's), (Start: 11 @86491 has 19 MA's), (19, 86563), (22, 86587), (23, 86599), (25, 86620), (30, 86647),

Gene: Muntaha_107 Start: 70741, Stop: 70965, Start Num: 2
Candidate Starts for Muntaha_107:
(Start: 2 @70741 has 5 MA's), (Start: 7 @70762 has 47 MA's), (10, 70774), (13, 70795), (14, 70798), (28, 70927),

Gene: Navo_142 Start: 86702, Stop: 86890, Start Num: 8
Candidate Starts for Navo_142:
(Start: 8 @86702 has 17 MA's), (Start: 11 @86714 has 19 MA's), (19, 86786), (22, 86810), (23, 86822), (30, 86870),

Gene: NootNoot_140 Start: 85811, Stop: 85999, Start Num: 8
Candidate Starts for NootNoot_140:
(Start: 8 @85811 has 17 MA's), (Start: 11 @85823 has 19 MA's), (19, 85895), (22, 85919), (23, 85931), (30, 85979),

Gene: PacManQ_143 Start: 87501, Stop: 87692, Start Num: 7
Candidate Starts for PacManQ_143:
(Start: 7 @87501 has 47 MA's), (Start: 11 @87516 has 19 MA's), (19, 87588), (22, 87612), (23, 87624), (30, 87672),

Gene: Paradiddles_139 Start: 88109, Stop: 88297, Start Num: 8
Candidate Starts for Paradiddles_139:
(Start: 8 @88109 has 17 MA's), (Start: 11 @88121 has 19 MA's), (19, 88193), (22, 88217), (23, 88229), (30, 88277),

Gene: Patelgo_116 Start: 75483, Stop: 75689, Start Num: 4
Candidate Starts for Patelgo_116:
(Start: 4 @75483 has 24 MA's), (18, 75558), (19, 75588), (21, 75600),

Gene: Peebs_141 Start: 87808, Stop: 87999, Start Num: 7
Candidate Starts for Peebs_141:
(Start: 7 @87808 has 47 MA's), (Start: 11 @87823 has 19 MA's), (19, 87895), (22, 87919), (23, 87931), (30, 87979),

Gene: Pepperwood_143 Start: 87955, Stop: 88131, Start Num: 11
Candidate Starts for Pepperwood_143:
(Start: 7 @87940 has 47 MA's), (Start: 11 @87955 has 19 MA's), (19, 88027), (22, 88051), (23, 88063), (30, 88111),

Gene: Persimmon_144 Start: 86104, Stop: 86280, Start Num: 11
Candidate Starts for Persimmon_144:
(Start: 8 @86092 has 17 MA's), (Start: 11 @86104 has 19 MA's), (19, 86176), (22, 86200), (23, 86212), (30, 86260),

Gene: Phredrick_112 Start: 72252, Stop: 72458, Start Num: 4

Candidate Starts for Phredrick_112:
(Start: 4 @72252 has 24 MA's), (21, 72369), (22, 72381),

Gene: PinkiePie_140 Start: 86912, Stop: 87100, Start Num: 8
Candidate Starts for PinkiePie_140:
(Start: 8 @86912 has 17 MA's), (Start: 11 @86924 has 19 MA's), (19, 86996), (22, 87020), (23, 87032), (30, 87080),

Gene: PumpkinSpice_155 Start: 88176, Stop: 88346, Start Num: 7
Candidate Starts for PumpkinSpice_155:
(Start: 4 @88167 has 24 MA's), (Start: 7 @88176 has 47 MA's), (Start: 12 @88206 has 1 MA's), (19, 88269), (23, 88305),

Gene: PynkPanther_144 Start: 87626, Stop: 87814, Start Num: 8
Candidate Starts for PynkPanther_144:
(Start: 8 @87626 has 17 MA's), (Start: 11 @87638 has 19 MA's), (19, 87710), (22, 87734), (23, 87746), (30, 87794),

Gene: Quaran19_152 Start: 87144, Stop: 87314, Start Num: 7
Candidate Starts for Quaran19_152:
(Start: 4 @87135 has 24 MA's), (Start: 7 @87144 has 47 MA's), (Start: 12 @87174 has 1 MA's), (19, 87237), (23, 87273),

Gene: Rikishi_152 Start: 87518, Stop: 87688, Start Num: 7
Candidate Starts for Rikishi_152:
(Start: 4 @87509 has 24 MA's), (Start: 7 @87518 has 47 MA's), (Start: 12 @87548 has 1 MA's), (19, 87611), (23, 87647),

Gene: Riptide_139 Start: 84930, Stop: 85118, Start Num: 8
Candidate Starts for Riptide_139:
(Start: 4 @84918 has 24 MA's), (6, 84924), (Start: 8 @84930 has 17 MA's), (Start: 11 @84942 has 19 MA's), (19, 85014), (22, 85038), (23, 85050), (30, 85098),

Gene: SaltySpitoon_152 Start: 87157, Stop: 87327, Start Num: 7
Candidate Starts for SaltySpitoon_152:
(Start: 4 @87148 has 24 MA's), (Start: 7 @87157 has 47 MA's), (Start: 12 @87187 has 1 MA's), (19, 87250), (23, 87286),

Gene: Samisti12_145 Start: 89207, Stop: 89383, Start Num: 11
Candidate Starts for Samisti12_145:
(Start: 7 @89192 has 47 MA's), (Start: 11 @89207 has 19 MA's), (19, 89279), (22, 89303), (23, 89315), (30, 89363),

Gene: Scheme_145 Start: 88717, Stop: 88893, Start Num: 11
Candidate Starts for Scheme_145:
(Start: 7 @88702 has 47 MA's), (Start: 11 @88717 has 19 MA's), (19, 88789), (22, 88813), (23, 88825), (30, 88873),

Gene: SeresaTree_112 Start: 73192, Stop: 73401, Start Num: 4
Candidate Starts for SeresaTree_112:
(1, 73177), (3, 73186), (Start: 4 @73192 has 24 MA's), (Start: 7 @73201 has 47 MA's), (21, 73309), (27, 73360),

Gene: Sham_109 Start: 73335, Stop: 73544, Start Num: 4
Candidate Starts for Sham_109:
(1, 73320), (3, 73329), (Start: 4 @73335 has 24 MA's), (Start: 7 @73344 has 47 MA's), (9, 73353), (18, 73410), (21, 73452), (27, 73503), (29, 73509),

Gene: Shuckle_142 Start: 87343, Stop: 87519, Start Num: 11
Candidate Starts for Shuckle_142:
(Start: 7 @87328 has 47 MA's), (Start: 11 @87343 has 19 MA's), (19, 87415), (22, 87439), (30, 87499),

Gene: Sollertia_150 Start: 87646, Stop: 87810, Start Num: 7
Candidate Starts for Sollertia_150:
(Start: 4 @87637 has 24 MA's), (Start: 7 @87646 has 47 MA's), (Start: 12 @87676 has 1 MA's), (15, 87697), (19, 87739), (22, 87763), (23, 87775),

Gene: SparkleGoddess_111 Start: 73803, Stop: 74012, Start Num: 4
Candidate Starts for SparkleGoddess_111:
(1, 73788), (Start: 4 @73803 has 24 MA's), (5, 73806), (18, 73878), (19, 73908), (21, 73920),

Gene: Spelly_154 Start: 87109, Stop: 87279, Start Num: 7
Candidate Starts for Spelly_154:
(Start: 4 @87100 has 24 MA's), (Start: 7 @87109 has 47 MA's), (Start: 12 @87139 has 1 MA's), (19, 87202), (23, 87238),

Gene: Spilled_156 Start: 87685, Stop: 87855, Start Num: 7
Candidate Starts for Spilled_156:
(Start: 4 @87676 has 24 MA's), (Start: 7 @87685 has 47 MA's), (Start: 12 @87715 has 1 MA's), (19, 87778), (23, 87814),

Gene: Squillium_143 Start: 86914, Stop: 87102, Start Num: 8
Candidate Starts for Squillium_143:
(Start: 8 @86914 has 17 MA's), (Start: 11 @86926 has 19 MA's), (19, 86998), (22, 87022), (23, 87034), (30, 87082),

Gene: Stanimal_149 Start: 87535, Stop: 87699, Start Num: 7
Candidate Starts for Stanimal_149:
(Start: 4 @87526 has 24 MA's), (Start: 7 @87535 has 47 MA's), (Start: 12 @87565 has 1 MA's), (15, 87586), (19, 87628), (22, 87652), (23, 87664),

Gene: StarPlatinum_156 Start: 89056, Stop: 89226, Start Num: 7
Candidate Starts for StarPlatinum_156:
(Start: 7 @89056 has 47 MA's), (Start: 12 @89086 has 1 MA's), (19, 89149), (23, 89185),

Gene: Starbow_150 Start: 87130, Stop: 87300, Start Num: 7
Candidate Starts for Starbow_150:
(Start: 4 @87121 has 24 MA's), (Start: 7 @87130 has 47 MA's), (Start: 12 @87160 has 1 MA's), (19, 87223), (23, 87259),

Gene: Stigma_111 Start: 73811, Stop: 74020, Start Num: 4
Candidate Starts for Stigma_111:
(1, 73796), (Start: 4 @73811 has 24 MA's), (5, 73814), (18, 73886), (19, 73916), (21, 73928),

Gene: Sushi23_144 Start: 88181, Stop: 88357, Start Num: 11
Candidate Starts for Sushi23_144:

(Start: 7 @88166 has 47 MA's), (Start: 11 @88181 has 19 MA's), (19, 88253), (22, 88277), (23, 88289), (30, 88337),

Gene: Targaryen_144 Start: 89161, Stop: 89352, Start Num: 7
Candidate Starts for Targaryen_144:
(Start: 7 @89161 has 47 MA's), (Start: 11 @89176 has 19 MA's), (19, 89248), (22, 89272), (23, 89284), (30, 89332),

Gene: Teutsch_143 Start: 88493, Stop: 88669, Start Num: 11
Candidate Starts for Teutsch_143:
(Start: 7 @88478 has 47 MA's), (Start: 11 @88493 has 19 MA's), (19, 88565), (22, 88589), (23, 88601), (30, 88649),

Gene: TomSawyer_155 Start: 88180, Stop: 88320, Start Num: 12
Candidate Starts for TomSawyer_155:
(Start: 4 @88141 has 24 MA's), (Start: 7 @88150 has 47 MA's), (Start: 12 @88180 has 1 MA's), (19, 88243), (23, 88279),

Gene: Tomas_149 Start: 89249, Stop: 89416, Start Num: 7
Candidate Starts for Tomas_149:
(Start: 4 @89240 has 24 MA's), (Start: 7 @89249 has 47 MA's), (15, 89297), (19, 89339),

Gene: Tribute_143 Start: 88324, Stop: 88515, Start Num: 7
Candidate Starts for Tribute_143:
(Start: 7 @88324 has 47 MA's), (Start: 11 @88339 has 19 MA's), (19, 88411), (22, 88435), (23, 88447), (30, 88495),

Gene: Tuesday_157 Start: 87750, Stop: 87920, Start Num: 7
Candidate Starts for Tuesday_157:
(Start: 4 @87741 has 24 MA's), (Start: 7 @87750 has 47 MA's), (Start: 12 @87780 has 1 MA's), (19, 87843), (23, 87879),

Gene: TunaTartare_112 Start: 75061, Stop: 75270, Start Num: 4
Candidate Starts for TunaTartare_112:
(1, 75046), (3, 75055), (Start: 4 @75061 has 24 MA's), (Start: 7 @75070 has 47 MA's), (21, 75178), (27, 75229), (29, 75235),

Gene: Wakanda_105 Start: 70583, Stop: 70807, Start Num: 2
Candidate Starts for Wakanda_105:
(Start: 2 @70583 has 5 MA's), (Start: 7 @70604 has 47 MA's), (10, 70616), (13, 70637), (14, 70640), (28, 70769),

Gene: Warpy_147 Start: 88693, Stop: 88869, Start Num: 11
Candidate Starts for Warpy_147:
(Start: 7 @88678 has 47 MA's), (Start: 11 @88693 has 19 MA's), (19, 88765), (22, 88789), (23, 88801), (30, 88849),

Gene: WashU_142 Start: 88381, Stop: 88572, Start Num: 7
Candidate Starts for WashU_142:
(Start: 7 @88381 has 47 MA's), (Start: 11 @88396 has 19 MA's), (19, 88468), (22, 88492), (23, 88504), (30, 88552),

Gene: Watermoore_143 Start: 88707, Stop: 88883, Start Num: 11

Candidate Starts for Watermoore_143:
(Start: 7 @88692 has 47 MA's), (Start: 11 @88707 has 19 MA's), (19, 88779), (22, 88803), (23, 88815), (30, 88863),

Gene: Westy_115 Start: 74838, Stop: 75047, Start Num: 4
Candidate Starts for Westy_115:
(1, 74823), (Start: 4 @74838 has 24 MA's), (5, 74841), (18, 74913), (19, 74943), (21, 74955),

Gene: WhereRU_143 Start: 86844, Stop: 87032, Start Num: 8
Candidate Starts for WhereRU_143:
(Start: 8 @86844 has 17 MA's), (Start: 11 @86856 has 19 MA's), (19, 86928), (22, 86952), (23, 86964), (30, 87012),

Gene: Wipeout_147 Start: 87957, Stop: 88127, Start Num: 7
Candidate Starts for Wipeout_147:
(Start: 4 @87948 has 24 MA's), (Start: 7 @87957 has 47 MA's), (Start: 12 @87987 has 1 MA's), (19, 88050), (23, 88086),

Gene: Wofford_148 Start: 89670, Stop: 89840, Start Num: 7
Candidate Starts for Wofford_148:
(Start: 4 @89661 has 24 MA's), (Start: 7 @89670 has 47 MA's), (Start: 12 @89700 has 1 MA's), (15, 89727), (17, 89730), (19, 89769), (22, 89793), (23, 89805),

Gene: Yaboi_151 Start: 87108, Stop: 87272, Start Num: 7
Candidate Starts for Yaboi_151:
(Start: 4 @87099 has 24 MA's), (Start: 7 @87108 has 47 MA's), (Start: 12 @87138 has 1 MA's), (15, 87159), (19, 87201), (22, 87225), (23, 87237),