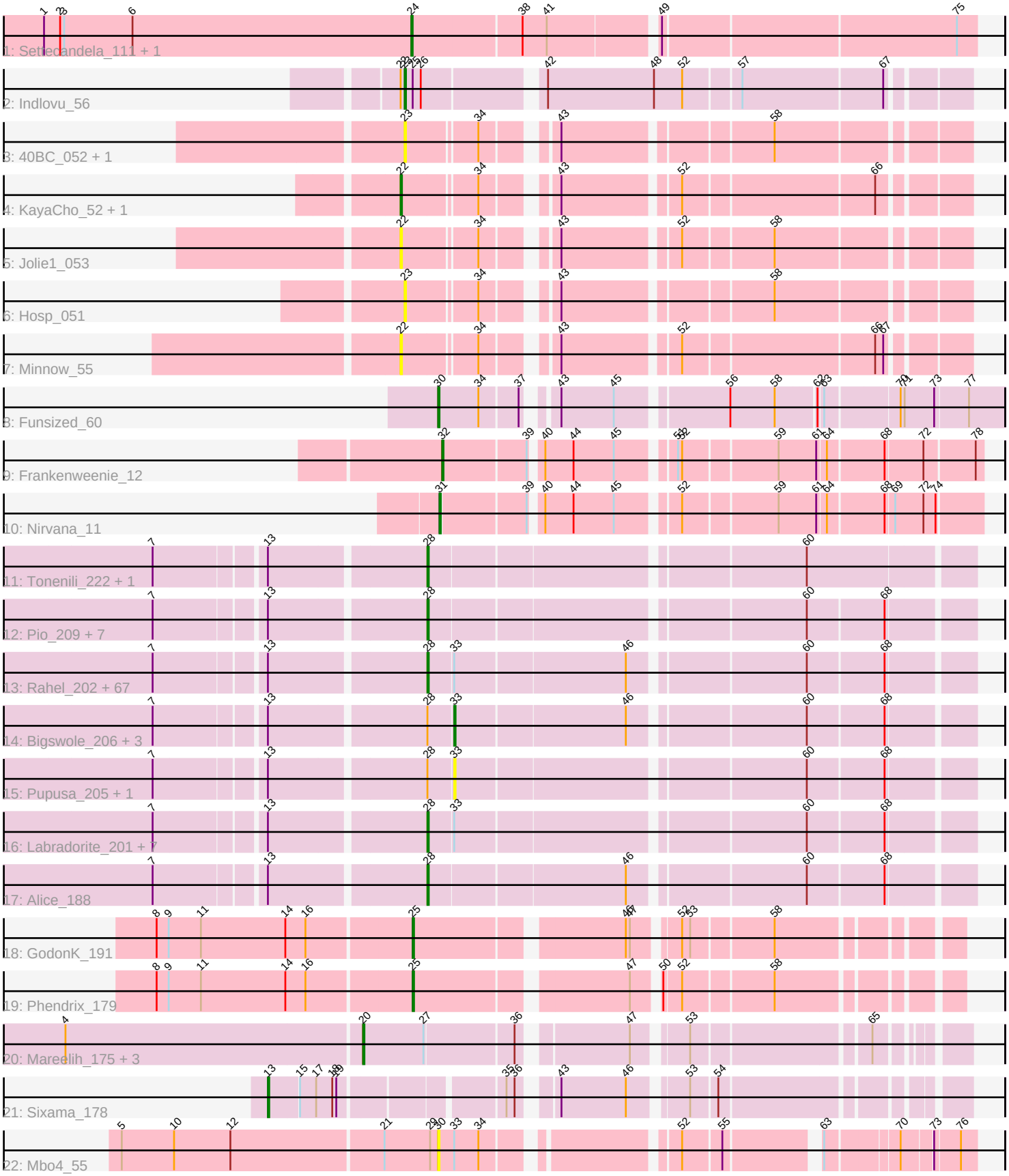
Pham 347424


1: Settiedandela_111 + 1
2: Indlovu_56
3: 40BC_052 + 1
4: KayaCho_52 + 1
5: Jolie1_053
6: Hosp_051
7: Minnow_55
8: Funsized_60
9: Frankenweenie_12
10: Nirvana_11
11: Tonenili_222 + 1
12: Pio_209 + 7
13: Rahel_202 + 67
14: Bigswole_206 + 3
15: Pupusa_205 + 1
16: Labradorite_201 + 7
17: Alice_188
18: GodonK_191
19: Phendrix_179
20: Mareelih_175 + 3
21: Sixama_178
22: Mbo4_55

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 347424 Report

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

Pham number 347424 has 114 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Settecandela_111, Phrappuccino_111
• Track 2 : Indlovu_56
• Track 3 : 40BC_052, 39HC_052
• Track 4 : KayaCho_52, ForDig_53
• Track 5 : Jolie1_053
• Track 6 : Hosp_051
• Track 7 : Minnow_55
• Track 8 : Funsized_60
• Track 9 : Frankenweenie_12
• Track 10 : Nirvana_11
• Track 11 : Tonenili_222, Vortrix_220
• Track 12 : Pio_209, Burrough_203, MoMoMixon_199, Gabriel_204, SiwenD96_203, Mikro_197, Kamryn_200, Caravan_192
• Track 13 : Rahel_202, Derek_198, NuevoMundo_204, LifeSavor_200, InigoMontoya_204, Bezza_194, Adlitam_200, Spec_195, Breeniome_200, BeanWater_193, RoMag_196, JPickles_197, Amataga_202, Littleton_204, Latch_201, LolaVinca_199, HyRo_189, Babyland_204, Astraea_195, Chomp_201, Yassified_198, Sprinklers_199, Shrimp_203, BadAgartude_195, I3_211, Phlegm_205, StubbySaigey_206, SmallFry_201, Sauce_197, SVoro_197, Phox_202, CharlieB_195, Salacia_201, Koguma_200, Naija_202, Delylah_203, ArcherS7_201, BananaFence_198, Tyke_199, Iota_196, EmmaElysia_204, Bxz1_191, Mangeria_202, Lukilu_192, Ading_202, Fixie_192, Gamgam_202, Pier_202, Momo_202, Dessert_201, DTDevon_203, Jemmno_200, Drazdys_199, Jaygup_197, LRRHood_194, Nappy_202, Shnickers_199, Jedediah_201, Atlantean_201, IkeLoa_193, GlutenPhree_202, CindyLou_202, ValleyTerrace_202, JulietS_192, ET08_189, Ronan_197, Essence_198, SilverDipper_205
• Track 14 : Bigswole_206, Ngannou_198, Bangla1971_201, ShiaLabeouf_198
• Track 15 : Pupusa_205, Tainan_202
• Track 16 : Labradorite_201, PharkleMinkus_201, Puhon_203, FrayBell_204, LordLeafolot_202, Bowman_201, GoldenSnow_201, Duckfeet_195
• Track 17 : Alice_188
• Track 18 : GodonK_191
• Track 19 : Phendrix_179
• Track 20 : Mareelih_175, Boopy_177, Forza_178, BlueNGold_174
• Track 21 : Sixama_178
• Track 22 : Mbo4_55

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

The start number called the most often in the published annotations is 28, it was called in 82 of the 101 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ading_202, Adlitam_200, Alice_188, Amataga_202, ArcherS7_201, Astraea_195, Atlantean_201, Babyland_204, BadAgartude_195, BananaFence_198, BeanWater_193, Bezza_194, Bowman_201, Breeniome_200, Burrough_203, Bxz1_191, Caravan_192, CharlieB_195, Chomp_201, CindyLou_202, DTDevon_203, Delylah_203, Derek_198, Dessert_201, Drazdys_199, Duckfeet_195, ET08_189, EmmaElysia_204, Essence_198, Fixie_192, FrayBell_204, Gabriel_204, Gamgam_202, GlutenPhree_202, GoldenSnow_201, HyRo_189, I3_211, IkeLoa_193, InigoMontoya_204, Iota_196, JPickles_197, Jaygup_197, Jedediah_201, Jemmno_200, JulietS_192, Kamryn_200, Koguma_200, LRRHood_194, Labradorite_201, Latch_201, LifeSavor_200, Littleton_204, LolaVinca_199, LordLeafolot_202, Lukilu_192, Mangeria_202, Mikro_197, MoMoMixon_199, Momo_202, Naija_202, Nappy_202, NuevoMundo_204, PharkleMinkus_201, Phlegm_205, Phox_202, Pier_202, Pio_209, Puhon_203, Rahel_202, RoMag_196, Ronan_197, SVoro_197, Salacia_201, Sauce_197, Shnickers_199, Shrimp_203, SilverDipper_205, SiwenD96_203, SmallFry_201, Spec_195, Sprinklers_199, StubbySaigey_206, Tonenili_222, Tyke_199, ValleyTerrace_202, Vortrix_220, Yassified_198,

Genes that have the "Most Annotated" start but do not call it:
• Bangla1971_201, Bigswole_206, Ngannou_198, Pupusa_205, ShiaLabeouf_198, Tainan_202,

Genes that do not have the "Most Annotated" start:
• 39HC_052, 40BC_052, BlueNGold_174, Boopy_177, ForDig_53, Forza_178, Frankenweenie_12, Funsized_60, GodonK_191, Hosp_051, Indlovu_56, Jolie1_053, KayaCho_52, Mareelih_175, Mbo4_55, Minnow_55, Nirvana_11, Phendrix_179, Phrappuccino_111, Settecandela_111, Sixama_178,

Summary by start number:

Start 13:
• Found in 94 of 114 (82.5%) of genes in pham
• Manual Annotations of this start: 1 of 101
• Called 1.1% of time when present
• Phage (with cluster) where this start called: Sixama_178 (DS),

Start 20:
• Found in 4 of 114 (3.5%) of genes in pham
• Manual Annotations of this start: 4 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlueNGold_174 (DS), Boopy_177 (DS), Forza_178 (DS), Mareelih_175 (DS),

Start 22:

• Found in 5 of 114 (4.4%) of genes in pham
• Manual Annotations of this start: 2 of 101
• Called 80.0% of time when present
• Phage (with cluster) where this start called: ForDig_53 (B6), Jolie1_053 (B6), KayaCho_52 (B6), Minnow_55 (B6),

Start 23:
• Found in 4 of 114 (3.5%) of genes in pham
• Manual Annotations of this start: 1 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 39HC_052 (B6), 40BC_052 (B6), Hosp_051 (B6), Indlovu_56 (B11),

Start 24:
• Found in 2 of 114 (1.8%) of genes in pham
• Manual Annotations of this start: 2 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phrappuccino_111 (AA), Settecandela_111 (AA),

Start 25:
• Found in 3 of 114 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 101
• Called 66.7% of time when present
• Phage (with cluster) where this start called: GodonK_191 (DK), Phendrix_179 (DK),

Start 28:
• Found in 93 of 114 (81.6%) of genes in pham
• Manual Annotations of this start: 82 of 101
• Called 93.5% of time when present
• Phage (with cluster) where this start called: Ading_202 (C1), Adlitam_200 (C1), Alice_188 (C1), Amataga_202 (C1), ArcherS7_201 (C1), Astraea_195 (C1), Atlantean_201 (C1), Babyland_204 (C1), BadAgartude_195 (C1), BananaFence_198 (C1), BeanWater_193 (C1), Bezza_194 (C1), Bowman_201 (C1), Breeniome_200 (C1), Burrough_203 (C1), Bxz1_191 (C1), Caravan_192 (C1), CharlieB_195 (C1), Chomp_201 (C1), CindyLou_202 (C1), DTDevon_203 (C1), Delylah_203 (C1), Derek_198 (C1), Dessert_201 (C1), Drazdys_199 (C1), Duckfeet_195 (C1), ET08_189 (C1), EmmaElysia_204 (C1), Essence_198 (C1), Fixie_192 (C1), FrayBell_204 (C1), Gabriel_204 (C1), Gamgam_202 (C1), GlutenPhree_202 (C1), GoldenSnow_201 (C1), HyRo_189 (C1), I3_211 (C1), IkeLoa_193 (C1), InigoMontoya_204 (C1), Iota_196 (C1), JPickles_197 (C1), Jaygup_197 (C1), Jedediah_201 (C1), Jemmno_200 (C1), JulietS_192 (C1), Kamryn_200 (C1), Koguma_200 (C1), LRRHood_194 (C1), Labradorite_201 (C1), Latch_201 (C1), LifeSavor_200 (C1), Littleton_204 (C1), LolaVinca_199 (C1), LordLeafolot_202 (C1), Lukilu_192 (C1), Mangeria_202 (C1), Mikro_197 (C1), MoMoMixon_199 (C1), Momo_202 (C1), Naija_202 (C1), Nappy_202 (C1), NuevoMundo_204 (C1), PharkleMinkus_201 (C1), Phlegm_205 (C1), Phox_202 (C1), Pier_202 (C1), Pio_209 (C1), Puhon_203 (C1), Rahel_202 (C1), RoMag_196 (C1), Ronan_197 (C1), SVoro_197 (C1), Salacia_201 (C1), Sauce_197 (C1), Shnickers_199 (C1), Shrimp_203 (C1), SilverDipper_205 (C1), SiwenD96_203 (C1), SmallFry_201 (C1), Spec_195 (C1), Sprinklers_199 (C1), StubbySaigey_206 (C1), Tonenili_222 (C1), Tyke_199 (C1), ValleyTerrace_202 (C1), Vortrix_220 (C1), Yassified_198 (C1),

Start 30:
• Found in 2 of 114 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Funsized_60 (B9), Mbo4_55 (singleton),

Start 31:
• Found in 1 of 114 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Nirvana_11 (BM),

Start 32:
• Found in 1 of 114 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 101
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Frankenweenie_12 (BM),

Start 33:
• Found in 83 of 114 (72.8%) of genes in pham
• Manual Annotations of this start: 4 of 101
• Called 7.2% of time when present
• Phage (with cluster) where this start called: Bangla1971_201 (C1), Bigswole_206 (C1), Ngannou_198 (C1), Pupusa_205 (C1), ShiaLabeouf_198 (C1), Tainan_202 (C1),

Summary by clusters:

There are 9 clusters represented in this pham: AA, singleton, DK, BM, B9, B6, B11, C1, DS,

Info for manual annotations of cluster AA:
•Start number 24 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster B11:
•Start number 23 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B6:
•Start number 22 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B9:
•Start number 30 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster BM:
•Start number 31 was manually annotated 1 time for cluster BM.
•Start number 32 was manually annotated 1 time for cluster BM.

Info for manual annotations of cluster C1:
•Start number 28 was manually annotated 82 times for cluster C1.
•Start number 33 was manually annotated 4 times for cluster C1.

Info for manual annotations of cluster DK:
•Start number 25 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DS:
•Start number 13 was manually annotated 1 time for cluster DS.
•Start number 20 was manually annotated 4 times for cluster DS.

Gene Information:

Gene: 39HC_052 Start: 52647, Stop: 52285, Start Num: 23
Candidate Starts for 39HC_052:
(Start: 23 @52647 has 1 MA's), (34, 52599), (43, 52557), (58, 52416),

Gene: 40BC_052 Start: 52647, Stop: 52285, Start Num: 23
Candidate Starts for 40BC_052:
(Start: 23 @52647 has 1 MA's), (34, 52599), (43, 52557), (58, 52416),

Gene: Ading_202 Start: 108038, Stop: 108412, Start Num: 28
Candidate Starts for Ading_202:
(7, 107855), (Start: 13 @107930 has 1 MA's), (Start: 28 @108038 has 82 MA's), (Start: 33 @108056 has 4 MA's), (46, 108179), (60, 108299), (68, 108353),

Gene: Adlitam_200 Start: 106642, Stop: 107016, Start Num: 28
Candidate Starts for Adlitam_200:
(7, 106459), (Start: 13 @106534 has 1 MA's), (Start: 28 @106642 has 82 MA's), (Start: 33 @106660 has 4 MA's), (46, 106783), (60, 106903), (68, 106957),

Gene: Alice_188 Start: 106610, Stop: 106984, Start Num: 28
Candidate Starts for Alice_188:
(7, 106427), (Start: 13 @106502 has 1 MA's), (Start: 28 @106610 has 82 MA's), (46, 106751), (60, 106871), (68, 106925),

Gene: Amataga_202 Start: 106454, Stop: 106828, Start Num: 28
Candidate Starts for Amataga_202:
(7, 106271), (Start: 13 @106346 has 1 MA's), (Start: 28 @106454 has 82 MA's), (Start: 33 @106472 has 4 MA's), (46, 106595), (60, 106715), (68, 106769),

Gene: ArcherS7_201 Start: 107496, Stop: 107870, Start Num: 28
Candidate Starts for ArcherS7_201:
(7, 107313), (Start: 13 @107388 has 1 MA's), (Start: 28 @107496 has 82 MA's), (Start: 33 @107514 has 4 MA's), (46, 107637), (60, 107757), (68, 107811),

Gene: Astraea_195 Start: 106058, Stop: 106432, Start Num: 28
Candidate Starts for Astraea_195:
(7, 105875), (Start: 13 @105950 has 1 MA's), (Start: 28 @106058 has 82 MA's), (Start: 33 @106076 has 4 MA's), (46, 106199), (60, 106319), (68, 106373),

Gene: Atlantean_201 Start: 106454, Stop: 106828, Start Num: 28
Candidate Starts for Atlantean_201:
(7, 106271), (Start: 13 @106346 has 1 MA's), (Start: 28 @106454 has 82 MA's), (Start: 33 @106472 has 4 MA's), (46, 106595), (60, 106715), (68, 106769),

Gene: Babyland_204 Start: 107231, Stop: 107605, Start Num: 28

Candidate Starts for Babyland_204:
(7, 107048), (Start: 13 @107123 has 1 MA's), (Start: 28 @107231 has 82 MA's), (Start: 33 @107249 has 4 MA's), (46, 107372), (60, 107492), (68, 107546),

Gene: BadAgartude_195 Start: 106553, Stop: 106927, Start Num: 28
Candidate Starts for BadAgartude_195:
(7, 106370), (Start: 13 @106445 has 1 MA's), (Start: 28 @106553 has 82 MA's), (Start: 33 @106571 has 4 MA's), (46, 106694), (60, 106814), (68, 106868),

Gene: BananaFence_198 Start: 106687, Stop: 107061, Start Num: 28
Candidate Starts for BananaFence_198:
(7, 106504), (Start: 13 @106579 has 1 MA's), (Start: 28 @106687 has 82 MA's), (Start: 33 @106705 has 4 MA's), (46, 106828), (60, 106948), (68, 107002),

Gene: Bangla1971_201 Start: 106478, Stop: 106834, Start Num: 33
Candidate Starts for Bangla1971_201:
(7, 106277), (Start: 13 @106352 has 1 MA's), (Start: 28 @106460 has 82 MA's), (Start: 33 @106478 has 4 MA's), (46, 106601), (60, 106721), (68, 106775),

Gene: BeanWater_193 Start: 106492, Stop: 106866, Start Num: 28
Candidate Starts for BeanWater_193:
(7, 106309), (Start: 13 @106384 has 1 MA's), (Start: 28 @106492 has 82 MA's), (Start: 33 @106510 has 4 MA's), (46, 106633), (60, 106753), (68, 106807),

Gene: Bezza_194 Start: 107004, Stop: 107378, Start Num: 28
Candidate Starts for Bezza_194:
(7, 106821), (Start: 13 @106896 has 1 MA's), (Start: 28 @107004 has 82 MA's), (Start: 33 @107022 has 4 MA's), (46, 107145), (60, 107265), (68, 107319),

Gene: Bigswole_206 Start: 109932, Stop: 110288, Start Num: 33
Candidate Starts for Bigswole_206:
(7, 109731), (Start: 13 @109806 has 1 MA's), (Start: 28 @109914 has 82 MA's), (Start: 33 @109932 has 4 MA's), (46, 110055), (60, 110175), (68, 110229),

Gene: BlueNGold_174 Start: 102444, Stop: 102061, Start Num: 20
Candidate Starts for BlueNGold_174:
(4, 102660), (Start: 20 @102444 has 4 MA's), (27, 102399), (36, 102336), (47, 102267), (53, 102234), (65, 102114),

Gene: Boopy_177 Start: 102455, Stop: 102072, Start Num: 20
Candidate Starts for Boopy_177:
(4, 102671), (Start: 20 @102455 has 4 MA's), (27, 102410), (36, 102347), (47, 102278), (53, 102245), (65, 102125),

Gene: Bowman_201 Start: 107664, Stop: 108038, Start Num: 28
Candidate Starts for Bowman_201:
(7, 107481), (Start: 13 @107556 has 1 MA's), (Start: 28 @107664 has 82 MA's), (Start: 33 @107682 has 4 MA's), (60, 107925), (68, 107979),

Gene: Breeniome_200 Start: 106011, Stop: 106385, Start Num: 28
Candidate Starts for Breeniome_200:
(7, 105828), (Start: 13 @105903 has 1 MA's), (Start: 28 @106011 has 82 MA's), (Start: 33 @106029 has 4 MA's), (46, 106152), (60, 106272), (68, 106326),

Gene: Burrough_203 Start: 108327, Stop: 108701, Start Num: 28
Candidate Starts for Burrough_203:
(7, 108144), (Start: 13 @108219 has 1 MA's), (Start: 28 @108327 has 82 MA's), (60, 108588), (68, 108642),

Gene: Bxz1_191 Start: 109526, Stop: 109900, Start Num: 28
Candidate Starts for Bxz1_191:
(7, 109343), (Start: 13 @109418 has 1 MA's), (Start: 28 @109526 has 82 MA's), (Start: 33 @109544 has 4 MA's), (46, 109667), (60, 109787), (68, 109841),

Gene: Caravan_192 Start: 107274, Stop: 107648, Start Num: 28
Candidate Starts for Caravan_192:
(7, 107091), (Start: 13 @107166 has 1 MA's), (Start: 28 @107274 has 82 MA's), (60, 107535), (68, 107589),

Gene: CharlieB_195 Start: 106694, Stop: 107068, Start Num: 28
Candidate Starts for CharlieB_195:
(7, 106511), (Start: 13 @106586 has 1 MA's), (Start: 28 @106694 has 82 MA's), (Start: 33 @106712 has 4 MA's), (46, 106835), (60, 106955), (68, 107009),

Gene: Chomp_201 Start: 107743, Stop: 108117, Start Num: 28
Candidate Starts for Chomp_201:
(7, 107560), (Start: 13 @107635 has 1 MA's), (Start: 28 @107743 has 82 MA's), (Start: 33 @107761 has 4 MA's), (46, 107884), (60, 108004), (68, 108058),

Gene: CindyLou_202 Start: 108003, Stop: 108377, Start Num: 28
Candidate Starts for CindyLou_202:
(7, 107820), (Start: 13 @107895 has 1 MA's), (Start: 28 @108003 has 82 MA's), (Start: 33 @108021 has 4 MA's), (46, 108144), (60, 108264), (68, 108318),

Gene: DTDevon_203 Start: 108492, Stop: 108866, Start Num: 28
Candidate Starts for DTDevon_203:
(7, 108309), (Start: 13 @108384 has 1 MA's), (Start: 28 @108492 has 82 MA's), (Start: 33 @108510 has 4 MA's), (46, 108633), (60, 108753), (68, 108807),

Gene: Delylah_203 Start: 107864, Stop: 108238, Start Num: 28
Candidate Starts for Delylah_203:
(7, 107681), (Start: 13 @107756 has 1 MA's), (Start: 28 @107864 has 82 MA's), (Start: 33 @107882 has 4 MA's), (46, 108005), (60, 108125), (68, 108179),

Gene: Derek_198 Start: 107020, Stop: 107394, Start Num: 28
Candidate Starts for Derek_198:
(7, 106837), (Start: 13 @106912 has 1 MA's), (Start: 28 @107020 has 82 MA's), (Start: 33 @107038 has 4 MA's), (46, 107161), (60, 107281), (68, 107335),

Gene: Dessert_201 Start: 106020, Stop: 106394, Start Num: 28
Candidate Starts for Dessert_201:
(7, 105837), (Start: 13 @105912 has 1 MA's), (Start: 28 @106020 has 82 MA's), (Start: 33 @106038 has 4 MA's), (46, 106161), (60, 106281), (68, 106335),

Gene: Drazdys_199 Start: 107137, Stop: 107511, Start Num: 28
Candidate Starts for Drazdys_199:

(7, 106954), (Start: 13 @107029 has 1 MA's), (Start: 28 @107137 has 82 MA's), (Start: 33 @107155 has 4 MA's), (46, 107278), (60, 107398), (68, 107452),

Gene: Duckfeet_195 Start: 106663, Stop: 107037, Start Num: 28
Candidate Starts for Duckfeet_195:
(7, 106480), (Start: 13 @106555 has 1 MA's), (Start: 28 @106663 has 82 MA's), (Start: 33 @106681 has 4 MA's), (60, 106924), (68, 106978),

Gene: ET08_189 Start: 106728, Stop: 107102, Start Num: 28
Candidate Starts for ET08_189:
(7, 106545), (Start: 13 @106620 has 1 MA's), (Start: 28 @106728 has 82 MA's), (Start: 33 @106746 has 4 MA's), (46, 106869), (60, 106989), (68, 107043),

Gene: EmmaElysia_204 Start: 107627, Stop: 108001, Start Num: 28
Candidate Starts for EmmaElysia_204:
(7, 107444), (Start: 13 @107519 has 1 MA's), (Start: 28 @107627 has 82 MA's), (Start: 33 @107645 has 4 MA's), (46, 107768), (60, 107888), (68, 107942),

Gene: Essence_198 Start: 106349, Stop: 106723, Start Num: 28
Candidate Starts for Essence_198:
(7, 106166), (Start: 13 @106241 has 1 MA's), (Start: 28 @106349 has 82 MA's), (Start: 33 @106367 has 4 MA's), (46, 106490), (60, 106610), (68, 106664),

Gene: Fixie_192 Start: 107129, Stop: 107503, Start Num: 28
Candidate Starts for Fixie_192:
(7, 106946), (Start: 13 @107021 has 1 MA's), (Start: 28 @107129 has 82 MA's), (Start: 33 @107147 has 4 MA's), (46, 107270), (60, 107390), (68, 107444),

Gene: ForDig_53 Start: 52846, Stop: 52481, Start Num: 22
Candidate Starts for ForDig_53:
(Start: 22 @52846 has 2 MA's), (34, 52795), (43, 52753), (52, 52675), (66, 52540),

Gene: Forza_178 Start: 102372, Stop: 101989, Start Num: 20
Candidate Starts for Forza_178:
(4, 102588), (Start: 20 @102372 has 4 MA's), (27, 102327), (36, 102264), (47, 102195), (53, 102162), (65, 102042),

Gene: Frankenweenie_12 Start: 5822, Stop: 5460, Start Num: 32
Candidate Starts for Frankenweenie_12:
(Start: 32 @5822 has 1 MA's), (39, 5762), (40, 5756), (44, 5735), (45, 5705), (51, 5669), (52, 5666), (59, 5600), (61, 5573), (64, 5567), (68, 5528), (72, 5501), (78, 5465),

Gene: FrayBell_204 Start: 107010, Stop: 107384, Start Num: 28
Candidate Starts for FrayBell_204:
(7, 106827), (Start: 13 @106902 has 1 MA's), (Start: 28 @107010 has 82 MA's), (Start: 33 @107028 has 4 MA's), (60, 107271), (68, 107325),

Gene: Funsized_60 Start: 56571, Stop: 56197, Start Num: 30
Candidate Starts for Funsized_60:
(Start: 30 @56571 has 1 MA's), (34, 56541), (37, 56514), (43, 56499), (45, 56460), (56, 56385), (58, 56352), (62, 56325), (63, 56322), (70, 56271), (71, 56268), (73, 56247), (77, 56223),

Gene: Gabriel_204 Start: 106087, Stop: 106461, Start Num: 28

Candidate Starts for Gabriel_204:
(7, 105904), (Start: 13 @105979 has 1 MA's), (Start: 28 @106087 has 82 MA's), (60, 106348), (68, 106402),

Gene: Gamgam_202 Start: 106444, Stop: 106818, Start Num: 28
Candidate Starts for Gamgam_202:
(7, 106261), (Start: 13 @106336 has 1 MA's), (Start: 28 @106444 has 82 MA's), (Start: 33 @106462 has 4 MA's), (46, 106585), (60, 106705), (68, 106759),

Gene: GlutenPhree_202 Start: 106455, Stop: 106829, Start Num: 28
Candidate Starts for GlutenPhree_202:
(7, 106272), (Start: 13 @106347 has 1 MA's), (Start: 28 @106455 has 82 MA's), (Start: 33 @106473 has 4 MA's), (46, 106596), (60, 106716), (68, 106770),

Gene: GodonK_191 Start: 98859, Stop: 98509, Start Num: 25
Candidate Starts for GodonK_191:
(8, 99045), (9, 99036), (11, 99012), (14, 98949), (16, 98934), (Start: 25 @98859 has 2 MA's), (46, 98718), (47, 98715), (52, 98688), (53, 98682), (58, 98625),

Gene: GoldenSnow_201 Start: 107134, Stop: 107508, Start Num: 28
Candidate Starts for GoldenSnow_201:
(7, 106951), (Start: 13 @107026 has 1 MA's), (Start: 28 @107134 has 82 MA's), (Start: 33 @107152 has 4 MA's), (60, 107395), (68, 107449),

Gene: Hosp_051 Start: 51040, Stop: 50678, Start Num: 23
Candidate Starts for Hosp_051:
(Start: 23 @51040 has 1 MA's), (34, 50992), (43, 50950), (58, 50809),

Gene: HyRo_189 Start: 106708, Stop: 107082, Start Num: 28
Candidate Starts for HyRo_189:
(7, 106525), (Start: 13 @106600 has 1 MA's), (Start: 28 @106708 has 82 MA's), (Start: 33 @106726 has 4 MA's), (46, 106849), (60, 106969), (68, 107023),

Gene: I3_211 Start: 109444, Stop: 109818, Start Num: 28
Candidate Starts for I3_211:
(7, 109261), (Start: 13 @109336 has 1 MA's), (Start: 28 @109444 has 82 MA's), (Start: 33 @109462 has 4 MA's), (46, 109585), (60, 109705), (68, 109759),

Gene: IkeLoa_193 Start: 106106, Stop: 106480, Start Num: 28
Candidate Starts for IkeLoa_193:
(7, 105923), (Start: 13 @105998 has 1 MA's), (Start: 28 @106106 has 82 MA's), (Start: 33 @106124 has 4 MA's), (46, 106247), (60, 106367), (68, 106421),

Gene: Indlovu_56 Start: 54580, Stop: 54197, Start Num: 23
Candidate Starts for Indlovu_56:
(Start: 22 @54583 has 2 MA's), (Start: 23 @54580 has 1 MA's), (Start: 25 @54574 has 2 MA's), (26, 54568), (42, 54490), (48, 54412), (52, 54391), (57, 54352), (67, 54250),

Gene: InigoMontoya_204 Start: 107118, Stop: 107492, Start Num: 28
Candidate Starts for InigoMontoya_204:
(7, 106935), (Start: 13 @107010 has 1 MA's), (Start: 28 @107118 has 82 MA's), (Start: 33 @107136 has 4 MA's), (46, 107259), (60, 107379), (68, 107433),

Gene: Iota_196 Start: 106803, Stop: 107177, Start Num: 28
Candidate Starts for Iota_196:
(7, 106620), (Start: 13 @106695 has 1 MA's), (Start: 28 @106803 has 82 MA's), (Start: 33 @106821 has 4 MA's), (46, 106944), (60, 107064), (68, 107118),

Gene: JPickles_197 Start: 105103, Stop: 105477, Start Num: 28
Candidate Starts for JPickles_197:
(7, 104920), (Start: 13 @104995 has 1 MA's), (Start: 28 @105103 has 82 MA's), (Start: 33 @105121 has 4 MA's), (46, 105244), (60, 105364), (68, 105418),

Gene: Jaygup_197 Start: 106164, Stop: 106538, Start Num: 28
Candidate Starts for Jaygup_197:
(7, 105981), (Start: 13 @106056 has 1 MA's), (Start: 28 @106164 has 82 MA's), (Start: 33 @106182 has 4 MA's), (46, 106305), (60, 106425), (68, 106479),

Gene: Jedediah_201 Start: 107217, Stop: 107591, Start Num: 28
Candidate Starts for Jedediah_201:
(7, 107034), (Start: 13 @107109 has 1 MA's), (Start: 28 @107217 has 82 MA's), (Start: 33 @107235 has 4 MA's), (46, 107358), (60, 107478), (68, 107532),

Gene: Jemmno_200 Start: 106046, Stop: 106420, Start Num: 28
Candidate Starts for Jemmno_200:
(7, 105863), (Start: 13 @105938 has 1 MA's), (Start: 28 @106046 has 82 MA's), (Start: 33 @106064 has 4 MA's), (46, 106187), (60, 106307), (68, 106361),

Gene: Jolie1_053 Start: 52943, Stop: 52578, Start Num: 22
Candidate Starts for Jolie1_053:
(Start: 22 @52943 has 2 MA's), (34, 52892), (43, 52850), (52, 52772), (58, 52709),

Gene: JulietS_192 Start: 104335, Stop: 104709, Start Num: 28
Candidate Starts for JulietS_192:
(7, 104152), (Start: 13 @104227 has 1 MA's), (Start: 28 @104335 has 82 MA's), (Start: 33 @104353 has 4 MA's), (46, 104476), (60, 104596), (68, 104650),

Gene: Kamryn_200 Start: 107880, Stop: 108254, Start Num: 28
Candidate Starts for Kamryn_200:
(7, 107697), (Start: 13 @107772 has 1 MA's), (Start: 28 @107880 has 82 MA's), (60, 108141), (68, 108195),

Gene: KayaCho_52 Start: 52748, Stop: 52383, Start Num: 22
Candidate Starts for KayaCho_52:
(Start: 22 @52748 has 2 MA's), (34, 52697), (43, 52655), (52, 52577), (66, 52442),

Gene: Koguma_200 Start: 106561, Stop: 106935, Start Num: 28
Candidate Starts for Koguma_200:
(7, 106378), (Start: 13 @106453 has 1 MA's), (Start: 28 @106561 has 82 MA's), (Start: 33 @106579 has 4 MA's), (46, 106702), (60, 106822), (68, 106876),

Gene: LRRHood_194 Start: 106906, Stop: 107280, Start Num: 28
Candidate Starts for LRRHood_194:
(7, 106723), (Start: 13 @106798 has 1 MA's), (Start: 28 @106906 has 82 MA's), (Start: 33 @106924 has 4 MA's), (46, 107047), (60, 107167), (68, 107221),

Gene: Labradorite_201 Start: 105654, Stop: 106028, Start Num: 28
Candidate Starts for Labradorite_201:
(7, 105471), (Start: 13 @105546 has 1 MA's), (Start: 28 @105654 has 82 MA's), (Start: 33 @105672 has 4 MA's), (60, 105915), (68, 105969),

Gene: Latch_201 Start: 106454, Stop: 106828, Start Num: 28
Candidate Starts for Latch_201:
(7, 106271), (Start: 13 @106346 has 1 MA's), (Start: 28 @106454 has 82 MA's), (Start: 33 @106472 has 4 MA's), (46, 106595), (60, 106715), (68, 106769),

Gene: LifeSavor_200 Start: 106979, Stop: 107353, Start Num: 28
Candidate Starts for LifeSavor_200:
(7, 106796), (Start: 13 @106871 has 1 MA's), (Start: 28 @106979 has 82 MA's), (Start: 33 @106997 has 4 MA's), (46, 107120), (60, 107240), (68, 107294),

Gene: Littleton_204 Start: 107691, Stop: 108065, Start Num: 28
Candidate Starts for Littleton_204:
(7, 107508), (Start: 13 @107583 has 1 MA's), (Start: 28 @107691 has 82 MA's), (Start: 33 @107709 has 4 MA's), (46, 107832), (60, 107952), (68, 108006),

Gene: LolaVinca_199 Start: 108246, Stop: 108620, Start Num: 28
Candidate Starts for LolaVinca_199:
(7, 108063), (Start: 13 @108138 has 1 MA's), (Start: 28 @108246 has 82 MA's), (Start: 33 @108264 has 4 MA's), (46, 108387), (60, 108507), (68, 108561),

Gene: LordLeafolot_202 Start: 107858, Stop: 108232, Start Num: 28
Candidate Starts for LordLeafolot_202:
(7, 107675), (Start: 13 @107750 has 1 MA's), (Start: 28 @107858 has 82 MA's), (Start: 33 @107876 has 4 MA's), (60, 108119), (68, 108173),

Gene: Lukilu_192 Start: 107916, Stop: 108290, Start Num: 28
Candidate Starts for Lukilu_192:
(7, 107733), (Start: 13 @107808 has 1 MA's), (Start: 28 @107916 has 82 MA's), (Start: 33 @107934 has 4 MA's), (46, 108057), (60, 108177), (68, 108231),

Gene: Mangeria_202 Start: 108247, Stop: 108621, Start Num: 28
Candidate Starts for Mangeria_202:
(7, 108064), (Start: 13 @108139 has 1 MA's), (Start: 28 @108247 has 82 MA's), (Start: 33 @108265 has 4 MA's), (46, 108388), (60, 108508), (68, 108562),

Gene: Mareelih_175 Start: 101890, Stop: 101507, Start Num: 20
Candidate Starts for Mareelih_175:
(4, 102106), (Start: 20 @101890 has 4 MA's), (27, 101845), (36, 101782), (47, 101713), (53, 101680), (65, 101560),

Gene: Mbo4_55 Start: 40403, Stop: 40738, Start Num: 30
Candidate Starts for Mbo4_55:
(5, 40172), (10, 40211), (12, 40253), (21, 40364), (29, 40397), (Start: 30 @40403 has 1 MA's), (Start: 33 @40415 has 4 MA's), (34, 40433), (52, 40553), (55, 40580), (63, 40640), (70, 40688), (73, 40709), (76, 40727),

Gene: Mikro_197 Start: 108888, Stop: 109262, Start Num: 28
Candidate Starts for Mikro_197:

(7, 108705), (Start: 13 @108780 has 1 MA's), (Start: 28 @108888 has 82 MA's), (60, 109149), (68, 109203),

Gene: Minnow_55 Start: 52884, Stop: 52519, Start Num: 22
Candidate Starts for Minnow_55:
(Start: 22 @52884 has 2 MA's), (34, 52833), (43, 52791), (52, 52713), (66, 52578), (67, 52572),

Gene: MoMoMixon_199 Start: 107378, Stop: 107752, Start Num: 28
Candidate Starts for MoMoMixon_199:
(7, 107195), (Start: 13 @107270 has 1 MA's), (Start: 28 @107378 has 82 MA's), (60, 107639), (68, 107693),

Gene: Momo_202 Start: 106454, Stop: 106828, Start Num: 28
Candidate Starts for Momo_202:
(7, 106271), (Start: 13 @106346 has 1 MA's), (Start: 28 @106454 has 82 MA's), (Start: 33 @106472 has 4 MA's), (46, 106595), (60, 106715), (68, 106769),

Gene: Naija_202 Start: 107157, Stop: 107531, Start Num: 28
Candidate Starts for Naija_202:
(7, 106974), (Start: 13 @107049 has 1 MA's), (Start: 28 @107157 has 82 MA's), (Start: 33 @107175 has 4 MA's), (46, 107298), (60, 107418), (68, 107472),

Gene: Nappy_202 Start: 108851, Stop: 109225, Start Num: 28
Candidate Starts for Nappy_202:
(7, 108668), (Start: 13 @108743 has 1 MA's), (Start: 28 @108851 has 82 MA's), (Start: 33 @108869 has 4 MA's), (46, 108992), (60, 109112), (68, 109166),

Gene: Ngannou_198 Start: 105454, Stop: 105810, Start Num: 33
Candidate Starts for Ngannou_198:
(7, 105253), (Start: 13 @105328 has 1 MA's), (Start: 28 @105436 has 82 MA's), (Start: 33 @105454 has 4 MA's), (46, 105577), (60, 105697), (68, 105751),

Gene: Nirvana_11 Start: 5644, Stop: 5282, Start Num: 31
Candidate Starts for Nirvana_11:
(Start: 31 @5644 has 1 MA's), (39, 5584), (40, 5578), (44, 5557), (45, 5527), (52, 5488), (59, 5422), (61, 5395), (64, 5389), (68, 5350), (69, 5344), (72, 5323), (74, 5314),

Gene: NuevoMundo_204 Start: 109444, Stop: 109818, Start Num: 28
Candidate Starts for NuevoMundo_204:
(7, 109261), (Start: 13 @109336 has 1 MA's), (Start: 28 @109444 has 82 MA's), (Start: 33 @109462 has 4 MA's), (46, 109585), (60, 109705), (68, 109759),

Gene: PharkleMinkus_201 Start: 107009, Stop: 107383, Start Num: 28
Candidate Starts for PharkleMinkus_201:
(7, 106826), (Start: 13 @106901 has 1 MA's), (Start: 28 @107009 has 82 MA's), (Start: 33 @107027 has 4 MA's), (60, 107270), (68, 107324),

Gene: Phendrix_179 Start: 97289, Stop: 96939, Start Num: 25
Candidate Starts for Phendrix_179:
(8, 97475), (9, 97466), (11, 97442), (14, 97379), (16, 97364), (Start: 25 @97289 has 2 MA's), (47, 97145), (50, 97130), (52, 97118), (58, 97055),

Gene: Phlegm_205 Start: 107157, Stop: 107531, Start Num: 28

Candidate Starts for Phlegm_205:
(7, 106974), (Start: 13 @107049 has 1 MA's), (Start: 28 @107157 has 82 MA's), (Start: 33 @107175 has 4 MA's), (46, 107298), (60, 107418), (68, 107472),

Gene: Phox_202 Start: 108112, Stop: 108486, Start Num: 28
Candidate Starts for Phox_202:
(7, 107929), (Start: 13 @108004 has 1 MA's), (Start: 28 @108112 has 82 MA's), (Start: 33 @108130 has 4 MA's), (46, 108253), (60, 108373), (68, 108427),

Gene: Phrappuccino_111 Start: 80442, Stop: 80837, Start Num: 24
Candidate Starts for Phrappuccino_111:
(1, 80169), (2, 80181), (3, 80184), (6, 80235), (Start: 24 @80442 has 2 MA's), (38, 80520), (41, 80538), (49, 80613), (75, 80823),

Gene: Pier_202 Start: 108986, Stop: 109360, Start Num: 28
Candidate Starts for Pier_202:
(7, 108803), (Start: 13 @108878 has 1 MA's), (Start: 28 @108986 has 82 MA's), (Start: 33 @109004 has 4 MA's), (46, 109127), (60, 109247), (68, 109301),

Gene: Pio_209 Start: 110181, Stop: 110555, Start Num: 28
Candidate Starts for Pio_209:
(7, 109998), (Start: 13 @110073 has 1 MA's), (Start: 28 @110181 has 82 MA's), (60, 110442), (68, 110496),

Gene: Puhon_203 Start: 107717, Stop: 108091, Start Num: 28
Candidate Starts for Puhon_203:
(7, 107534), (Start: 13 @107609 has 1 MA's), (Start: 28 @107717 has 82 MA's), (Start: 33 @107735 has 4 MA's), (60, 107978), (68, 108032),

Gene: Pupusa_205 Start: 108504, Stop: 108860, Start Num: 33
Candidate Starts for Pupusa_205:
(7, 108303), (Start: 13 @108378 has 1 MA's), (Start: 28 @108486 has 82 MA's), (Start: 33 @108504 has 4 MA's), (60, 108747), (68, 108801),

Gene: Rahel_202 Start: 106892, Stop: 107266, Start Num: 28
Candidate Starts for Rahel_202:
(7, 106709), (Start: 13 @106784 has 1 MA's), (Start: 28 @106892 has 82 MA's), (Start: 33 @106910 has 4 MA's), (46, 107033), (60, 107153), (68, 107207),

Gene: RoMag_196 Start: 107203, Stop: 107577, Start Num: 28
Candidate Starts for RoMag_196:
(7, 107020), (Start: 13 @107095 has 1 MA's), (Start: 28 @107203 has 82 MA's), (Start: 33 @107221 has 4 MA's), (46, 107344), (60, 107464), (68, 107518),

Gene: Ronan_197 Start: 105595, Stop: 105969, Start Num: 28
Candidate Starts for Ronan_197:
(7, 105412), (Start: 13 @105487 has 1 MA's), (Start: 28 @105595 has 82 MA's), (Start: 33 @105613 has 4 MA's), (46, 105736), (60, 105856), (68, 105910),

Gene: SVoro_197 Start: 107504, Stop: 107878, Start Num: 28
Candidate Starts for SVoro_197:
(7, 107321), (Start: 13 @107396 has 1 MA's), (Start: 28 @107504 has 82 MA's), (Start: 33 @107522 has 4 MA's), (46, 107645), (60, 107765), (68, 107819),

Gene: Salacia_201 Start: 107295, Stop: 107669, Start Num: 28
Candidate Starts for Salacia_201:
(7, 107112), (Start: 13 @107187 has 1 MA's), (Start: 28 @107295 has 82 MA's), (Start: 33 @107313 has 4 MA's), (46, 107436), (60, 107556), (68, 107610),

Gene: Sauce_197 Start: 106109, Stop: 106483, Start Num: 28
Candidate Starts for Sauce_197:
(7, 105926), (Start: 13 @106001 has 1 MA's), (Start: 28 @106109 has 82 MA's), (Start: 33 @106127 has 4 MA's), (46, 106250), (60, 106370), (68, 106424),

Gene: Settecandela_111 Start: 80442, Stop: 80837, Start Num: 24
Candidate Starts for Settecandela_111:
(1, 80169), (2, 80181), (3, 80184), (6, 80235), (Start: 24 @80442 has 2 MA's), (38, 80520), (41, 80538), (49, 80613), (75, 80823),

Gene: ShiaLabeouf_198 Start: 106118, Stop: 106474, Start Num: 33
Candidate Starts for ShiaLabeouf_198:
(7, 105917), (Start: 13 @105992 has 1 MA's), (Start: 28 @106100 has 82 MA's), (Start: 33 @106118 has 4 MA's), (46, 106241), (60, 106361), (68, 106415),

Gene: Shnickers_199 Start: 106164, Stop: 106538, Start Num: 28
Candidate Starts for Shnickers_199:
(7, 105981), (Start: 13 @106056 has 1 MA's), (Start: 28 @106164 has 82 MA's), (Start: 33 @106182 has 4 MA's), (46, 106305), (60, 106425), (68, 106479),

Gene: Shrimp_203 Start: 108221, Stop: 108595, Start Num: 28
Candidate Starts for Shrimp_203:
(7, 108038), (Start: 13 @108113 has 1 MA's), (Start: 28 @108221 has 82 MA's), (Start: 33 @108239 has 4 MA's), (46, 108362), (60, 108482), (68, 108536),

Gene: SilverDipper_205 Start: 107713, Stop: 108087, Start Num: 28
Candidate Starts for SilverDipper_205:
(7, 107530), (Start: 13 @107605 has 1 MA's), (Start: 28 @107713 has 82 MA's), (Start: 33 @107731 has 4 MA's), (46, 107854), (60, 107974), (68, 108028),

Gene: SiwenD96_203 Start: 108559, Stop: 108933, Start Num: 28
Candidate Starts for SiwenD96_203:
(7, 108376), (Start: 13 @108451 has 1 MA's), (Start: 28 @108559 has 82 MA's), (60, 108820), (68, 108874),

Gene: Sixama_178 Start: 102763, Stop: 102323, Start Num: 13
Candidate Starts for Sixama_178:
(Start: 13 @102763 has 1 MA's), (15, 102742), (17, 102730), (18, 102718), (19, 102715), (35, 102607), (36, 102601), (43, 102583), (46, 102535), (53, 102499), (54, 102481),

Gene: SmallFry_201 Start: 106258, Stop: 106632, Start Num: 28
Candidate Starts for SmallFry_201:
(7, 106075), (Start: 13 @106150 has 1 MA's), (Start: 28 @106258 has 82 MA's), (Start: 33 @106276 has 4 MA's), (46, 106399), (60, 106519), (68, 106573),

Gene: Spec_195 Start: 106449, Stop: 106823, Start Num: 28
Candidate Starts for Spec_195:

(7, 106266), (Start: 13 @106341 has 1 MA's), (Start: 28 @106449 has 82 MA's), (Start: 33 @106467 has 4 MA's), (46, 106590), (60, 106710), (68, 106764),

Gene: Sprinklers_199 Start: 106816, Stop: 107190, Start Num: 28
Candidate Starts for Sprinklers_199:
(7, 106633), (Start: 13 @106708 has 1 MA's), (Start: 28 @106816 has 82 MA's), (Start: 33 @106834 has 4 MA's), (46, 106957), (60, 107077), (68, 107131),

Gene: StubbySaigey_206 Start: 107247, Stop: 107621, Start Num: 28
Candidate Starts for StubbySaigey_206:
(7, 107064), (Start: 13 @107139 has 1 MA's), (Start: 28 @107247 has 82 MA's), (Start: 33 @107265 has 4 MA's), (46, 107388), (60, 107508), (68, 107562),

Gene: Tainan_202 Start: 107603, Stop: 107959, Start Num: 33
Candidate Starts for Tainan_202:
(7, 107402), (Start: 13 @107477 has 1 MA's), (Start: 28 @107585 has 82 MA's), (Start: 33 @107603 has 4 MA's), (60, 107846), (68, 107900),

Gene: Tonenili_222 Start: 113140, Stop: 113517, Start Num: 28
Candidate Starts for Tonenili_222:
(7, 112957), (Start: 13 @113032 has 1 MA's), (Start: 28 @113140 has 82 MA's), (60, 113401),

Gene: Tyke_199 Start: 108370, Stop: 108744, Start Num: 28
Candidate Starts for Tyke_199:
(7, 108187), (Start: 13 @108262 has 1 MA's), (Start: 28 @108370 has 82 MA's), (Start: 33 @108388 has 4 MA's), (46, 108511), (60, 108631), (68, 108685),

Gene: ValleyTerrace_202 Start: 106454, Stop: 106828, Start Num: 28
Candidate Starts for ValleyTerrace_202:
(7, 106271), (Start: 13 @106346 has 1 MA's), (Start: 28 @106454 has 82 MA's), (Start: 33 @106472 has 4 MA's), (46, 106595), (60, 106715), (68, 106769),

Gene: Vortrix_220 Start: 111927, Stop: 112304, Start Num: 28
Candidate Starts for Vortrix_220:
(7, 111744), (Start: 13 @111819 has 1 MA's), (Start: 28 @111927 has 82 MA's), (60, 112188),

Gene: Yassified_198 Start: 106793, Stop: 107167, Start Num: 28
Candidate Starts for Yassified_198:
(7, 106610), (Start: 13 @106685 has 1 MA's), (Start: 28 @106793 has 82 MA's), (Start: 33 @106811 has 4 MA's), (46, 106934), (60, 107054), (68, 107108),