

Pham 250470

1: Lianjiy_163 + 2	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
2: BlueOwl_166 + 14	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
3: Paraid_167 + 2	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
4: EGde_168	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
5: MulchManson_203 + 6	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
6: LiiSaint_205 + 2	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
7: JayJay_203 + 1	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
8: Evy_208 + 3	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
9: Shuckie_210	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
10: Broc_211	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
11: Teisco_217	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
12: Dabber_211	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
13: BaimonHane_203 + 1	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
14: Matus_210	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
15: Miret_227	20	24	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
16: Calmus_215	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
17: Samis_222	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
18: Tomas_219	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
19: Kelley_213	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
20: Bejfer_219	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
21: Kap_210	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
22: Tupa_165	24	31	32	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
23: Midab_163 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
24: Sesela_161 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
25: BlueyGdSauty_161	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
26: Sparkle3radess_161	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
27: Emilia_170 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
28: Jaga_169	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
29: Linpid_163 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
30: Bejor_163 + 3	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
31: Shan_153	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
32: MedanTheKilla_168 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
33: Fraico_158	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
34: Phadonk_171	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
35: Cincus_151 + 1	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
36: Wajana_137	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
37: Mutana_138	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
38: Onaewi_154	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
39: Wease_1519	23	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
40: Pedrigo_116	19	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219
41: NiceHo_134	21	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
42: Inga_161	23	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
43: Francesca_153	23	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
44: Nova53_131	23	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	
45: Doin_123	23	27	31	38	44	49	80	82	116	123	128	147	153	157	169	184	191	198	206	219	

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 250470 Report

This analysis was run 02/07/26 on database version 634.

Pham number 250470 has 84 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Liandry_218, Squillium_221, PinkiePie_218
- Track 2 : BlueOtter_216, Sushi23_218, Cross_217, Larnav_217, HangryHippo_216, Coogler_215, Cursive_220, Watermoore_217, Lululemon_214, PacManQ_214, Leo04_218, Pepperwood_218, Scheme_221, Peebs_215, Tribute_214
- Track 3 : Paradiddles_210, NootNoot_215, Davielle_217, Braelyn_214, Persimmon_221, WhereRU_217
- Track 4 : EGole_221
- Track 5 : MulchMansion_221, LilMartin_217, Angela_220
- Track 6 : LilSaint_228, Anedea_231, Riptide_219
- Track 7 : Jay2Jay_223, Warpy_221
- Track 8 : Evy_208, Targaryen_217
- Track 9 : Shuckle_216
- Track 10 : Bmoc_222
- Track 11 : Deutsch_217
- Track 12 : Daubenski_211
- Track 13 : Bartholomune_218, Navo_212
- Track 14 : Marsus_220
- Track 15 : Mildred21_227
- Track 16 : Cadmus_215
- Track 17 : Samisti12_222
- Track 18 : Tomas_230
- Track 19 : Kenrey_173
- Track 20 : Beuffert_159
- Track 21 : Karp_160
- Track 22 : TunaTartare_165
- Track 23 : Moab_167, Patelgo_168
- Track 24 : SeresaTree_161, Faust_159
- Track 25 : Blueeyedbeauty_161
- Track 26 : SparkleGoddess_165
- Track 27 : Emma1919_170, Forrest_172, Maupel_170, Gilson_169
- Track 28 : Jada_169
- Track 29 : Limpid_160, Annadreamy_153
- Track 30 : Belfort_166, Stigma_164, Comrade_163, Westy_168
- Track 31 : Sham_159
- Track 32 : MeganTheeKilla_169, DeluluLabubu_174
- Track 33 : Francob_168
- Track 34 : Phredrick_171

- Track 35 : Circinus_131, BillNye_130
- Track 36 : Wakanda_137
- Track 37 : Muntaha_138
- Track 38 : Chaewon_134
- Track 39 : Weasels2_119
- Track 40 : Peregrin_116
- Track 41 : NiceHouse_134
- Track 42 : Trina_156
- Track 43 : Francesca_123
- Track 44 : Nova53_123
- Track 45 : Dorin_123

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

The start number called the most often in the published annotations is 4, it was called in 78 of the 79 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_231, Angela_220, Annadreamy_153, Bartholomune_218, Belfort_166, Beuffert_159, BillNye_130, BlueOtter_216, Blueeyedbeauty_161, Bmoc_222, Braelyn_214, Cadmus_215, Chaewon_134, Circinus_131, Comrade_163, Coogler_215, Cross_217, Cursive_220, Daubenski_211, Davielle_217, DeluluLabubu_174, Dorin_123, EGole_221, Emma1919_170, Evy_208, Faust_159, Forrest_172, Francesca_123, Francob_168, Gilson_169, HangryHippo_216, Jada_169, Jay2Jay_223, Karp_160, Kenrey_173, Larnav_217, Leo04_218, Liandry_218, LilMartin_217, LilSaint_228, Limpid_160, Lululemon_214, Marsus_220, Maupel_170, MeganTheeKilla_169, Mildred21_227, Moab_167, MulchMansion_221, Muntaha_138, Navo_212, NiceHouse_134, NootNoot_215, Nova53_123, PacManQ_214, Paradiddles_210, Patelgo_168, Peebs_215, Pepperwood_218, Peregrin_116, Persimmon_221, Phredrick_171, PinkiePie_218, Riptide_219, Samisti12_222, Scheme_221, SeresaTree_161, Sham_159, Shuckle_216, SparkleGoddess_165, Squillium_221, Stigma_164, Sushi23_218, Targaryen_217, Teutsch_217, Tomas_230, Tribute_214, Trina_156, TunaTartare_165, Wakanda_137, Warpy_221, Watermoore_217, Westy_168, WhereRU_217,

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

-

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

- Weasels2_119,

Summary by start number:

Start 3:

- Found in 1 of 84 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 79
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Weasels2_119 (CB),

Start 4:

- Found in 83 of 84 (98.8%) of genes in pham
- Manual Annotations of this start: 78 of 79
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anedea_231 (BE1), Angela_220 (BE1), Annadreamy_153 (BK1), Bartholomune_218 (BE1), Belfort_166 (BK1), Beuffert_159 (BK1), BillNye_130 (BK2), BlueOtter_216 (BE1), Blueeyedbeauty_161 (BK1), Bmoc_222 (BE1), Braelyn_214 (BE1), Cadmus_215 (BE1), Chaewon_134 (BK2), Circinus_131 (BK2), Comrade_163 (BK1), Coogler_215 (BE1), Cross_217 (BE1), Cursive_220 (BE1), Daubenski_211 (BE1), Davielle_217 (BE1), DeluluLabubu_174 (BK1), Dorin_123 (CG), EGole_221 (BE1), Emma1919_170 (BK1), Evy_208 (BE1), Faust_159 (BK1), Forrest_172 (BK1), Francesca_123 (CG), Francob_168 (BK1), Gilson_169 (BK1), HangryHippo_216 (BE1), Jada_169 (BK1), Jay2Jay_223 (BE1), Karp_160 (BK1), Kenrey_173 (BK1), Larnav_217 (BE1), Leo04_218 (BE1), Liandry_218 (BE1), LilMartin_217 (BE1), LilSaint_228 (BE1), Limpid_160 (BK1), Lululemon_214 (BE1), Marsus_220 (BE1), Maupel_170 (BK1), MeganTheeKilla_169 (BK1), Mildred21_227 (BE1), Moab_167 (BK1), MulchMansion_221 (BE1), Muntaha_138 (BK2), Navo_212 (BE1), NiceHouse_134 (CE), NootNoot_215 (BE1), Nova53_123 (CG), PacManQ_214 (BE1), Paradiddles_210 (BE1), Patelgo_168 (BK1), Peebs_215 (BE1), Pepperwood_218 (BE1), Peregrin_116 (CB), Persimmon_221 (BE1), Phredrick_171 (BK1), PinkiePie_218 (BE1), Riptide_219 (BE1), Samisti12_222 (BE1), Scheme_221 (BE1), SeresaTree_161 (BK1), Sham_159 (BK1), Shuckle_216 (BE1), SparkleGoddess_165 (BK1), Squillium_221 (BE1), Stigma_164 (BK1), Sushi23_218 (BE1), Targaryen_217 (BE1), Teutsch_217 (BE1), Tomas_230 (BE2), Tribute_214 (BE1), Trina_156 (CE), TunaTartare_165 (BK1), Wakanda_137 (BK2), Warpy_221 (BE1), Watermoore_217 (BE1), Westy_168 (BK1), WhereRU_217 (BE1),

Summary by clusters:

There are 7 clusters represented in this pham: CB, CG, CE, BK1, BK2, BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 4 was manually annotated 44 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 4 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 4 was manually annotated 23 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 4 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster CB:

- Start number 3 was manually annotated 1 time for cluster CB.
- Start number 4 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CE:

- Start number 4 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster CG:

- Start number 4 was manually annotated 3 times for cluster CG.

Gene Information:

Gene: Anedea_231 Start: 110089, Stop: 112002, Start Num: 4

Candidate Starts for Anedea_231:

(Start: 4 @110089 has 78 MA's), (8, 110149), (11, 110170), (13, 110182), (20, 110275), (24, 110311), (25, 110329), (26, 110344), (31, 110428), (43, 110545), (44, 110548), (51, 110602), (52, 110608), (69, 110770), (78, 110875), (84, 110953), (89, 110986), (95, 111046), (116, 111151), (128, 111250), (146, 111343), (184, 111643), (191, 111691), (198, 111724),

Gene: Angela_220 Start: 107839, Stop: 109758, Start Num: 4

Candidate Starts for Angela_220:

(Start: 4 @107839 has 78 MA's), (8, 107899), (11, 107920), (13, 107932), (20, 108025), (31, 108178), (37, 108250), (38, 108253), (44, 108298), (53, 108367), (69, 108520), (73, 108580), (78, 108628), (86, 108721), (95, 108799), (128, 109003), (129, 109009), (138, 109051), (140, 109066), (169, 109276), (182, 109378), (184, 109399), (185, 109402), (188, 109423), (191, 109447), (198, 109480), (201, 109516), (202, 109519), (212, 109582), (229, 109693),

Gene: Annadreamy_153 Start: 83083, Stop: 85002, Start Num: 4

Candidate Starts for Annadreamy_153:

(Start: 4 @83083 has 78 MA's), (8, 83143), (13, 83176), (25, 83323), (27, 83344), (31, 83422), (44, 83542), (63, 83725), (69, 83764), (75, 83839), (76, 83848), (78, 83863), (79, 83890), (92, 84010), (114, 84127), (121, 84181), (122, 84184), (162, 84490), (164, 84514), (166, 84523), (175, 84571), (191, 84706), (223, 84925),

Gene: Bartholomune_218 Start: 108069, Stop: 109979, Start Num: 4

Candidate Starts for Bartholomune_218:

(Start: 4 @108069 has 78 MA's), (8, 108129), (11, 108150), (13, 108162), (24, 108291), (31, 108408), (32, 108435), (38, 108483), (44, 108528), (48, 108552), (49, 108570), (69, 108750), (71, 108771), (78, 108861), (82, 108909), (116, 109137), (128, 109233), (133, 109260), (157, 109431), (169, 109506), (184, 109629), (191, 109677), (198, 109710), (206, 109764), (219, 109863),

Gene: Belfort_166 Start: 89022, Stop: 90947, Start Num: 4

Candidate Starts for Belfort_166:

(Start: 4 @89022 has 78 MA's), (8, 89082), (13, 89115), (15, 89124), (25, 89262), (27, 89283), (31, 89361), (41, 89445), (43, 89478), (44, 89481), (65, 89670), (69, 89703), (75, 89778), (76, 89787), (78, 89802), (81, 89844), (85, 89892), (114, 90072), (128, 90192), (131, 90210), (151, 90360), (152, 90369), (163, 90444), (169, 90474), (175, 90510), (181, 90570), (183, 90585), (184, 90597), (191, 90645), (195, 90663), (202, 90717), (212, 90780), (228, 90894),

Gene: Beuffert_159 Start: 87172, Stop: 89091, Start Num: 4

Candidate Starts for Beuffert_159:

(Start: 4 @87172 has 78 MA's), (8, 87232), (13, 87265), (21, 87361), (25, 87412), (27, 87433), (31, 87511), (36, 87571), (44, 87631), (63, 87814), (69, 87853), (74, 87925), (76, 87937), (78, 87952), (92, 88099), (103, 88159), (108, 88195), (114, 88216), (121, 88270), (122, 88273), (126, 88312), (132, 88357), (150, 88489), (162, 88579), (164, 88603), (174, 88657), (175, 88660), (177, 88666), (191, 88795), (197, 88825),

Gene: BillNye_130 Start: 78775, Stop: 80697, Start Num: 4

Candidate Starts for BillNye_130:

(Start: 4 @78775 has 78 MA's), (8, 78835), (9, 78838), (13, 78868), (27, 79036), (30, 79108), (31, 79114), (40, 79195), (41, 79198), (44, 79234), (65, 79423), (68, 79453), (69, 79456), (70, 79465), (75,

79534), (78, 79558), (84, 79636), (87, 79657), (99, 79762), (102, 79774), (111, 79822), (119, 79873), (128, 79954), (163, 80194), (166, 80212), (185, 80350), (186, 80353), (189, 80386), (193, 80401), (204, 80476), (220, 80599), (221, 80602), (234, 80686),

Gene: BlueOtter_216 Start: 108190, Stop: 110100, Start Num: 4

Candidate Starts for BlueOtter_216:

(Start: 4 @108190 has 78 MA's), (8, 108250), (10, 108256), (11, 108271), (13, 108283), (24, 108412), (28, 108457), (31, 108529), (38, 108604), (43, 108646), (44, 108649), (49, 108691), (69, 108871), (116, 109258), (123, 109303), (128, 109357), (147, 109453), (153, 109528), (157, 109555), (184, 109753), (191, 109801), (198, 109834), (201, 109870), (206, 109888), (219, 109987),

Gene: Blueeyedbeauty_161 Start: 86834, Stop: 88759, Start Num: 4

Candidate Starts for Blueeyedbeauty_161:

(Start: 4 @86834 has 78 MA's), (8, 86894), (12, 86924), (13, 86927), (25, 87074), (27, 87095), (31, 87173), (44, 87293), (63, 87476), (69, 87515), (74, 87587), (78, 87614), (92, 87761), (108, 87857), (114, 87878), (121, 87932), (122, 87935), (150, 88151), (162, 88244), (174, 88322), (175, 88325), (177, 88331), (191, 88460), (206, 88547), (217, 88637),

Gene: Bmoc_222 Start: 108285, Stop: 110207, Start Num: 4

Candidate Starts for Bmoc_222:

(Start: 4 @108285 has 78 MA's), (8, 108345), (11, 108366), (13, 108378), (20, 108471), (31, 108624), (43, 108741), (44, 108744), (69, 108966), (78, 109074), (83, 109140), (95, 109245), (128, 109449), (146, 109542), (169, 109725), (184, 109848), (190, 109890), (191, 109896), (198, 109929), (206, 109983), (212, 110031), (231, 110160),

Gene: Braelyn_214 Start: 107716, Stop: 109626, Start Num: 4

Candidate Starts for Braelyn_214:

(Start: 4 @107716 has 78 MA's), (8, 107776), (11, 107797), (13, 107809), (24, 107938), (31, 108055), (32, 108082), (38, 108130), (44, 108175), (48, 108199), (49, 108217), (69, 108397), (78, 108508), (82, 108556), (116, 108784), (128, 108880), (157, 109078), (169, 109153), (184, 109276), (191, 109324), (198, 109357), (206, 109411), (219, 109510),

Gene: Cadmus_215 Start: 109022, Stop: 110929, Start Num: 4

Candidate Starts for Cadmus_215:

(Start: 4 @109022 has 78 MA's), (8, 109082), (11, 109103), (13, 109115), (20, 109208), (31, 109361), (44, 109481), (59, 109613), (60, 109634), (61, 109637), (69, 109703), (78, 109814), (86, 109907), (89, 109925), (95, 109985), (97, 109994), (111, 110057), (116, 110090), (128, 110189), (135, 110228), (138, 110237), (159, 110384), (175, 110489), (191, 110624), (201, 110693), (231, 110888),

Gene: Chaewon_134 Start: 78704, Stop: 80641, Start Num: 4

Candidate Starts for Chaewon_134:

(2, 78674), (Start: 4 @78704 has 78 MA's), (8, 78764), (9, 78767), (12, 78794), (13, 78797), (27, 78965), (31, 79043), (36, 79103), (41, 79127), (44, 79163), (45, 79172), (67, 79379), (69, 79385), (71, 79406), (75, 79463), (78, 79487), (85, 79577), (99, 79691), (111, 79751), (115, 79766), (116, 79784), (128, 79883), (173, 80186), (176, 80204), (178, 80213), (196, 80363), (204, 80417), (208, 80441), (209, 80453), (221, 80546), (234, 80630),

Gene: Circinus_131 Start: 78743, Stop: 80665, Start Num: 4

Candidate Starts for Circinus_131:

(Start: 4 @78743 has 78 MA's), (8, 78803), (9, 78806), (13, 78836), (27, 79004), (30, 79076), (31, 79082), (40, 79163), (41, 79166), (44, 79202), (65, 79391), (68, 79421), (69, 79424), (70, 79433), (75, 79502), (78, 79526), (84, 79604), (87, 79625), (99, 79730), (102, 79742), (111, 79790), (119, 79841), (128, 79922), (163, 80162), (166, 80180), (185, 80318), (186, 80321), (189, 80354), (193, 80369),

(204, 80444), (220, 80567), (221, 80570), (234, 80654),

Gene: Comrade_163 Start: 89224, Stop: 91149, Start Num: 4

Candidate Starts for Comrade_163:

(Start: 4 @89224 has 78 MA's), (8, 89284), (13, 89317), (15, 89326), (25, 89464), (27, 89485), (31, 89563), (41, 89647), (43, 89680), (44, 89683), (65, 89872), (69, 89905), (75, 89980), (76, 89989), (78, 90004), (81, 90046), (85, 90094), (114, 90274), (128, 90394), (131, 90412), (151, 90562), (152, 90571), (163, 90646), (169, 90676), (175, 90712), (181, 90772), (183, 90787), (184, 90799), (191, 90847), (195, 90865), (202, 90919), (212, 90982), (228, 91096),

Gene: Coogler_215 Start: 108615, Stop: 110525, Start Num: 4

Candidate Starts for Coogler_215:

(Start: 4 @108615 has 78 MA's), (8, 108675), (10, 108681), (11, 108696), (13, 108708), (24, 108837), (28, 108882), (31, 108954), (38, 109029), (43, 109071), (44, 109074), (49, 109116), (69, 109296), (116, 109683), (123, 109728), (128, 109782), (147, 109878), (153, 109953), (157, 109980), (184, 110178), (191, 110226), (198, 110259), (201, 110295), (206, 110313), (219, 110412),

Gene: Cross_217 Start: 108835, Stop: 110745, Start Num: 4

Candidate Starts for Cross_217:

(Start: 4 @108835 has 78 MA's), (8, 108895), (10, 108901), (11, 108916), (13, 108928), (24, 109057), (28, 109102), (31, 109174), (38, 109249), (43, 109291), (44, 109294), (49, 109336), (69, 109516), (116, 109903), (123, 109948), (128, 110002), (147, 110098), (153, 110173), (157, 110200), (184, 110398), (191, 110446), (198, 110479), (201, 110515), (206, 110533), (219, 110632),

Gene: Cursive_220 Start: 108519, Stop: 110429, Start Num: 4

Candidate Starts for Cursive_220:

(Start: 4 @108519 has 78 MA's), (8, 108579), (10, 108585), (11, 108600), (13, 108612), (24, 108741), (28, 108786), (31, 108858), (38, 108933), (43, 108975), (44, 108978), (49, 109020), (69, 109200), (116, 109587), (123, 109632), (128, 109686), (147, 109782), (153, 109857), (157, 109884), (184, 110082), (191, 110130), (198, 110163), (201, 110199), (206, 110217), (219, 110316),

Gene: Daubenski_211 Start: 108917, Stop: 110824, Start Num: 4

Candidate Starts for Daubenski_211:

(Start: 4 @108917 has 78 MA's), (8, 108977), (11, 108998), (13, 109010), (20, 109103), (31, 109256), (44, 109376), (59, 109508), (60, 109529), (61, 109532), (69, 109598), (78, 109709), (86, 109802), (89, 109820), (95, 109880), (97, 109889), (111, 109952), (116, 109985), (128, 110084), (138, 110132), (159, 110279), (191, 110519), (201, 110588), (222, 110735), (231, 110783),

Gene: Davielle_217 Start: 108114, Stop: 110024, Start Num: 4

Candidate Starts for Davielle_217:

(Start: 4 @108114 has 78 MA's), (8, 108174), (11, 108195), (13, 108207), (24, 108336), (31, 108453), (32, 108480), (38, 108528), (44, 108573), (48, 108597), (49, 108615), (69, 108795), (78, 108906), (82, 108954), (116, 109182), (128, 109278), (157, 109476), (169, 109551), (184, 109674), (191, 109722), (198, 109755), (206, 109809), (219, 109908),

Gene: DeluluLabubu_174 Start: 89872, Stop: 91797, Start Num: 4

Candidate Starts for DeluluLabubu_174:

(Start: 4 @89872 has 78 MA's), (6, 89890), (8, 89932), (13, 89965), (15, 89974), (25, 90112), (27, 90133), (31, 90211), (35, 90265), (36, 90271), (42, 90301), (44, 90331), (49, 90373), (54, 90406), (62, 90502), (65, 90520), (69, 90553), (113, 90913), (114, 90922), (128, 91042), (161, 91279), (163, 91294), (175, 91360), (184, 91447), (188, 91471), (195, 91513), (212, 91630), (226, 91738),

Gene: Dorin_123 Start: 78886, Stop: 80877, Start Num: 4

Candidate Starts for Dorin_123:

(Start: 4 @78886 has 78 MA's), (13, 78976), (14, 78982), (18, 79018), (23, 79081), (33, 79270), (44, 79342), (45, 79351), (49, 79384), (67, 79567), (68, 79570), (69, 79573), (70, 79582), (77, 79657), (95, 79837), (96, 79840), (117, 79954), (130, 80068), (154, 80251), (159, 80278), (168, 80350), (172, 80371), (175, 80395), (188, 80500), (194, 80536), (209, 80662), (222, 80770), (224, 80788), (233, 80827),

Gene: EGole_221 Start: 110565, Stop: 112475, Start Num: 4

Candidate Starts for EGole_221:

(Start: 4 @110565 has 78 MA's), (8, 110625), (10, 110631), (11, 110646), (13, 110658), (24, 110787), (28, 110832), (31, 110904), (38, 110979), (43, 111021), (44, 111024), (49, 111066), (69, 111246), (116, 111633), (123, 111678), (128, 111732), (147, 111828), (153, 111903), (157, 111930), (184, 112128), (191, 112176), (198, 112209), (201, 112245), (206, 112263),

Gene: Emma1919_170 Start: 87931, Stop: 89856, Start Num: 4

Candidate Starts for Emma1919_170:

(Start: 4 @87931 has 78 MA's), (6, 87949), (8, 87991), (13, 88024), (15, 88033), (25, 88171), (27, 88192), (31, 88270), (35, 88324), (36, 88330), (42, 88360), (44, 88390), (49, 88432), (54, 88465), (62, 88561), (65, 88579), (69, 88612), (113, 88972), (114, 88981), (128, 89101), (161, 89338), (163, 89353), (175, 89419), (184, 89506), (195, 89572), (212, 89689), (226, 89797),

Gene: Evy_208 Start: 109007, Stop: 110920, Start Num: 4

Candidate Starts for Evy_208:

(Start: 4 @109007 has 78 MA's), (8, 109067), (11, 109088), (13, 109100), (20, 109193), (24, 109229), (31, 109346), (32, 109373), (38, 109421), (43, 109463), (44, 109466), (49, 109508), (69, 109688), (71, 109709), (78, 109799), (82, 109847), (111, 110042), (116, 110075), (128, 110174), (133, 110201), (153, 110345), (157, 110372), (184, 110570), (191, 110618), (198, 110651), (206, 110705), (219, 110804),

Gene: Faust_159 Start: 88402, Stop: 90324, Start Num: 4

Candidate Starts for Faust_159:

(Start: 4 @88402 has 78 MA's), (8, 88462), (13, 88495), (27, 88663), (29, 88687), (31, 88741), (36, 88801), (42, 88831), (44, 88861), (63, 89044), (69, 89083), (78, 89182), (79, 89209), (110, 89434), (123, 89512), (179, 89923), (187, 89986), (191, 90022), (192, 90025), (193, 90028), (203, 90100), (213, 90166), (232, 90298),

Gene: Forrest_172 Start: 89523, Stop: 91448, Start Num: 4

Candidate Starts for Forrest_172:

(Start: 4 @89523 has 78 MA's), (6, 89541), (8, 89583), (13, 89616), (15, 89625), (25, 89763), (27, 89784), (31, 89862), (35, 89916), (36, 89922), (42, 89952), (44, 89982), (49, 90024), (54, 90057), (62, 90153), (65, 90171), (69, 90204), (113, 90564), (114, 90573), (128, 90693), (161, 90930), (163, 90945), (175, 91011), (184, 91098), (195, 91164), (212, 91281), (226, 91389),

Gene: Francesca_123 Start: 79801, Stop: 81792, Start Num: 4

Candidate Starts for Francesca_123:

(Start: 4 @79801 has 78 MA's), (13, 79891), (14, 79897), (18, 79933), (23, 79996), (33, 80185), (44, 80257), (45, 80266), (49, 80299), (67, 80482), (68, 80485), (69, 80488), (70, 80497), (77, 80572), (95, 80752), (107, 80815), (117, 80869), (130, 80983), (154, 81166), (159, 81193), (168, 81265), (172, 81286), (175, 81310), (188, 81415), (194, 81451), (209, 81577), (222, 81685), (224, 81703), (233, 81742),

Gene: Francob_168 Start: 88436, Stop: 90361, Start Num: 4

Candidate Starts for Francob_168:

(Start: 4 @88436 has 78 MA's), (6, 88454), (8, 88496), (13, 88529), (15, 88538), (27, 88697), (31, 88775), (41, 88859), (44, 88895), (64, 89081), (65, 89084), (69, 89117), (91, 89360), (104, 89447), (106, 89453), (114, 89486), (128, 89606), (163, 89858), (175, 89924), (184, 90011), (195, 90077), (201, 90128), (212, 90194), (226, 90302),

Gene: Gilson_169 Start: 87893, Stop: 89818, Start Num: 4

Candidate Starts for Gilson_169:

(Start: 4 @87893 has 78 MA's), (6, 87911), (8, 87953), (13, 87986), (15, 87995), (25, 88133), (27, 88154), (31, 88232), (35, 88286), (36, 88292), (42, 88322), (44, 88352), (49, 88394), (54, 88427), (62, 88523), (65, 88541), (69, 88574), (113, 88934), (114, 88943), (128, 89063), (161, 89300), (163, 89315), (175, 89381), (184, 89468), (195, 89534), (212, 89651), (226, 89759),

Gene: HangryHippo_216 Start: 108190, Stop: 110100, Start Num: 4

Candidate Starts for HangryHippo_216:

(Start: 4 @108190 has 78 MA's), (8, 108250), (10, 108256), (11, 108271), (13, 108283), (24, 108412), (28, 108457), (31, 108529), (38, 108604), (43, 108646), (44, 108649), (49, 108691), (69, 108871), (116, 109258), (123, 109303), (128, 109357), (147, 109453), (153, 109528), (157, 109555), (184, 109753), (191, 109801), (198, 109834), (201, 109870), (206, 109888), (219, 109987),

Gene: Jada_169 Start: 88219, Stop: 90144, Start Num: 4

Candidate Starts for Jada_169:

(Start: 4 @88219 has 78 MA's), (6, 88237), (8, 88279), (13, 88312), (15, 88321), (25, 88459), (27, 88480), (31, 88558), (35, 88612), (36, 88618), (42, 88648), (44, 88678), (49, 88720), (54, 88753), (62, 88849), (65, 88867), (69, 88900), (113, 89260), (114, 89269), (128, 89389), (161, 89626), (163, 89641), (175, 89707), (195, 89860), (212, 89977), (226, 90085),

Gene: Jay2Jay_223 Start: 109162, Stop: 111075, Start Num: 4

Candidate Starts for Jay2Jay_223:

(Start: 4 @109162 has 78 MA's), (8, 109222), (11, 109243), (13, 109255), (20, 109348), (24, 109384), (31, 109501), (32, 109528), (38, 109576), (43, 109618), (44, 109621), (49, 109663), (69, 109843), (71, 109864), (78, 109954), (82, 110002), (111, 110197), (116, 110230), (128, 110329), (133, 110356), (153, 110500), (157, 110527), (169, 110602), (184, 110725), (191, 110773), (198, 110806), (206, 110860), (219, 110959),

Gene: Karp_160 Start: 88448, Stop: 90373, Start Num: 4

Candidate Starts for Karp_160:

(Start: 4 @88448 has 78 MA's), (8, 88508), (13, 88541), (15, 88550), (27, 88709), (31, 88787), (41, 88871), (43, 88904), (44, 88907), (65, 89096), (69, 89129), (75, 89204), (76, 89213), (78, 89228), (81, 89270), (85, 89318), (114, 89498), (128, 89618), (131, 89636), (151, 89786), (152, 89795), (163, 89870), (169, 89900), (175, 89936), (181, 89996), (183, 90011), (184, 90023), (191, 90071), (195, 90089), (202, 90143), (212, 90206), (228, 90320),

Gene: Kenrey_173 Start: 89234, Stop: 91159, Start Num: 4

Candidate Starts for Kenrey_173:

(Start: 4 @89234 has 78 MA's), (6, 89252), (8, 89294), (13, 89327), (15, 89336), (25, 89474), (27, 89495), (31, 89573), (42, 89663), (44, 89693), (49, 89735), (54, 89768), (62, 89864), (65, 89882), (69, 89915), (70, 89924), (102, 90224), (114, 90284), (128, 90404), (163, 90656), (175, 90722), (184, 90809), (195, 90875), (212, 90992), (226, 91100), (228, 91106),

Gene: Larnav_217 Start: 108684, Stop: 110594, Start Num: 4

Candidate Starts for Larnav_217:

(Start: 4 @108684 has 78 MA's), (8, 108744), (10, 108750), (11, 108765), (13, 108777), (24, 108906), (28, 108951), (31, 109023), (38, 109098), (43, 109140), (44, 109143), (49, 109185), (69, 109365),

(116, 109752), (123, 109797), (128, 109851), (147, 109947), (153, 110022), (157, 110049), (184, 110247), (191, 110295), (198, 110328), (201, 110364), (206, 110382), (219, 110481),

Gene: Leo04_218 Start: 109216, Stop: 111126, Start Num: 4

Candidate Starts for Leo04_218:

(Start: 4 @109216 has 78 MA's), (8, 109276), (10, 109282), (11, 109297), (13, 109309), (24, 109438), (28, 109483), (31, 109555), (38, 109630), (43, 109672), (44, 109675), (49, 109717), (69, 109897), (116, 110284), (123, 110329), (128, 110383), (147, 110479), (153, 110554), (157, 110581), (184, 110779), (191, 110827), (198, 110860), (201, 110896), (206, 110914), (219, 111013),

Gene: Liandry_218 Start: 108592, Stop: 110502, Start Num: 4

Candidate Starts for Liandry_218:

(Start: 4 @108592 has 78 MA's), (8, 108652), (11, 108673), (13, 108685), (24, 108814), (31, 108931), (32, 108958), (38, 109006), (44, 109051), (48, 109075), (49, 109093), (69, 109273), (82, 109432), (116, 109660), (128, 109756), (157, 109954), (169, 110029), (184, 110152), (191, 110200), (198, 110233), (206, 110287), (219, 110386),

Gene: LilMartin_217 Start: 107203, Stop: 109122, Start Num: 4

Candidate Starts for LilMartin_217:

(Start: 4 @107203 has 78 MA's), (8, 107263), (11, 107284), (13, 107296), (20, 107389), (31, 107542), (37, 107614), (38, 107617), (44, 107662), (53, 107731), (69, 107884), (73, 107944), (78, 107992), (86, 108085), (95, 108163), (128, 108367), (129, 108373), (138, 108415), (140, 108430), (169, 108640), (182, 108742), (184, 108763), (185, 108766), (188, 108787), (191, 108811), (198, 108844), (201, 108880), (202, 108883), (212, 108946), (229, 109057),

Gene: LilSaint_228 Start: 108461, Stop: 110374, Start Num: 4

Candidate Starts for LilSaint_228:

(Start: 4 @108461 has 78 MA's), (8, 108521), (11, 108542), (13, 108554), (20, 108647), (24, 108683), (25, 108701), (26, 108716), (31, 108800), (43, 108917), (44, 108920), (51, 108974), (52, 108980), (69, 109142), (78, 109247), (84, 109325), (89, 109358), (95, 109418), (116, 109523), (128, 109622), (146, 109715), (184, 110015), (191, 110063), (198, 110096),

Gene: Limpid_160 Start: 88396, Stop: 90315, Start Num: 4

Candidate Starts for Limpid_160:

(Start: 4 @88396 has 78 MA's), (8, 88456), (13, 88489), (25, 88636), (27, 88657), (31, 88735), (44, 88855), (63, 89038), (69, 89077), (75, 89152), (76, 89161), (78, 89176), (79, 89203), (92, 89323), (114, 89440), (121, 89494), (122, 89497), (162, 89803), (164, 89827), (166, 89836), (175, 89884), (191, 90019), (223, 90238),

Gene: Lululemon_214 Start: 107571, Stop: 109481, Start Num: 4

Candidate Starts for Lululemon_214:

(Start: 4 @107571 has 78 MA's), (8, 107631), (10, 107637), (11, 107652), (13, 107664), (24, 107793), (28, 107838), (31, 107910), (38, 107985), (43, 108027), (44, 108030), (49, 108072), (69, 108252), (116, 108639), (123, 108684), (128, 108738), (147, 108834), (153, 108909), (157, 108936), (184, 109134), (191, 109182), (198, 109215), (201, 109251), (206, 109269), (219, 109368),

Gene: Marsus_220 Start: 108868, Stop: 110787, Start Num: 4

Candidate Starts for Marsus_220:

(Start: 4 @108868 has 78 MA's), (8, 108928), (11, 108949), (13, 108961), (20, 109054), (31, 109207), (32, 109234), (37, 109279), (44, 109327), (53, 109396), (69, 109549), (73, 109609), (78, 109657), (83, 109723), (86, 109750), (95, 109828), (128, 110032), (138, 110080), (140, 110095), (169, 110305), (182, 110407), (184, 110428), (185, 110431), (188, 110452), (191, 110476), (198, 110509), (201, 110545), (202, 110548), (212, 110611),

Gene: Maupel_170 Start: 87893, Stop: 89818, Start Num: 4

Candidate Starts for Maupel_170:

(Start: 4 @87893 has 78 MA's), (6, 87911), (8, 87953), (13, 87986), (15, 87995), (25, 88133), (27, 88154), (31, 88232), (35, 88286), (36, 88292), (42, 88322), (44, 88352), (49, 88394), (54, 88427), (62, 88523), (65, 88541), (69, 88574), (113, 88934), (114, 88943), (128, 89063), (161, 89300), (163, 89315), (175, 89381), (184, 89468), (195, 89534), (212, 89651), (226, 89759),

Gene: MeganTheeKilla_169 Start: 87962, Stop: 89887, Start Num: 4

Candidate Starts for MeganTheeKilla_169:

(Start: 4 @87962 has 78 MA's), (6, 87980), (8, 88022), (13, 88055), (15, 88064), (25, 88202), (27, 88223), (31, 88301), (35, 88355), (36, 88361), (42, 88391), (44, 88421), (49, 88463), (54, 88496), (62, 88592), (65, 88610), (69, 88643), (113, 89003), (114, 89012), (128, 89132), (161, 89369), (163, 89384), (175, 89450), (184, 89537), (188, 89561), (195, 89603), (212, 89720), (226, 89828),

Gene: Mildred21_227 Start: 106964, Stop: 108877, Start Num: 4

Candidate Starts for Mildred21_227:

(Start: 4 @106964 has 78 MA's), (8, 107024), (11, 107045), (13, 107057), (20, 107150), (31, 107303), (36, 107363), (44, 107423), (49, 107465), (53, 107492), (67, 107639), (69, 107645), (83, 107819), (86, 107846), (95, 107924), (100, 107939), (111, 107996), (128, 108128), (140, 108191), (158, 108329), (169, 108401), (175, 108437), (184, 108524), (190, 108566), (191, 108572), (198, 108605), (206, 108659), (212, 108707),

Gene: Moab_167 Start: 90438, Stop: 92363, Start Num: 4

Candidate Starts for Moab_167:

(Start: 4 @90438 has 78 MA's), (6, 90456), (8, 90498), (13, 90531), (15, 90540), (24, 90660), (27, 90699), (31, 90777), (34, 90828), (43, 90894), (44, 90897), (50, 90948), (64, 91083), (65, 91086), (69, 91119), (114, 91488), (119, 91527), (128, 91608), (137, 91653), (151, 91776), (155, 91803), (163, 91860), (175, 91926), (184, 92013), (201, 92130), (212, 92196), (226, 92304),

Gene: MulchMansion_221 Start: 108837, Stop: 110756, Start Num: 4

Candidate Starts for MulchMansion_221:

(Start: 4 @108837 has 78 MA's), (8, 108897), (11, 108918), (13, 108930), (20, 109023), (31, 109176), (37, 109248), (38, 109251), (44, 109296), (53, 109365), (69, 109518), (73, 109578), (78, 109626), (86, 109719), (95, 109797), (128, 110001), (129, 110007), (138, 110049), (140, 110064), (169, 110274), (182, 110376), (184, 110397), (185, 110400), (188, 110421), (191, 110445), (198, 110478), (201, 110514), (202, 110517), (212, 110580), (229, 110691),

Gene: Muntaha_138 Start: 77693, Stop: 79627, Start Num: 4

Candidate Starts for Muntaha_138:

(Start: 4 @77693 has 78 MA's), (5, 77708), (8, 77753), (9, 77756), (13, 77786), (27, 77954), (30, 78026), (31, 78032), (40, 78113), (41, 78116), (44, 78152), (59, 78284), (63, 78335), (69, 78374), (75, 78455), (85, 78569), (109, 78740), (111, 78743), (128, 78875), (148, 79010), (152, 79055), (166, 79139), (170, 79160), (173, 79172), (227, 79574), (234, 79616),

Gene: Navo_212 Start: 106920, Stop: 108830, Start Num: 4

Candidate Starts for Navo_212:

(Start: 4 @106920 has 78 MA's), (8, 106980), (11, 107001), (13, 107013), (24, 107142), (31, 107259), (32, 107286), (38, 107334), (44, 107379), (48, 107403), (49, 107421), (69, 107601), (71, 107622), (78, 107712), (82, 107760), (116, 107988), (128, 108084), (133, 108111), (157, 108282), (169, 108357), (184, 108480), (191, 108528), (198, 108561), (206, 108615), (219, 108714),

Gene: NiceHouse_134 Start: 86082, Stop: 88034, Start Num: 4

Candidate Starts for NiceHouse_134:

(Start: 4 @86082 has 78 MA's), (10, 86148), (13, 86175), (19, 86244), (24, 86304), (27, 86343), (31, 86421), (34, 86472), (39, 86499), (47, 86562), (55, 86634), (57, 86655), (69, 86769), (72, 86802), (77, 86838), (80, 86877), (83, 86913), (88, 86949), (89, 86958), (90, 86982), (94, 87003), (101, 87036), (106, 87063), (108, 87075), (125, 87174), (130, 87234), (156, 87426), (160, 87438), (165, 87480), (180, 87573), (205, 87744), (211, 87798), (214, 87813),

Gene: NootNoot_215 Start: 107437, Stop: 109347, Start Num: 4

Candidate Starts for NootNoot_215:

(Start: 4 @107437 has 78 MA's), (8, 107497), (11, 107518), (13, 107530), (24, 107659), (31, 107776), (32, 107803), (38, 107851), (44, 107896), (48, 107920), (49, 107938), (69, 108118), (78, 108229), (82, 108277), (116, 108505), (128, 108601), (157, 108799), (169, 108874), (184, 108997), (191, 109045), (198, 109078), (206, 109132), (219, 109231),

Gene: Nova53_123 Start: 80323, Stop: 82371, Start Num: 4

Candidate Starts for Nova53_123:

(Start: 4 @80323 has 78 MA's), (13, 80413), (14, 80419), (18, 80455), (22, 80512), (23, 80518), (25, 80560), (44, 80779), (56, 80875), (60, 80935), (69, 81016), (76, 81091), (77, 81097), (79, 81133), (93, 81259), (124, 81442), (135, 81553), (142, 81592), (145, 81622), (153, 81709), (171, 81838), (188, 81976), (199, 82036), (207, 82114), (215, 82168), (222, 82258), (233, 82321),

Gene: PacManQ_214 Start: 107571, Stop: 109481, Start Num: 4

Candidate Starts for PacManQ_214:

(Start: 4 @107571 has 78 MA's), (8, 107631), (10, 107637), (11, 107652), (13, 107664), (24, 107793), (28, 107838), (31, 107910), (38, 107985), (43, 108027), (44, 108030), (49, 108072), (69, 108252), (116, 108639), (123, 108684), (128, 108738), (147, 108834), (153, 108909), (157, 108936), (184, 109134), (191, 109182), (198, 109215), (201, 109251), (206, 109269), (219, 109368),

Gene: Paradiddles_210 Start: 109812, Stop: 111722, Start Num: 4

Candidate Starts for Paradiddles_210:

(Start: 4 @109812 has 78 MA's), (8, 109872), (11, 109893), (13, 109905), (24, 110034), (31, 110151), (32, 110178), (38, 110226), (44, 110271), (48, 110295), (49, 110313), (69, 110493), (78, 110604), (82, 110652), (116, 110880), (128, 110976), (157, 111174), (169, 111249), (184, 111372), (191, 111420), (198, 111453), (206, 111507), (219, 111606),

Gene: Patelgo_168 Start: 90916, Stop: 92841, Start Num: 4

Candidate Starts for Patelgo_168:

(Start: 4 @90916 has 78 MA's), (6, 90934), (8, 90976), (13, 91009), (15, 91018), (24, 91138), (27, 91177), (31, 91255), (34, 91306), (43, 91372), (44, 91375), (50, 91426), (64, 91561), (65, 91564), (69, 91597), (114, 91966), (119, 92005), (128, 92086), (137, 92131), (151, 92254), (155, 92281), (163, 92338), (175, 92404), (184, 92491), (201, 92608), (212, 92674), (226, 92782),

Gene: Peebs_215 Start: 108655, Stop: 110565, Start Num: 4

Candidate Starts for Peebs_215:

(Start: 4 @108655 has 78 MA's), (8, 108715), (10, 108721), (11, 108736), (13, 108748), (24, 108877), (28, 108922), (31, 108994), (38, 109069), (43, 109111), (44, 109114), (49, 109156), (69, 109336), (116, 109723), (123, 109768), (128, 109822), (147, 109918), (153, 109993), (157, 110020), (184, 110218), (191, 110266), (198, 110299), (201, 110335), (206, 110353), (219, 110452),

Gene: Pepperwood_218 Start: 108887, Stop: 110797, Start Num: 4

Candidate Starts for Pepperwood_218:

(Start: 4 @108887 has 78 MA's), (8, 108947), (10, 108953), (11, 108968), (13, 108980), (24, 109109), (28, 109154), (31, 109226), (38, 109301), (43, 109343), (44, 109346), (49, 109388), (69, 109568),

(116, 109955), (123, 110000), (128, 110054), (147, 110150), (153, 110225), (157, 110252), (184, 110450), (191, 110498), (198, 110531), (201, 110567), (206, 110585), (219, 110684),

Gene: Peregrin_116 Start: 72417, Stop: 74381, Start Num: 4

Candidate Starts for Peregrin_116:

(Start: 4 @72417 has 78 MA's), (6, 72435), (8, 72477), (13, 72510), (15, 72519), (23, 72615), (27, 72678), (40, 72837), (44, 72876), (65, 73080), (69, 73116), (70, 73125), (77, 73197), (80, 73236), (86, 73299), (144, 73689), (184, 73974), (188, 73998), (193, 74028), (233, 74325),

Gene: Persimmon_221 Start: 107938, Stop: 109848, Start Num: 4

Candidate Starts for Persimmon_221:

(Start: 4 @107938 has 78 MA's), (8, 107998), (11, 108019), (13, 108031), (24, 108160), (31, 108277), (32, 108304), (38, 108352), (44, 108397), (48, 108421), (49, 108439), (69, 108619), (78, 108730), (82, 108778), (116, 109006), (128, 109102), (157, 109300), (169, 109375), (184, 109498), (191, 109546), (198, 109579), (206, 109633), (219, 109732),

Gene: Phredrick_171 Start: 87858, Stop: 89783, Start Num: 4

Candidate Starts for Phredrick_171:

(Start: 4 @87858 has 78 MA's), (6, 87876), (8, 87918), (13, 87951), (15, 87960), (25, 88098), (27, 88119), (31, 88197), (42, 88287), (44, 88317), (49, 88359), (54, 88392), (62, 88488), (65, 88506), (69, 88539), (102, 88848), (114, 88908), (128, 89028), (163, 89280), (175, 89346), (184, 89433), (195, 89499), (212, 89616), (226, 89724), (228, 89730),

Gene: PinkiePie_218 Start: 108592, Stop: 110502, Start Num: 4

Candidate Starts for PinkiePie_218:

(Start: 4 @108592 has 78 MA's), (8, 108652), (11, 108673), (13, 108685), (24, 108814), (31, 108931), (32, 108958), (38, 109006), (44, 109051), (48, 109075), (49, 109093), (69, 109273), (82, 109432), (116, 109660), (128, 109756), (157, 109954), (169, 110029), (184, 110152), (191, 110200), (198, 110233), (206, 110287), (219, 110386),

Gene: Riptide_219 Start: 107619, Stop: 109532, Start Num: 4

Candidate Starts for Riptide_219:

(Start: 4 @107619 has 78 MA's), (8, 107679), (11, 107700), (13, 107712), (20, 107805), (24, 107841), (25, 107859), (26, 107874), (31, 107958), (43, 108075), (44, 108078), (51, 108132), (52, 108138), (69, 108300), (78, 108405), (84, 108483), (89, 108516), (95, 108576), (116, 108681), (128, 108780), (146, 108873), (184, 109173), (191, 109221), (198, 109254),

Gene: Samisti12_222 Start: 110481, Stop: 112391, Start Num: 4

Candidate Starts for Samisti12_222:

(Start: 4 @110481 has 78 MA's), (8, 110541), (10, 110547), (11, 110562), (13, 110574), (24, 110703), (28, 110748), (31, 110820), (38, 110895), (43, 110937), (44, 110940), (49, 110982), (69, 111162), (83, 111339), (116, 111549), (123, 111594), (128, 111648), (147, 111744), (153, 111819), (157, 111846), (184, 112044), (191, 112092), (198, 112125), (201, 112161), (206, 112179), (219, 112278),

Gene: Scheme_221 Start: 110126, Stop: 112036, Start Num: 4

Candidate Starts for Scheme_221:

(Start: 4 @110126 has 78 MA's), (8, 110186), (10, 110192), (11, 110207), (13, 110219), (24, 110348), (28, 110393), (31, 110465), (38, 110540), (43, 110582), (44, 110585), (49, 110627), (69, 110807), (116, 111194), (123, 111239), (128, 111293), (147, 111389), (153, 111464), (157, 111491), (184, 111689), (191, 111737), (198, 111770), (201, 111806), (206, 111824), (219, 111923),

Gene: SeresaTree_161 Start: 87784, Stop: 89706, Start Num: 4

Candidate Starts for SeresaTree_161:

(Start: 4 @87784 has 78 MA's), (8, 87844), (13, 87877), (27, 88045), (29, 88069), (31, 88123), (36, 88183), (42, 88213), (44, 88243), (63, 88426), (69, 88465), (78, 88564), (79, 88591), (110, 88816), (123, 88894), (179, 89305), (187, 89368), (191, 89404), (192, 89407), (193, 89410), (203, 89482), (213, 89548), (232, 89680),

Gene: Sham_159 Start: 89384, Stop: 91306, Start Num: 4

Candidate Starts for Sham_159:

(Start: 4 @89384 has 78 MA's), (7, 89438), (8, 89444), (13, 89477), (27, 89645), (29, 89669), (31, 89723), (44, 89843), (46, 89861), (63, 90026), (66, 90044), (69, 90065), (74, 90137), (79, 90191), (110, 90419), (123, 90497), (164, 90815), (179, 90908), (187, 90971), (190, 91001), (191, 91007), (192, 91010), (193, 91013), (203, 91085), (213, 91151),

Gene: Shuckle_216 Start: 109014, Stop: 110924, Start Num: 4

Candidate Starts for Shuckle_216:

(Start: 4 @109014 has 78 MA's), (8, 109074), (10, 109080), (11, 109095), (13, 109107), (24, 109236), (31, 109353), (38, 109428), (43, 109470), (44, 109473), (69, 109695), (116, 110082), (123, 110127), (128, 110181), (147, 110277), (153, 110352), (157, 110379), (184, 110577), (191, 110625), (198, 110658), (201, 110694), (206, 110712), (219, 110811),

Gene: SparkleGoddess_165 Start: 89235, Stop: 91160, Start Num: 4

Candidate Starts for SparkleGoddess_165:

(Start: 4 @89235 has 78 MA's), (8, 89295), (13, 89328), (15, 89337), (25, 89475), (27, 89496), (31, 89574), (41, 89658), (43, 89691), (44, 89694), (65, 89883), (69, 89916), (75, 89991), (76, 90000), (78, 90015), (81, 90057), (114, 90285), (128, 90405), (131, 90423), (151, 90573), (152, 90582), (163, 90657), (169, 90687), (175, 90723), (181, 90783), (183, 90798), (184, 90810), (191, 90858), (195, 90876), (202, 90930), (212, 90993), (228, 91107),

Gene: Squillium_221 Start: 108594, Stop: 110504, Start Num: 4

Candidate Starts for Squillium_221:

(Start: 4 @108594 has 78 MA's), (8, 108654), (11, 108675), (13, 108687), (24, 108816), (31, 108933), (32, 108960), (38, 109008), (44, 109053), (48, 109077), (49, 109095), (69, 109275), (82, 109434), (116, 109662), (128, 109758), (157, 109956), (169, 110031), (184, 110154), (191, 110202), (198, 110235), (206, 110289), (219, 110388),

Gene: Stigma_164 Start: 89669, Stop: 91594, Start Num: 4

Candidate Starts for Stigma_164:

(Start: 4 @89669 has 78 MA's), (8, 89729), (13, 89762), (15, 89771), (25, 89909), (27, 89930), (31, 90008), (41, 90092), (43, 90125), (44, 90128), (65, 90317), (69, 90350), (75, 90425), (76, 90434), (78, 90449), (81, 90491), (85, 90539), (114, 90719), (128, 90839), (131, 90857), (151, 91007), (152, 91016), (163, 91091), (169, 91121), (175, 91157), (181, 91217), (183, 91232), (184, 91244), (191, 91292), (195, 91310), (202, 91364), (212, 91427), (228, 91541),

Gene: Sushi23_218 Start: 109521, Stop: 111431, Start Num: 4

Candidate Starts for Sushi23_218:

(Start: 4 @109521 has 78 MA's), (8, 109581), (10, 109587), (11, 109602), (13, 109614), (24, 109743), (28, 109788), (31, 109860), (38, 109935), (43, 109977), (44, 109980), (49, 110022), (69, 110202), (116, 110589), (123, 110634), (128, 110688), (147, 110784), (153, 110859), (157, 110886), (184, 111084), (191, 111132), (198, 111165), (201, 111201), (206, 111219), (219, 111318),

Gene: Targaryen_217 Start: 109691, Stop: 111604, Start Num: 4

Candidate Starts for Targaryen_217:

(Start: 4 @109691 has 78 MA's), (8, 109751), (11, 109772), (13, 109784), (20, 109877), (24, 109913), (31, 110030), (32, 110057), (38, 110105), (43, 110147), (44, 110150), (49, 110192), (69, 110372), (71,

110393), (78, 110483), (82, 110531), (111, 110726), (116, 110759), (128, 110858), (133, 110885), (153, 111029), (157, 111056), (184, 111254), (191, 111302), (198, 111335), (206, 111389), (219, 111488),

Gene: Deutsch_217 Start: 109310, Stop: 111220, Start Num: 4

Candidate Starts for Deutsch_217:

(Start: 4 @109310 has 78 MA's), (8, 109370), (10, 109376), (11, 109391), (13, 109403), (24, 109532), (29, 109595), (31, 109649), (38, 109724), (43, 109766), (44, 109769), (49, 109811), (69, 109991), (116, 110378), (123, 110423), (128, 110477), (147, 110573), (153, 110648), (157, 110675), (169, 110750), (184, 110873), (191, 110921), (198, 110954), (201, 110990), (206, 111008), (219, 111107),

Gene: Tomas_230 Start: 110406, Stop: 112316, Start Num: 4

Candidate Starts for Tomas_230:

(1, 110340), (Start: 4 @110406 has 78 MA's), (8, 110466), (11, 110487), (13, 110499), (31, 110745), (41, 110829), (44, 110865), (69, 111087), (76, 111177), (85, 111282), (100, 111378), (118, 111480), (137, 111618), (141, 111642), (153, 111744), (162, 111798), (167, 111831), (174, 111873), (175, 111876), (184, 111963), (185, 111966), (191, 112011), (202, 112083), (213, 112155), (216, 112173),

Gene: Tribute_214 Start: 109475, Stop: 111385, Start Num: 4

Candidate Starts for Tribute_214:

(Start: 4 @109475 has 78 MA's), (8, 109535), (10, 109541), (11, 109556), (13, 109568), (24, 109697), (28, 109742), (31, 109814), (38, 109889), (43, 109931), (44, 109934), (49, 109976), (69, 110156), (116, 110543), (123, 110588), (128, 110642), (147, 110738), (153, 110813), (157, 110840), (184, 111038), (191, 111086), (198, 111119), (201, 111155), (206, 111173), (219, 111272),

Gene: Trina_156 Start: 93747, Stop: 95681, Start Num: 4

Candidate Starts for Trina_156:

(Start: 4 @93747 has 78 MA's), (8, 93810), (10, 93816), (13, 93843), (16, 93861), (24, 93972), (27, 94011), (31, 94089), (45, 94218), (58, 94335), (65, 94410), (69, 94446), (74, 94503), (77, 94521), (83, 94596), (105, 94743), (120, 94827), (124, 94851), (127, 94890), (143, 94980), (178, 95205), (182, 95259), (188, 95304), (205, 95406), (218, 95520), (222, 95571), (230, 95604), (233, 95631), (234, 95649),

Gene: TunaTartare_165 Start: 90618, Stop: 92543, Start Num: 4

Candidate Starts for TunaTartare_165:

(Start: 4 @90618 has 78 MA's), (7, 90672), (8, 90678), (13, 90711), (27, 90879), (31, 90957), (44, 91077), (64, 91263), (69, 91299), (85, 91488), (98, 91584), (110, 91653), (121, 91719), (123, 91731), (134, 91815), (136, 91830), (187, 92208), (190, 92238), (191, 92244), (192, 92247), (193, 92250), (203, 92322), (210, 92376), (219, 92433), (225, 92481),

Gene: Wakanda_137 Start: 77634, Stop: 79568, Start Num: 4

Candidate Starts for Wakanda_137:

(Start: 4 @77634 has 78 MA's), (5, 77649), (8, 77694), (9, 77697), (13, 77727), (27, 77895), (30, 77967), (31, 77973), (40, 78054), (41, 78057), (44, 78093), (59, 78225), (63, 78276), (69, 78315), (75, 78396), (85, 78510), (109, 78681), (111, 78684), (128, 78816), (148, 78951), (152, 78996), (170, 79101), (173, 79113), (227, 79515), (234, 79557),

Gene: Warpy_221 Start: 108600, Stop: 110513, Start Num: 4

Candidate Starts for Warpy_221:

(Start: 4 @108600 has 78 MA's), (8, 108660), (11, 108681), (13, 108693), (20, 108786), (24, 108822), (31, 108939), (32, 108966), (38, 109014), (43, 109056), (44, 109059), (49, 109101), (69, 109281), (71, 109302), (78, 109392), (82, 109440), (111, 109635), (116, 109668), (128, 109767), (133, 109794), (153, 109938), (157, 109965), (169, 110040), (184, 110163), (191, 110211), (198, 110244), (206,

110298), (219, 110397),

Gene: Watermoore_217 Start: 109833, Stop: 111743, Start Num: 4

Candidate Starts for Watermoore_217:

(Start: 4 @109833 has 78 MA's), (8, 109893), (10, 109899), (11, 109914), (13, 109926), (24, 110055), (28, 110100), (31, 110172), (38, 110247), (43, 110289), (44, 110292), (49, 110334), (69, 110514), (116, 110901), (123, 110946), (128, 111000), (147, 111096), (153, 111171), (157, 111198), (184, 111396), (191, 111444), (198, 111477), (201, 111513), (206, 111531), (219, 111630),

Gene: Weasels2_119 Start: 73774, Stop: 75735, Start Num: 3

Candidate Starts for Weasels2_119:

(Start: 3 @73774 has 1 MA's), (8, 73834), (13, 73867), (16, 73885), (17, 73903), (34, 74164), (44, 74233), (69, 74473), (77, 74554), (80, 74593), (112, 74797), (124, 74875), (139, 74989), (149, 75076), (152, 75112), (154, 75118), (185, 75319), (200, 75400), (203, 75439), (212, 75505), (233, 75679),

Gene: Westy_168 Start: 89984, Stop: 91909, Start Num: 4

Candidate Starts for Westy_168:

(Start: 4 @89984 has 78 MA's), (8, 90044), (13, 90077), (15, 90086), (25, 90224), (27, 90245), (31, 90323), (41, 90407), (43, 90440), (44, 90443), (65, 90632), (69, 90665), (75, 90740), (76, 90749), (78, 90764), (81, 90806), (85, 90854), (114, 91034), (128, 91154), (131, 91172), (151, 91322), (152, 91331), (163, 91406), (169, 91436), (175, 91472), (181, 91532), (183, 91547), (184, 91559), (191, 91607), (195, 91625), (202, 91679), (212, 91742), (228, 91856),

Gene: WhereRU_217 Start: 108117, Stop: 110027, Start Num: 4

Candidate Starts for WhereRU_217:

(Start: 4 @108117 has 78 MA's), (8, 108177), (11, 108198), (13, 108210), (24, 108339), (31, 108456), (32, 108483), (38, 108531), (44, 108576), (48, 108600), (49, 108618), (69, 108798), (78, 108909), (82, 108957), (116, 109185), (128, 109281), (157, 109479), (169, 109554), (184, 109677), (191, 109725), (198, 109758), (206, 109812), (219, 109911),