Potential panel genes of large\_intestine cancer are (n=300):

Asia:  
0, KRAS (66.6732%)  
1, BRAF (17.3938%)  
2, APC (9.0378%)  
3, TP53 (7.2653%)  
4, PIK3CA (5.1617%)  
5, SMAD4 (2.0841%)  
6, TGFBR2 (1.6556%)  
7, TCF7L2 (1.5972%)  
8, NRAS (1.5388%)  
9, AMER1 (1.5193%)  
10, RNF43 (1.4608%)  
11, MSH6 (1.3635%)  
12, FBXW7 (1.305%)  
13, CTNNB1 (1.2271%)  
14, ATM (0.9739%)  
15, FAT4 (0.9349%)  
16, ACVR2A (0.7012%)  
17, ERBB3 (0.6817%)  
18, ERBB2 (0.6817%)  
19, MLH1 (0.6623%)  
20, MSH2 (0.6233%)  
21, LRP1B (0.5259%)  
22, KMT2C (0.4869%)  
23, PTEN (0.448%)  
24, RNF213 (0.4285%)  
25, PTPRT (0.4285%)  
26, AXIN2 (0.409%)  
27, ARID1A (0.409%)  
28, CAMTA1 (0.3896%)  
29, SMAD2 (0.3896%)  
30, PREX2 (0.3896%)  
31, TRRAP (0.3896%)  
32, GNAS (0.3896%)  
33, ERBB4 (0.3701%)  
34, NF1 (0.3701%)  
35, ZFHX3 (0.3506%)  
36, EGFR (0.3506%)  
37, KMT2D (0.3311%)  
38, CASP8 (0.3116%)  
39, SPEN (0.3116%)  
40, BRCA2 (0.3116%)  
41, POLE (0.3116%)  
42, MED12 (0.3116%)  
43, CHD4 (0.3116%)  
44, NCOR1 (0.2922%)  
45, NTRK3 (0.2922%)  
46, KMT2A (0.2922%)  
47, ARID2 (0.2922%)  
48, NCOR2 (0.2727%)  
49, UBR5 (0.2727%)  
50, GRIN2A (0.2727%)  
51, SETD2 (0.2727%)  
52, NSD3 (0.2727%)  
53, PMS2 (0.2727%)  
54, CACNA1D (0.2727%)  
55, PDGFRA (0.2727%)  
56, SETBP1 (0.2727%)  
57, FLT4 (0.2727%)  
58, NIN (0.2727%)  
59, PIK3R1 (0.2532%)  
60, ATR (0.2532%)  
61, EP300 (0.2532%)  
62, ASXL1 (0.2532%)  
63, FAT1 (0.2532%)  
64, KDR (0.2532%)  
65, TPR (0.2532%)  
66, TP63 (0.2337%)  
67, PBRM1 (0.2337%)  
68, ZNF521 (0.2337%)  
69, RUNX1T1 (0.2337%)  
70, PTPRB (0.2337%)  
71, ARID1B (0.2337%)  
72, PRDM16 (0.2337%)  
73, ROS1 (0.2337%)  
74, JAK2 (0.2337%)  
75, MYH11 (0.2337%)  
76, RANBP2 (0.2337%)  
77, PTPN13 (0.2143%)  
78, MRTFA (0.2143%)  
79, QKI (0.2143%)  
80, TET1 (0.2143%)  
81, NOTCH2 (0.2143%)  
82, ALK (0.2143%)  
83, ACVR1B (0.2143%)  
84, KAT6B (0.2143%)  
85, KAT6A (0.2143%)  
86, HIP1 (0.2143%)  
87, NUMA1 (0.2143%)  
88, AFDN (0.2143%)  
89, CREBBP (0.2143%)  
90, KIT (0.2143%)  
91, POLQ (0.2143%)  
92, CDH11 (0.2143%)  
93, MTOR (0.1948%)  
94, RB1 (0.1948%)  
95, ATRX (0.1948%)  
96, PCM1 (0.1948%)  
97, KDM5A (0.1948%)  
98, JAK1 (0.1948%)  
99, FOXP1 (0.1948%)  
100, MYH9 (0.1948%)  
101, ABL1 (0.1948%)  
102, EBF1 (0.1948%)  
103, BCL9 (0.1948%)  
104, MYO5A (0.1753%)  
105, KNL1 (0.1753%)  
106, CIC (0.1753%)  
107, NOTCH1 (0.1753%)  
108, BRCA1 (0.1753%)  
109, TERT (0.1753%)  
110, PML (0.1753%)  
111, KEAP1 (0.1753%)  
112, SMAD3 (0.1753%)  
113, LIFR (0.1753%)  
114, BCORL1 (0.1753%)  
115, PIK3CB (0.1753%)  
116, MET (0.1753%)  
117, SND1 (0.1753%)  
118, COL1A1 (0.1753%)  
119, TRIP11 (0.1753%)  
120, NFATC2 (0.1753%)  
121, EZH2 (0.1753%)  
122, SMARCA4 (0.1558%)  
123, BCL11A (0.1558%)  
124, STAT6 (0.1558%)  
125, PAX7 (0.1558%)  
126, CBFA2T3 (0.1558%)  
127, CBLB (0.1558%)  
128, MAP3K1 (0.1558%)  
129, ARHGAP35 (0.1558%)  
130, NCOA1 (0.1558%)  
131, BLM (0.1558%)  
132, RET (0.1558%)  
133, STAG2 (0.1558%)  
134, TOP1 (0.1558%)  
135, ZMYM2 (0.1558%)  
136, FGFR3 (0.1558%)  
137, FANCD2 (0.1558%)  
138, TBX3 (0.1558%)  
139, ERC1 (0.1558%)  
140, MAML2 (0.1558%)  
141, PLCG1 (0.1558%)  
142, SALL4 (0.1558%)  
143, B2M (0.1558%)  
144, DICER1 (0.1558%)  
145, AKT1 (0.1558%)  
146, CLTCL1 (0.1558%)  
147, FGFR1 (0.1558%)  
148, DDR2 (0.1363%)  
149, AFF1 (0.1363%)  
150, NSD1 (0.1363%)  
151, COL2A1 (0.1363%)  
152, FLT3 (0.1363%)  
153, CREB1 (0.1363%)  
154, CLIP1 (0.1363%)  
155, MAP3K13 (0.1363%)  
156, BRIP1 (0.1363%)  
157, GATA3 (0.1363%)  
158, PAX3 (0.1363%)  
159, ABL2 (0.1363%)  
160, CLTC (0.1363%)  
161, MECOM (0.1363%)  
162, ETV5 (0.1363%)  
163, PER1 (0.1363%)  
164, SF3B1 (0.1363%)  
165, ERG (0.1363%)  
166, DCTN1 (0.1363%)  
167, TRIM33 (0.1363%)  
168, FANCA (0.1363%)  
169, BCOR (0.1363%)  
170, TSC1 (0.1363%)  
171, FGFR2 (0.1363%)  
172, PLAG1 (0.1363%)  
173, BRD4 (0.1363%)  
174, CNTRL (0.1363%)  
175, ARNT (0.1363%)  
176, BCL9L (0.1363%)  
177, PTPRC (0.1363%)  
178, NRG1 (0.1363%)  
179, CDK12 (0.1363%)  
180, PALB2 (0.1363%)  
181, DROSHA (0.1363%)  
182, EPS15 (0.1363%)  
183, RARA (0.1363%)  
184, DNMT3A (0.1363%)  
185, RBM10 (0.1363%)  
186, CARD11 (0.1169%)  
187, CTCF (0.1169%)  
188, PAX8 (0.1169%)  
189, FBXO11 (0.1169%)  
190, BAX (0.1169%)  
191, CYLD (0.1169%)  
192, TCF12 (0.1169%)  
193, TET2 (0.1169%)  
194, XPO1 (0.1169%)  
195, LZTR1 (0.1169%)  
196, BMPR1A (0.1169%)  
197, FUBP1 (0.1169%)  
198, PTPRK (0.1169%)  
199, CARS (0.1169%)  
200, USP8 (0.1169%)  
201, TSC2 (0.1169%)  
202, KDM6A (0.1169%)  
203, ITK (0.1169%)  
204, CUX1 (0.1169%)  
205, NUP98 (0.1169%)  
206, ATP2B3 (0.1169%)  
207, XPC (0.1169%)  
208, LRIG3 (0.1169%)  
209, STIL (0.1169%)  
210, AFF4 (0.1169%)  
211, AXIN1 (0.1169%)  
212, CDC73 (0.1169%)  
213, PDE4DIP (0.1169%)  
214, KDM5C (0.1169%)  
215, EXT1 (0.1169%)  
216, BCL11B (0.1169%)  
217, SUZ12 (0.1169%)  
218, LATS2 (0.1169%)  
219, EPAS1 (0.1169%)  
220, NSD2 (0.1169%)  
221, TNFAIP3 (0.1169%)  
222, USP6 (0.1169%)  
223, ERCC5 (0.1169%)  
224, CBL (0.1169%)  
225, JAK3 (0.1169%)  
226, RBM15 (0.1169%)  
227, SMARCB1 (0.1169%)  
228, ETV1 (0.1169%)  
229, DDX5 (0.0974%)  
230, LATS1 (0.0974%)  
231, NFE2L2 (0.0974%)  
232, TENT5C (0.0974%)  
233, IKZF1 (0.0974%)  
234, EML4 (0.0974%)  
235, SLC34A2 (0.0974%)  
236, NT5C2 (0.0974%)  
237, ZNF331 (0.0974%)  
238, FGFR4 (0.0974%)  
239, NUP214 (0.0974%)  
240, ABI1 (0.0974%)  
241, IKZF3 (0.0974%)  
242, MYB (0.0974%)  
243, AR (0.0974%)  
244, SFRP4 (0.0974%)  
245, RUNX1 (0.0974%)  
246, TMPRSS2 (0.0974%)  
247, LPP (0.0974%)  
248, CHEK2 (0.0974%)  
249, NF2 (0.0974%)  
250, ESR1 (0.0974%)  
251, SFPQ (0.0974%)  
252, ERCC2 (0.0974%)  
253, DDX10 (0.0974%)  
254, MLLT3 (0.0974%)  
255, GNAQ (0.0974%)  
256, FLI1 (0.0974%)  
257, WRN (0.0974%)  
258, CRTC1 (0.0974%)  
259, PRF1 (0.0974%)  
260, PDGFRB (0.0974%)  
261, BARD1 (0.0974%)  
262, AFF3 (0.0974%)  
263, IL7R (0.0974%)  
264, IKBKB (0.0974%)  
265, WDCP (0.0974%)  
266, BUB1B (0.0974%)  
267, NCOA2 (0.0974%)  
268, AKT2 (0.0974%)  
269, HRAS (0.0974%)  
270, EXT2 (0.0974%)  
271, EZR (0.0974%)  
272, PPM1D (0.0974%)  
273, GPC3 (0.0974%)  
274, APOBEC3B (0.0974%)  
275, GOLGA5 (0.0779%)  
276, CSF3R (0.0779%)  
277, MN1 (0.0779%)  
278, MAP2K1 (0.0779%)  
279, RSPO2 (0.0779%)  
280, MALT1 (0.0779%)  
281, ACKR3 (0.0779%)  
282, PTCH1 (0.0779%)  
283, POT1 (0.0779%)  
284, NR4A3 (0.0779%)  
285, MSI2 (0.0779%)  
286, SYK (0.0779%)  
287, KCNJ5 (0.0779%)  
288, FCRL4 (0.0779%)  
289, FUS (0.0779%)  
290, SPOP (0.0779%)  
291, MSN (0.0779%)  
292, PDGFB (0.0779%)  
293, ARHGEF12 (0.0779%)  
294, NBN (0.0779%)  
295, BIRC3 (0.0779%)  
296, EWSR1 (0.0779%)  
297, RSPO3 (0.0779%)  
298, PAX5 (0.0779%)  
299, FH (0.0779%)  
  
  
The world:  
0, KRAS (48.9653%)  
1, BRAF (22.4708%)  
2, TP53 (16.8706%)  
3, APC (12.7689%)  
4, PIK3CA (6.2334%)  
5, FBXW7 (2.1025%)  
6, SMAD4 (1.9486%)  
7, LRP1B (1.3289%)  
8, RNF43 (1.2666%)  
9, CTNNB1 (1.2646%)  
10, FAT4 (1.2549%)  
11, TCF7L2 (1.1964%)  
12, NRAS (1.1691%)  
13, KMT2C (1.1574%)  
14, ATM (1.0873%)  
15, KMT2D (1.06%)  
16, ARID1A (0.9665%)  
17, GNAS (0.9158%)  
18, PTEN (0.9041%)  
19, PTPRT (0.8924%)  
20, AMER1 (0.8846%)  
21, POLE (0.8749%)  
22, NF1 (0.8671%)  
23, ZFHX3 (0.8652%)  
24, ACVR2A (0.8457%)  
25, FAT1 (0.795%)  
26, ERBB4 (0.756%)  
27, TRRAP (0.721%)  
28, TGFBR2 (0.7093%)  
29, MTOR (0.7015%)  
30, MSH6 (0.7015%)  
31, RNF213 (0.6976%)  
32, EGFR (0.6761%)  
33, NOTCH1 (0.6742%)  
34, CREBBP (0.6645%)  
35, EP300 (0.6645%)  
36, CARD11 (0.6625%)  
37, ERBB2 (0.6606%)  
38, NCOR2 (0.6391%)  
39, PREX2 (0.6333%)  
40, FLT4 (0.6313%)  
41, GRIN2A (0.6274%)  
42, ARID1B (0.6255%)  
43, ATRX (0.6196%)  
44, KMT2A (0.6196%)  
45, ALK (0.606%)  
46, SMARCA4 (0.6002%)  
47, BRCA2 (0.5807%)  
48, SPEN (0.5573%)  
49, MYH11 (0.5573%)  
50, ROS1 (0.5573%)  
51, ERBB3 (0.5475%)  
52, AXIN2 (0.5436%)  
53, SMAD2 (0.5339%)  
54, PDE4DIP (0.532%)  
55, TSC2 (0.532%)  
56, ARID2 (0.532%)  
57, UBR5 (0.5203%)  
58, KDR (0.5144%)  
59, MSH2 (0.5125%)  
60, PTCH1 (0.5086%)  
61, NCOR1 (0.5066%)  
62, ASXL1 (0.4988%)  
63, NOTCH2 (0.4969%)  
64, MLH1 (0.4949%)  
65, CHD4 (0.4871%)  
66, AR (0.4852%)  
67, BCL9L (0.4813%)  
68, SETD2 (0.4793%)  
69, TPR (0.4793%)  
70, CIC (0.4774%)  
71, PIK3R1 (0.4774%)  
72, ATR (0.4716%)  
73, MED12 (0.4677%)  
74, HLA-A (0.4657%)  
75, RET (0.4657%)  
76, PDGFRA (0.4482%)  
77, SMAD3 (0.4482%)  
78, RUNX1T1 (0.4345%)  
79, CAMTA1 (0.4248%)  
80, BCOR (0.4248%)  
81, CDH11 (0.4228%)  
82, NRG1 (0.4228%)  
83, TET1 (0.4228%)  
84, CUX1 (0.4228%)  
85, NTRK3 (0.4209%)  
86, POLD1 (0.4209%)  
87, DICER1 (0.4189%)  
88, BCORL1 (0.417%)  
89, PBRM1 (0.417%)  
90, B2M (0.417%)  
91, AFF3 (0.417%)  
92, NSD1 (0.415%)  
93, KIT (0.415%)  
94, PTPRK (0.4131%)  
95, MYH9 (0.4111%)  
96, KDM5A (0.4111%)  
97, ESR1 (0.4092%)  
98, CACNA1D (0.4072%)  
99, AFDN (0.4072%)  
100, TET2 (0.4014%)  
101, AFF1 (0.3956%)  
102, POLQ (0.3917%)  
103, PRDM16 (0.3897%)  
104, PTPN13 (0.3819%)  
105, FANCA (0.3819%)  
106, LATS2 (0.378%)  
107, NUMA1 (0.378%)  
108, RECQL4 (0.3741%)  
109, IRS4 (0.3683%)  
110, KAT6A (0.3663%)  
111, BRD4 (0.3644%)  
112, MYO5A (0.3644%)  
113, ATP2B3 (0.3624%)  
114, ZNF521 (0.3585%)  
115, NIN (0.3566%)  
116, SND1 (0.3546%)  
117, RB1 (0.3527%)  
118, MET (0.3507%)  
119, ABL1 (0.3507%)  
120, CDK12 (0.3468%)  
121, SETBP1 (0.3468%)  
122, QKI (0.3449%)  
123, BCL9 (0.3449%)  
124, DNMT3A (0.3449%)  
125, FGFR3 (0.3449%)  
126, LIFR (0.3449%)  
127, FGFR2 (0.3429%)  
128, COL2A1 (0.339%)  
129, CASP8 (0.339%)  
130, KAT6B (0.3371%)  
131, KDM6A (0.3371%)  
132, TERT (0.3352%)  
133, COL1A1 (0.3293%)  
134, WRN (0.3293%)  
135, ERCC2 (0.3274%)  
136, MN1 (0.3274%)  
137, PTPRC (0.3254%)  
138, MAP3K1 (0.3235%)  
139, CIITA (0.3215%)  
140, TSC1 (0.3196%)  
141, PML (0.3176%)  
142, RANBP2 (0.3176%)  
143, FANCD2 (0.3176%)  
144, CDH1 (0.3157%)  
145, CNTRL (0.3137%)  
146, JAK3 (0.3137%)  
147, TP63 (0.3098%)  
148, JAK1 (0.3079%)  
149, KNL1 (0.3079%)  
150, BRCA1 (0.3079%)  
151, PTPRB (0.3059%)  
152, NSD2 (0.304%)  
153, NUP214 (0.304%)  
154, NFATC2 (0.302%)  
155, IKZF1 (0.302%)  
156, PDGFRB (0.3001%)  
157, FGFR4 (0.2962%)  
158, RBM10 (0.2962%)  
159, MLLT10 (0.2942%)  
160, SMO (0.2923%)  
161, FGFR1 (0.2923%)  
162, STAG2 (0.2923%)  
163, AKT1 (0.2903%)  
164, CTCF (0.2903%)  
165, ARHGEF12 (0.2864%)  
166, TBX3 (0.2864%)  
167, FLT3 (0.2845%)  
168, SF3B1 (0.2845%)  
169, GPHN (0.2845%)  
170, NTRK1 (0.2825%)  
171, CLTC (0.2825%)  
172, PALB2 (0.2806%)  
173, KDM5C (0.2806%)  
174, HNF1A (0.2806%)  
175, EBF1 (0.2806%)  
176, SALL4 (0.2786%)  
177, ERCC5 (0.2786%)  
178, TCF3 (0.2786%)  
179, CDC73 (0.2767%)  
180, FOXP1 (0.2728%)  
181, DROSHA (0.2728%)  
182, GATA3 (0.2728%)  
183, PCM1 (0.2708%)  
184, TSHR (0.2708%)  
185, JAK2 (0.2708%)  
186, AXIN1 (0.2708%)  
187, MAP2K4 (0.2689%)  
188, ETV1 (0.267%)  
189, MLLT3 (0.267%)  
190, LATS1 (0.267%)  
191, MECOM (0.267%)  
192, TRIP11 (0.2631%)  
193, CLTCL1 (0.2631%)  
194, PAX5 (0.2631%)  
195, MAML2 (0.2611%)  
196, BCR (0.2611%)  
197, BCL11B (0.2592%)  
198, CLIP1 (0.2592%)  
199, PMS2 (0.2553%)  
200, ARHGAP35 (0.2553%)  
201, TCF12 (0.2553%)  
202, BLM (0.2553%)  
203, EZH2 (0.2533%)  
204, PAX3 (0.2494%)  
205, DNM2 (0.2494%)  
206, PRDM1 (0.2494%)  
207, LPP (0.2475%)  
208, BCL11A (0.2475%)  
209, NUP98 (0.2455%)  
210, ZMYM2 (0.2436%)  
211, CHEK2 (0.2436%)  
212, MITF (0.2416%)  
213, ZBTB16 (0.2416%)  
214, NCOA2 (0.2416%)  
215, USP6 (0.2397%)  
216, MAP3K13 (0.2397%)  
217, RUNX1 (0.2377%)  
218, FUBP1 (0.2358%)  
219, BRIP1 (0.2358%)  
220, DCTN1 (0.2358%)  
221, NBN (0.2338%)  
222, FLCN (0.2338%)  
223, IDH1 (0.2338%)  
224, RAD51B (0.2338%)  
225, PPP2R1A (0.2319%)  
226, ETV6 (0.2299%)  
227, HIP1 (0.2299%)  
228, MSI2 (0.2299%)  
229, NSD3 (0.2299%)  
230, CRTC1 (0.228%)  
231, EML4 (0.228%)  
232, SDHA (0.226%)  
233, DDR2 (0.226%)  
234, BRD3 (0.2241%)  
235, PIK3CB (0.2241%)  
236, MAP2K1 (0.2241%)  
237, TRIM24 (0.2241%)  
238, PER1 (0.2241%)  
239, FANCC (0.2182%)  
240, ABL2 (0.2182%)  
241, NCOA1 (0.2182%)  
242, NR4A3 (0.2163%)  
243, SYK (0.2163%)  
244, GAS7 (0.2163%)  
245, IL6ST (0.2143%)  
246, TRIM33 (0.2143%)  
247, FHIT (0.2143%)  
248, ERG (0.2124%)  
249, PPM1D (0.2124%)  
250, PLCG1 (0.2104%)  
251, GNAQ (0.2085%)  
252, ACVR1B (0.2085%)  
253, LZTR1 (0.2085%)  
254, CARS (0.2065%)  
255, EXT1 (0.2046%)  
256, ERC1 (0.2027%)  
257, CBL (0.2027%)  
258, CBLB (0.2027%)  
259, ERCC3 (0.2027%)  
260, TNFAIP3 (0.2007%)  
261, RAF1 (0.2007%)  
262, BCL6 (0.1988%)  
263, PPFIBP1 (0.1968%)  
264, SFRP4 (0.1968%)  
265, SMARCB1 (0.1968%)  
266, PTPN11 (0.1968%)  
267, PBX1 (0.1949%)  
268, MYOD1 (0.1949%)  
269, CBFA2T3 (0.1949%)  
270, MRTFA (0.1929%)  
271, WT1 (0.1929%)  
272, XPO1 (0.1929%)  
273, ERCC4 (0.1929%)  
274, SLC34A2 (0.1929%)  
275, FIP1L1 (0.191%)  
276, BMPR1A (0.189%)  
277, STAT3 (0.189%)  
278, EPAS1 (0.1871%)  
279, AFF4 (0.1871%)  
280, NUTM1 (0.1871%)  
281, LRIG3 (0.1871%)  
282, CYLD (0.1871%)  
283, CNOT3 (0.1871%)  
284, STK11 (0.1851%)  
285, NF2 (0.1851%)  
286, MEN1 (0.1851%)  
287, PAX7 (0.1832%)  
288, CSF3R (0.1832%)  
289, IRF4 (0.1832%)  
290, SRC (0.1832%)  
291, CDKN2A (0.1812%)  
292, IL7R (0.1812%)  
293, TFE3 (0.1812%)  
294, STAT5B (0.1793%)  
295, GATA2 (0.1793%)  
296, RPL22 (0.1793%)  
297, RABEP1 (0.1773%)  
298, EPS15 (0.1773%)  
299, TOP1 (0.1773%)