Potential panel genes of hepatocellular\_carcinoma cancer are (n=300):

Asia:  
0, TP53 (39.0533%)  
1, CTNNB1 (36.0947%)  
2, PIK3CA (11.2426%)  
3, BRAF (9.4675%)  
4, KEAP1 (2.9586%)  
5, KRAS (1.7751%)  
6, AXIN1 (1.7751%)  
7, AR (1.7751%)  
8, MAP2K4 (1.1834%)  
9, EGFR (1.1834%)  
10, FHIT (1.1834%)  
11, KDR (1.1834%)  
12, MYO5A (1.1834%)  
13, TOP1 (1.1834%)  
14, ARID2 (1.1834%)  
15, NFE2L2 (1.1834%)  
16, PTEN (1.1834%)  
17, ZNF521 (0.5917%)  
18, CRTC1 (0.5917%)  
19, TSC2 (0.5917%)  
20, PTPRT (0.5917%)  
21, PLCG1 (0.5917%)  
22, SDHC (0.5917%)  
23, RPL10 (0.5917%)  
24, NOTCH1 (0.5917%)  
25, SMAD3 (0.5917%)  
26, ZNF331 (0.5917%)  
27, KTN1 (0.5917%)  
28, RBM10 (0.5917%)  
29, NF2 (0.5917%)  
30, ELF4 (0.5917%)  
31, PML (0.5917%)  
32, IL6ST (0.5917%)  
33, KDM6A (0.5917%)  
34, MAP2K2 (0.5917%)  
35, SMAD4 (0.5917%)  
36, BCL9L (0.5917%)  
37, NRG1 (0.5917%)  
38, PALB2 (0.5917%)  
39, FOXP1 (0.5917%)  
40, WT1 (0.5917%)  
41, ATP1A1 (0.5917%)  
42, POLQ (0.5917%)  
43, ERBB2 (0.5917%)  
44, SMO (0.5917%)  
45, RANBP2 (0.5917%)  
46, POT1 (0.5917%)  
47, BCL11B (0.5917%)  
48, NUP214 (0.5917%)  
49, CBFA2T3 (0.5917%)  
50, FAT1 (0.5917%)  
51, PHF6 (0.5917%)  
52, NT5C2 (0.5917%)  
53, IL21R (0.5917%)  
54, DNMT3A (0.5917%)  
55, CAMTA1 (0.5917%)  
56, ZBTB16 (0.5917%)  
57, TET2 (0.5917%)  
58, STAT3 (0.5917%)  
59, MYH9 (0.5917%)  
60, KDM5C (0.5917%)  
61, KMT2C (0.5917%)  
62, SET (0.5917%)  
63, CNOT3 (0.5917%)  
64, IKZF1 (0.5917%)  
65, AKT2 (0.5917%)  
66, KMT2A (0.5917%)  
67, TPR (0.5917%)  
68, MYCL (0.5917%)  
69, RAF1 (0.5917%)  
70, JAK2 (0.5917%)  
71, HIP1 (0.5917%)  
72, ATR (0.5917%)  
73, TSC1 (0.5917%)  
74, TRRAP (0.5917%)  
75, GRIN2A (0.5917%)  
76, LMO1 (0.5917%)  
77, HMGA2 (0.5917%)  
78, EPAS1 (0.5917%)  
79, SMARCA4 (0.5917%)  
80, CHD4 (0.5917%)  
81, PREX2 (0.5917%)  
82, APC (0.5917%)  
83, ERCC2 (0.5917%)  
84, BARD1 (0.5917%)  
85, DCTN1 (0.5917%)  
86, LASP1 (0.5917%)  
87, PTPRB (0.5917%)  
88, STK11 (0.5917%)  
89, FSTL3 (0.5917%)  
90, ACVR1B (0.5917%)  
91, ARHGAP26 (0.5917%)  
92, FLT4 (0.5917%)  
93, GPC3 (0.5917%)  
94, COL2A1 (0.5917%)  
95, EXT1 (0.5917%)  
96, FGFR4 (0.5917%)  
  
  
The world:  
0, TP53 (41.0932%)  
1, CTNNB1 (36.5492%)  
2, AXIN1 (6.7172%)  
3, ARID1A (3.8525%)  
4, ARID2 (3.5891%)  
5, LRP1B (3.1939%)  
6, PREX2 (2.7988%)  
7, PIK3CA (2.4366%)  
8, TSC2 (2.272%)  
9, KMT2C (2.1403%)  
10, NFE2L2 (1.8769%)  
11, PTEN (1.7451%)  
12, PTPRB (1.7122%)  
13, ATM (1.6464%)  
14, SETD2 (1.6464%)  
15, KMT2D (1.6134%)  
16, PDE4DIP (1.5805%)  
17, RB1 (1.5805%)  
18, ZNF521 (1.5805%)  
19, ERBB4 (1.5147%)  
20, NTRK3 (1.5147%)  
21, ZFHX3 (1.5147%)  
22, ALK (1.4817%)  
23, PTPRT (1.4817%)  
24, APC (1.4817%)  
25, ARID1B (1.4817%)  
26, RNF213 (1.4488%)  
27, PTPN13 (1.4488%)  
28, NF1 (1.4488%)  
29, CDKN2A (1.4159%)  
30, FAT4 (1.4159%)  
31, CAMTA1 (1.3829%)  
32, SND1 (1.3171%)  
33, ATR (1.3171%)  
34, CREBBP (1.3171%)  
35, KMT2A (1.3171%)  
36, GRIN2A (1.2842%)  
37, KEAP1 (1.2842%)  
38, KIT (1.2842%)  
39, EGFR (1.2842%)  
40, NCOR2 (1.2512%)  
41, SMARCA4 (1.2512%)  
42, FLT4 (1.2183%)  
43, CDH11 (1.2183%)  
44, PRDM16 (1.2183%)  
45, JAK1 (1.2183%)  
46, HNF1A (1.1854%)  
47, PTPRK (1.1854%)  
48, PTPRC (1.1195%)  
49, TRRAP (1.1195%)  
50, POLQ (1.1195%)  
51, BRAF (1.1195%)  
52, KDR (1.0537%)  
53, CARD11 (1.0537%)  
54, GPHN (1.0537%)  
55, FAT1 (0.9878%)  
56, CUX1 (0.9878%)  
57, RUNX1T1 (0.9878%)  
58, ROS1 (0.9878%)  
59, KRAS (0.9549%)  
60, MTOR (0.9549%)  
61, BRCA2 (0.9549%)  
62, GPC3 (0.9549%)  
63, EBF1 (0.9549%)  
64, NOTCH1 (0.9549%)  
65, NCOR1 (0.9549%)  
66, SPEN (0.922%)  
67, TPR (0.922%)  
68, GAS7 (0.922%)  
69, UBR5 (0.922%)  
70, PBRM1 (0.922%)  
71, EP300 (0.922%)  
72, CACNA1D (0.922%)  
73, MAML2 (0.922%)  
74, RANBP2 (0.922%)  
75, NOTCH2 (0.889%)  
76, ERC1 (0.889%)  
77, MLLT3 (0.889%)  
78, ARHGEF12 (0.889%)  
79, AXIN2 (0.889%)  
80, ACVR2A (0.889%)  
81, IL6ST (0.889%)  
82, ATRX (0.8561%)  
83, ASXL1 (0.8561%)  
84, TSC1 (0.8561%)  
85, FANCD2 (0.8561%)  
86, CDH1 (0.8561%)  
87, AFF1 (0.8232%)  
88, RAD51B (0.8232%)  
89, NUP214 (0.8232%)  
90, MSI2 (0.8232%)  
91, NCOA2 (0.8232%)  
92, NSD1 (0.8232%)  
93, KAT6A (0.8232%)  
94, FOXP1 (0.8232%)  
95, NUP98 (0.8232%)  
96, IKZF1 (0.8232%)  
97, POLE (0.7903%)  
98, FHIT (0.7903%)  
99, GNAS (0.7903%)  
100, MYH9 (0.7903%)  
101, TET1 (0.7903%)  
102, KAT6B (0.7903%)  
103, MECOM (0.7573%)  
104, NSD2 (0.7573%)  
105, SMARCB1 (0.7573%)  
106, PDGFRA (0.7573%)  
107, TP63 (0.7573%)  
108, TERT (0.7573%)  
109, CLTCL1 (0.7573%)  
110, AFF3 (0.7573%)  
111, MYO5A (0.7573%)  
112, CLTC (0.7573%)  
113, LPP (0.7573%)  
114, KTN1 (0.7573%)  
115, BAP1 (0.7573%)  
116, BLM (0.7244%)  
117, COL1A1 (0.7244%)  
118, TET2 (0.7244%)  
119, AR (0.7244%)  
120, CLIP1 (0.7244%)  
121, IL21R (0.7244%)  
122, MYH11 (0.7244%)  
123, ERG (0.7244%)  
124, TBL1XR1 (0.7244%)  
125, CNTRL (0.7244%)  
126, COL2A1 (0.7244%)  
127, RUNX1 (0.6915%)  
128, DICER1 (0.6915%)  
129, AMER1 (0.6915%)  
130, IDH1 (0.6915%)  
131, SETBP1 (0.6915%)  
132, PBX1 (0.6915%)  
133, CBFA2T3 (0.6585%)  
134, FGFR4 (0.6585%)  
135, KDM6A (0.6585%)  
136, MITF (0.6585%)  
137, SLC34A2 (0.6585%)  
138, HIP1 (0.6256%)  
139, ARHGAP35 (0.6256%)  
140, JAK2 (0.6256%)  
141, PAX3 (0.6256%)  
142, FBXW7 (0.6256%)  
143, AFDN (0.6256%)  
144, ARHGAP26 (0.6256%)  
145, NIN (0.6256%)  
146, WT1 (0.6256%)  
147, ESR1 (0.6256%)  
148, MLLT10 (0.6256%)  
149, EXT1 (0.6256%)  
150, TCF12 (0.6256%)  
151, TCF7L2 (0.6256%)  
152, IRS4 (0.6256%)  
153, NRG1 (0.6256%)  
154, ATP2B3 (0.5927%)  
155, EML4 (0.5927%)  
156, MET (0.5927%)  
157, ERCC2 (0.5927%)  
158, POT1 (0.5927%)  
159, SF3B1 (0.5927%)  
160, JAK3 (0.5927%)  
161, LRIG3 (0.5927%)  
162, BRIP1 (0.5927%)  
163, MSH6 (0.5927%)  
164, BCL11A (0.5927%)  
165, SMAD4 (0.5927%)  
166, STAG2 (0.5927%)  
167, NF2 (0.5927%)  
168, DNMT3A (0.5598%)  
169, LATS1 (0.5598%)  
170, NFATC2 (0.5598%)  
171, FGFR2 (0.5598%)  
172, RSPO2 (0.5598%)  
173, CBLB (0.5598%)  
174, RET (0.5598%)  
175, BMPR1A (0.5598%)  
176, FLT3 (0.5598%)  
177, PAX5 (0.5598%)  
178, LIFR (0.5598%)  
179, MED12 (0.5598%)  
180, FANCA (0.5598%)  
181, BCL11B (0.5598%)  
182, NUMA1 (0.5268%)  
183, ZMYM2 (0.5268%)  
184, RAP1GDS1 (0.5268%)  
185, KNL1 (0.5268%)  
186, EPS15 (0.5268%)  
187, IDH2 (0.5268%)  
188, NRAS (0.5268%)  
189, BCORL1 (0.5268%)  
190, ERBB3 (0.5268%)  
191, BCOR (0.5268%)  
192, USP6 (0.5268%)  
193, BCR (0.5268%)  
194, SMAD3 (0.5268%)  
195, PPFIBP1 (0.5268%)  
196, DROSHA (0.5268%)  
197, WRN (0.5268%)  
198, PIK3R1 (0.5268%)  
199, CRTC1 (0.4939%)  
200, LZTR1 (0.4939%)  
201, FIP1L1 (0.4939%)  
202, AKT2 (0.4939%)  
203, ZNF331 (0.4939%)  
204, LEF1 (0.4939%)  
205, PRDM1 (0.4939%)  
206, CDK12 (0.4939%)  
207, STRN (0.4939%)  
208, XPO1 (0.4939%)  
209, CRTC3 (0.4939%)  
210, SMO (0.4939%)  
211, RECQL4 (0.4939%)  
212, TRAF7 (0.4939%)  
213, FLI1 (0.4939%)  
214, MAP3K1 (0.461%)  
215, CBL (0.461%)  
216, ZBTB16 (0.461%)  
217, TSHR (0.461%)  
218, ABL2 (0.461%)  
219, NCOA1 (0.461%)  
220, LATS2 (0.461%)  
221, ATP1A1 (0.461%)  
222, PLCG1 (0.461%)  
223, NSD3 (0.461%)  
224, PIK3CB (0.461%)  
225, ERCC4 (0.461%)  
226, PRF1 (0.461%)  
227, POLD1 (0.461%)  
228, PRRX1 (0.461%)  
229, BRCA1 (0.461%)  
230, CDC73 (0.4281%)  
231, CCDC6 (0.4281%)  
232, CYLD (0.4281%)  
233, FGFR3 (0.4281%)  
234, TRIP11 (0.4281%)  
235, AFF4 (0.4281%)  
236, HNRNPA2B1 (0.4281%)  
237, MAP2K1 (0.4281%)  
238, CIC (0.4281%)  
239, WIF1 (0.4281%)  
240, TMPRSS2 (0.4281%)  
241, DNM2 (0.4281%)  
242, ITK (0.4281%)  
243, NT5C2 (0.4281%)  
244, CHD4 (0.4281%)  
245, STAT3 (0.4281%)  
246, MLLT1 (0.4281%)  
247, PAX7 (0.4281%)  
248, RNF43 (0.4281%)  
249, CTCF (0.4281%)  
250, ASPSCR1 (0.4281%)  
251, FBXO11 (0.4281%)  
252, TOP1 (0.4281%)  
253, PPP6C (0.4281%)  
254, SMAD2 (0.4281%)  
255, NTRK1 (0.4281%)  
256, EXT2 (0.4281%)  
257, ARNT (0.4281%)  
258, GNAQ (0.4281%)  
259, NFIB (0.4281%)  
260, BCL9 (0.4281%)  
261, MSH2 (0.4281%)  
262, ETV6 (0.4281%)  
263, PCM1 (0.4281%)  
264, MYB (0.4281%)  
265, IRF4 (0.3951%)  
266, ELF4 (0.3951%)  
267, EWSR1 (0.3951%)  
268, IKBKB (0.3951%)  
269, TPM4 (0.3951%)  
270, DDX10 (0.3951%)  
271, FGFR1OP (0.3951%)  
272, EIF3E (0.3951%)  
273, TRIM33 (0.3951%)  
274, STIL (0.3951%)  
275, SYK (0.3951%)  
276, BCL2 (0.3951%)  
277, SUFU (0.3951%)  
278, LCK (0.3951%)  
279, BCL9L (0.3951%)  
280, SRC (0.3951%)  
281, STK11 (0.3951%)  
282, USP8 (0.3951%)  
283, HLA-A (0.3951%)  
284, NR4A3 (0.3951%)  
285, PTPN11 (0.3951%)  
286, FOXO3 (0.3951%)  
287, YWHAE (0.3951%)  
288, MN1 (0.3951%)  
289, NUTM1 (0.3951%)  
290, CHEK2 (0.3622%)  
291, TRIM24 (0.3622%)  
292, MRTFA (0.3622%)  
293, QKI (0.3622%)  
294, GNA11 (0.3622%)  
295, MALT1 (0.3622%)  
296, ELL (0.3622%)  
297, ATIC (0.3622%)  
298, ABL1 (0.3622%)  
299, DDX6 (0.3622%)