

Table SI. Clinicopathological characteristics of 25 patients with hepatocellular carcinoma.

Clinicopathological characteristics	Number of cases (percentage, %)
Age, years	
≤ 55	7 (28)
> 55	18 (72)
Sex	
Male	22 (88)
Female	3 (12)
Size of tumor, cm	
≤ 5	18 (72)
> 5	7 (28)
Portal vein invasion	
Negative	21 (84)
Positive	4 (16)
TNM staging	
I, II	10 (40)
III	15 (60)
Grade	
Well + Moderate	13 (52)
Poor	12 (48)
Alpha fetoprotein	
≤ 400	19 (76)
> 400	6 (24)

Table SII. Primer sequences used in in the present study.

Gene name	Primer sequence (5'-3')
IGFBP4	F: GGTGACCACCCCAACAACAG
	R: GAATTTTGGCGAAGTGCTTCTG
MYBBP1A	F: GACCGCTATGGCCTATTGAAG
	R: GGGCATATTTTCATCTCGGACC
GAPDH	F: GGAGCGAGATCCCTCCAAAAT
	R: GGCTGTTGTCATACTTCTCATGG
NOTCH1	F: GAGGCGTGGCAGACTATGC
	R: CTTGTACTIONCCGTCAGCGTGA
HES1	F: GGAAATGACAGTGAAGCACCTCC
	R: GAAGCGGGTCACCTCGTTCATG
DNER	F: AAGGCTATGAAGGTCCCAACT
	R: CTGAGAGCGAGGCAGGATTT
NEURL	F: CCTTCCCCGTCACCTTCTCAC
	R: AGCCTGACTTGCTCGTAGATG
DLK1	F: GCACTGTGGGTATCGTCTTCC
	R: CTCCCCGCTGTTGTACTIONGAA

F, forward; R, reverse; IGFBP4, insulin-like growth factor binding protein; MYBBP1A: Myb-binding protein 1A; NEURL, neuralized E3 ubiquitin protein ligase 1; HES, hes family bHLH transcription factor 1.

Table SIII. Information about antibodies used in the present study.

Antibody (Experimental use)	Dilution	Supplier	Cat. no.
GAPDH (WB)	1:1,000	Wuhan Servicebio Technology Co., Ltd.	GB15004
MYBBP1A (WB)	1:1,000	Proteintech Group, Inc.	14524-1-AP
IGFBP4 (WB)	1:500	Proteintech Group, Inc.	18500-1-AP
IGFBP4 (WB)	1:500	Abcam	Ab205581
E-Cadherin (WB)	1:1,000	Cell Signaling Technology, Inc.	3195T
N-Cadherin (WB)	1:1,000	Cell Signaling Technology, Inc.	13116T
E-Cadherin (WB)	1:2,000	Proteintech Group, Inc.	20874-1-AP
N-Cadherin (WB)	1:2,000	Proteintech Group, Inc.	22018-1-AP
VIMENTIN (WB)	1:1,000	Cell Signaling Technology, Inc.	5741T
NOTCH1 (WB)	1:1,000	Proteintech Group, Inc.	20687-1-AP
HES1 (WB)	1:1,000	Abcam	ab108937
DNMT1 (WB)	1:1,000	Proteintech Group, Inc.	24206-1-AP
YAP1 (WB)	1:1,000	Proteintech Group, Inc.	66900-1-IG
Beta Catenin (WB)	1:1,000	Proteintech Group, Inc.	51067-2-AP
Wnt3a (WB)	1:1,000	Abcam	ab219412
p-SMAD2 (WB)	1:1,000	ABclonal Biotech Co., Ltd.	AP1342
p-SMAD3 (WB)	1:1,000	ABclonal Biotech Co., Ltd.	AP0727
SMAD 2/3 (WB)	1:1,000	Abcam	ab305325
MYBBP1A (IHC)	1:100	Proteintech Group, Inc.	14524-1-AP
IGFBP4 (IHC)	1:200	Proteintech Group, Inc.	18500-1-AP
E-Cadherin (IHC)	1:500	Proteintech Group, Inc.	20874-1-AP
N-Cadherin (IHC)	1:500	Proteintech Group, Inc.	20874-1-AP
VIMENTIN (WB)	1:2,000	Proteintech Group, Inc.	60330-1-IG
NOTCH1 (IHC)	1:500	Proteintech Group, Inc.	20687-1-AP
Multi-rAb-HRP-Goat-Anti-Mouse-Recombinant-Secondary-Antibody-H-L	1:4000	Proteintech Group, Inc.	RGAM001
Multi-rAb-HRP-Goat-Anti-Rabbit-Recombinant-Secondary-Antibody-H-L	1:4000	Proteintech Group, Inc.	RGAR001

WB, western blotting; IHC, immunohistochemistry; p-, phosphorylated; IGFBP4, insulin-like growth factor binding protein; MYBBP1A: Myb-binding protein 1A; HES, hes family bHLH transcription factor 1.