

Additional file 1

Supplementary Table S1. Primers used in the study

Primers for Real-time PCR		
Protein		Sequence (5'→ . 3')
MAGL	F	ATGGTAGAGTTCGCGCCCTTGTTT
	R	TCATCATAACTCCAAGTGCTGGTCA
E-cadherin	F	TTGCTACTGGAACAGGGACAC
	R	CCCGTGTGTTAGTTCTGCTGT
N-cadherin	F	TTATCCTTGTGCTGATGTTTGTG
	R	TCTTCTTCTCCTCCACCTTCTTC
Vimentin	F	CCTTGACATTGAGATTGCCACCTA
	R	TCATCGTGATGCTGAGAAGTTTCG
Snail	F	TCCAGAGTTTACCTTCCAGCA
	R	CTTTCCCACTGTCTACTCTG
Twist	F	GTCCGCAGTCTTACGAGGAG
	R	GTCTGAATCTTGCTCAGCTTGTC
β-actin	F	CTGAGGACAAGCCACAAGATTA
	R	ATCCACCAGAGTGAAAAGAACG

Supplementary Table S2. Antibodies used in the research

Protein	Usage	Antibody
MAGL	WB, IHC	Ab77398, Abcam
E-cadherin	WB, IHC	3195,CST
N-cadherin	WB, IHC	14215,CST
Vimentin	WB, IHC	5741,CST
Snail	WB, IHC	3879,CST
Twist	WB, IHC	ab50887, Abcam
NF-κB p65	WB, IHC	8242,CST
β-actin	WB, IHC	3700,CST

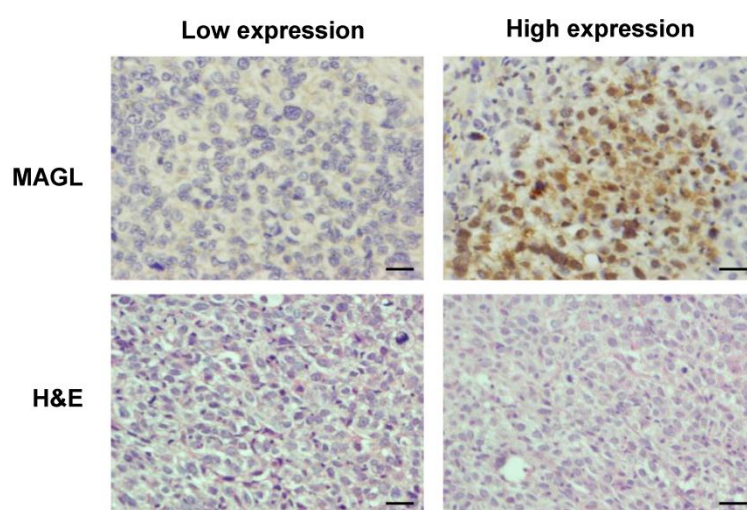
Abbreviations: WB, western blot; IHC, immunohistochemistry

Supplementary Table S3. Sequences of shRNA targeting MAGL and NF-κB p65

Sequence (5' → 3')	
MAGL-shRNA1	GCTCGGATGCTGATGGGGCTGGACCTGCTGGTGTTCGGGAAA GCAATAGTGAAGCCACAGATGTATTGCTTTCCCCACGACCAT GTTGGCCACGGACAGAGCGAAGGGGAGAGGATGGTAGTGTCT
MAGL-shRNA2	GCTCGGATGCTGATGGGGCTGGACCTGCTGGTGTAAATTAGT GAAGCCACAGATGTAATTTATCGCCCACGACCATGTTGGCCAC GGACAGAGCGAAGGGGAGAGGATGGTAGTGTCT
NF-κB p65-shRNA1	TGCTGTTGACAGTGAGCGCGGAATCCAGTGTGTGAAGAATAG TGAAGCCACAGATGTATTCTTCACACACTGGATTCCCATGCCTA CTGCCTCGGA
NF-κB p65-shRNA2	TGCTGTTGACAGTGAGCGACTGAGTCAGATCAGCTCCTAATAG TGAAGCCACAGATGTATTAGGAGCTGATCTGACTCAGCTGCCT ACTGCCTCGGA

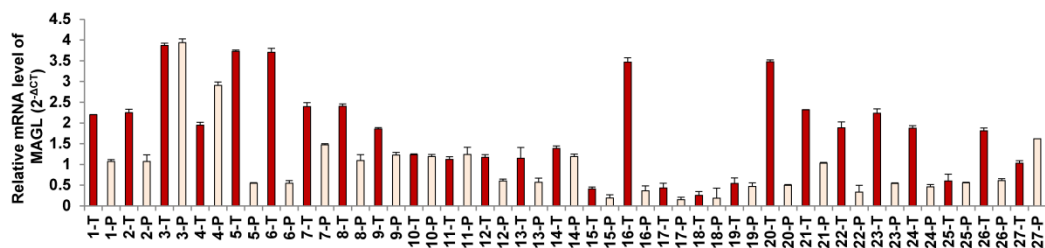
Supplementary Figure S1

Representative images of MAGL immunohistochemic staining. MAGL expression at low or high levels were detected in HCC samples which includes both tumor and peritumor tissues (×200). Positive cells were stained brown. Nucleus were stained blue with hematoxylin. The frozen sections of HCC samples generated from MAGL low or high expression were also stained with H&E.



Supplementary Figure S2

qRT-PCR assay of MAGL mRNA expression in 27 tumor samples. The average mRNA level of MAGL was significantly higher in tumor tissues than in paired peritumor tissues.



Supplementary Figure S3

The regulating effects of MAGL on NF-κB p65, N-cadherin, and Snail expression in HCCLM3 cells with different MAGL expression levels. Western blot assay showed that the reduced protein expression of NF-κB p65, N-cadherin, and Snail in HCCLM3-shMAGL cells could obviously be reversed when the MAGL expression was markedly up-regulated, which also accompanied by down-regulation of E-cadherin expression. Abbreviation: OE, overexpression.

