

Supplementary Materials

Table S1 Primer pairs in this study

Name	Sequence (5'- to -3')	Purpose
Slug (-973/+225)-F	CGGGGTACCAGTGTGAGAGAATGTCCGGT	
Slug (-973/+225)-R	CCGCTCGAGGAATGTAAGCTCCCTTTCAG	promoter
Snail(-1000/+267)-F	CGGGGTACCCTCTCTAGGAGTTACTCTGA	
Snail(-1000/+267)-R	CCGCTCGAGCCAACCACCCAGACAGATC	promoter
MMP-9-F	AGACCTGGGCAGATTCCAAAC	
MMP-9-R	CGGCAAGTCTTCCGAGTAGT	RT-PCR
E-cadherin-F	CGAGAGCTACACGTTACACGG	
E-cadherin-R	GGGTGTCGAGGGAAAAATAGG	RT-PCR
N-cadherin-F	AGCCAACCTTAACTGAGGAGT	
N-cadherin-R	GGCAAGTTGATTGGAGGGATG	RT-PCR
ZEB1-F	CAGCTTGATACCTGTGAATGGG	
ZEB1-R	TATCTGTGGTCGTGTGGGACT	RT-PCR
α -catenin-F	TCCGATCCTCTATACTGCATCC	
α -catenin-R	TGCTGTGAGGCATCGTCTG	RT-PCR
β -catenin-F	AGCTTCCAGACACGCTATCAT	
β -catenin-R	CGGTACAACGAGCTGTTTCTAC	RT-PCR
Vimentin-F	AGTCCACTGAGTACCGGAGAC	
Vimentin-R	CATTCACGCATCTGGCGTTC	RT-PCR
Snail-F	TCGGAAGCCTAACTACAGCGA	
Snail-R	AGATGAGCATTGGCAGCGAG	RT-PCR
Slug-F	CGAACTGGACACACATACAGTG	
Slug-R	CTGAGGATCTCTGGTTGTGGT	RT-PCR
AP-2 β -F	ATGCCTCAATGCATCTCTCC	
AP-2 β -R	GAGTAACGTGACATTTGCTG	RT-PCR
β -actin-F	GCGCGGCTACAGCTTCA	
β -actin-R	CTTAATGTCACGCACGATTTC	RT-PCR
miR-27a(upper)	CUGAGGAGCAGGGCUUAGCUGCUUGUGAGCAGGGUCCACAC	plasmid
	CAAGUCGUGUUCACAGUGGCUAAGUCCGCCCCCAG	construction

Table S2 Correlation between E-cadherin expression and clinical characteristics

Features	Total	Overexpression	Low expression	P value
Sex				
Male	62	36	26	
Female	8	6	2	0.42
Age (median, 48 years)				
<48 years	31	15	16	
≥48 years	39	27	12	0.248
Tumor size, cm				
≤5	47	35	12	
>5	23	6	17	0.003
Cell differentiation				
Well/ Moderately	50	31	19	
Poor	20	11	9	0.091
Tumor stage				
I/II	47	35	12	
III/IV	23	7	16	0.003

Table S3 Correlation between AP-2 β expression and E-cadherin expression in HCC samples by IHC analysis

AP-2 β expression	Cases	E-cadherin expression		P value*
		Low, No (%)	High, No (%)	
Low (\leq 30%)	43	24(55.8%)	19(44.2%)	0.043
High ($>$ 30%)	27	4(14.8%)	23(85.2%)	
Total	70	28(40%)	42(60%)	

All 70 samples were divided according to the proportion score to define AP-2 β or E-cadherin expression with low or high staining score of HCCs.

*Fisher's exact test.

Table S4 Correlation between Slug expression and clinical characteristics

Features	Total	Overexpression	Low expression	P value
Sex				
Male	62	37	25	
Female	8	4	4	0.142
Age (median, 48 years)				
<48 years	31	21	10	
≥48 years	39	20	19	0.132
Tumor size, cm				
≤5	47	19	28	
>5	23	22	1	2.12E-05
Cell differentiation				
Well/ Moderately	50	32	18	
Poor	20	9	11	0.035
Tumor stage				
I/II	47	19	28	
III/IV	23	22	1	2.12E-05

Table S5 Correlation between AP-2 β expression and Slug expression in HCC samples by IHC analysis

AP-2 β expression	Cases	Slug expression		P value*
		Low, No (%)	High, No (%)	
Low (\leq 30%)	43	14(32.6%)	29(67.4%)	0.074
High ($>$ 30%)	27	15(55.6%)	12(44.4%)	
Total	70	29(41.4%)	41(58.6%)	

All 70 samples were divided according to the proportion score to define AP-2 β or Slug expression with low or high staining score of HCCs.

*Fisher's exact test.

Table S6 Correlation between Snail expression and clinical characteristics

Features	Total	Overexpression	Low expression	P value
Sex				
Male	62	36	34	
Female	8	5	5	0.463
Age (median, 48 years)				
<48 years	31	20	11	
≥48 years	39	18	21	0.048
Tumor size, cm				
≤5	47	32	15	
>5	23	23	0	3.59E-08
Cell differentiation				
Well/ Moderately	50	28	22	
Poor	20	10	10	0.365
Tumor stage				
I/II	47	32	15	
III/IV	23	23	0	3.59E-08

Table S7 Correlation between AP-2 β expression and Snail expression in HCC samples by IHC analysis

AP-2 β expression	Cases	Snail expression		P value*
		Low, No (%)	High, No (%)	
Low (\leq 30%)	43	18(36.8%)	25(63.2%)	0.02
High ($>$ 30%)	27	14(51.9%)	13(48.1%)	
Total	70	32(45.7%)	39(54.3%)	

All 70 samples were divided according to the proportion score to define AP-2 β or Snail expression with low or high staining score of HCCs.

*Fisher's exact test.