

## MicroRNA-33a-3p suppresses cell migration and invasion by directly targeting PBX3 in human hepatocellular carcinoma

### SUPPLEMENTARY TABLES

**Supplementary Table S1:** Multivariate Cox regression analysis of clinicopathological features and miR-33a-3p expression in 85 HCC patients

Variable	Cases(n)	Multivariate COX analysis	
		RR(95%CI)	P-value
<i>Sex</i>	Male	0.641	0.309
	Female	0.273 – 1.509	
<i>Age</i> (year)	≤60	1.319	0.527
	>60	0.560 – 3.108	
<i>Cirrhosis</i>	Absent	0.342	0.021
	Present	0.138 – 0.848	
<i>Size</i> (cm)	≤5	3.014	0.008
	>5	1.328 - 6.843	
<i>Venous invasion</i>	Absent	0.459	0.039
	Present	0.219 - 0.962	
<i>miR-33a-3p</i>	High	1.108	0.776
	Low	0.546- 2.251	

Abbreviation: RR: Relative risk, CI: Confidence interval

**Supplementary Table S2: Primers sequences***PolyA tailing qRT-PCR*

U6 forward primer	5'-CTCGCTTCGGCAGCACA-3'
U6 reverse primer	5'-AACGCTTCACGAATTGCGT-3'
oligodT adapter primer	5'-GCGAGCACAGAATTAATACGACTCACTATAGGTTTTTTTVN-3'
Reverse primer	5'-GCGAGCACAGAATTAATACGAC-3'
miR-33a-3p forward primer	5'-5' CAATGTTCCACAGTGCATCAC-3'

*Q-PCR analysis of PBX3 and Alu*

PBX3 forward primer	5'-CAAGTCGGAGCCAATGTG-3'
PBX3 reverse primer	5'-ATGTAGCTCAGGGAAAAGTG-3'
Human GAPDH forward primer	5'-GACCCCTTCATTGACCTCAAC-3'
Human GAPDH reverse primer	5'-CTTCTCCATGGTGGTGAAGA-3'
Alu forward primer	5'ACGCCTGTAATCCCAGCACTT-3'
Alu reverse primer	5'TCGCCCAGGCTGGAGTGCA-3'
Chicken GAPDH forward primer	5'ACGCCATCACTATCTCCAGGAG-3'
Chicken GAPDH reverse primer	5'TACTTACCCCAGCCTCTTG-3'

*PGL-control 3'-UTR recombinant plasmid construct*

PBX3 3'-UTR forward primer	5'-TGCTCTAGACCGGTCTCTGGCCACACTTTCCCTG
PBX3 3'-UTR reverse primer	5'-CGGAATTCATGCATACTAACTACCACGAGGAAGAC
Mut-PBX3 forward primer	5'- CGAGCACAAAGGGTCCA GGTCTTAATTCAACACAGGATCG
Mut-PBX3 reverse primer	5'- GACCTGGCACCCCTGTGCTCGGTTTTAAAAGTTGCAAG