Supplementary data

Synthesis of gene primers

According to the sequences of *TGF-β1*, *Smad2*, *Smad3*, *VEGF-A*, *Gal-3*, *SphK1*, *Snail*, *Bcl-2*, *Bax*, *α-SMA*, *Caspase3, PDK1* and *HIF-1α* genes in GenBank, Primer-BLAST was used to design the primers for these genes, at the same time, *β-actin* (*actin beta*, *ACTB*) gene was used as the internal reference gene. The information regarding the primer sequences is shown in Table S1.The data were sent to Hunan Accurate Bioengineering Co. (Hunan, China) for synthesis

Table S1. Primer sequence information

Primer	Primer sequence(5'~3')	Amplified fragment size/bp
TGF-β1	F: GCGGACTACTACGCCAAGGA	90
	R: GCTGTGCGAGCTAGACTTCATTT	
Smad2	F: TGCTGGCTCAGTCCGTTAAT	120
	R: TTGTTACCGTCTGCCTTCGG	
Smad3	F: GGGTGGATTTGGGGAAGAG	132
	R: GGTTTGCTTTCGTGTTTTGG	
VEGF-A	F: GGGGCTGCTGTAATGACGA	104
	R: CCTATGTGCTGGCTTTGGTGA	
Gal-3	F: CCCCTCCAAGATCCGAGAT	81
	R: GTTCGCATTGGGCTTTACTG	
SphK1	F: AGTATGGCTCAAAGCTGCCC	89
	R: CAGCCAGGACGGTCAAAGT	
Snail	F: ATGTCAAGAAGTACCAGTGCAAGA	116
	R: AAGGAGCCTCAGGAGTCAGC	
Bcl-2	F: GATGACCGAGTACCTGAACCG	120
	R: GACAGCCAGGAGAAATCAAACA	
Bax	F: CCTTTTGCTTCAGGGTTTCAT	110
	R: CGCTCAGCTTCTTGGTGGAT	
α-SMA	F: CAATGGCTCTGGGCTCTGT	156
	R: CCTCTTTTGCTTTGTGCTTCA	
PDK1	F: GCAAAATCACCAGGACAGCC	129
	R: CGGATAAACACCTTTGTCAGCAT	
Akt1	F: CCTAAAGAAGGAGGTCATCGTG	182
	R: GGGACAGGTGGAAGAAAAGC	
Caspase3	F: TGTCAAACAACAGCAATGACGA	149
	R: CAGCACAAACATCACAAAACCA	
HIF-1α	F: GGCGCGAACGACAAGAAAA	121
	R: GTGGCAACTGATGAGCAAGC	
VEGF	F: CTGCTGTGGACTTGAGTTGGG	107
	R: GCTGCCGTAAGAGGGATAAAA	

| *β-actin (ACTB)* | F: TCATCACCATCGGCAATGAG | 157 |
| | R: AGCACCGTGTTGGCGTAGAG | |