

Supplementary materials

Table 1: The primers were applied in this study

Gene	Species	Primers (5'-3')
<i>Aggrecan</i>	Human	Forward: CCCCTGCTATTTTCATCGACCC Reverse: GACACACGGCTCCACTTGAT
<i>COL2</i>	Human	Forward: TGGACGATCAGGCGAAACC Reverse: GCTGCGGATGCTCTCAATCT
<i>GAPDH</i>	Human	Forward: ACCACAGTCCATGCCATCAC Reverse: TCCACCACCCTGTTGCTGTA
<i>Aggrecan</i>	Mouse	Forward: GTGGAGCCGTGTTTCCAAG Reverse: AGATGCTGTTGACTCGAACCT
<i>COL2</i>	Mouse	Forward: CCTCAAGGCAAAGTTGGTCCT Reverse: CTCCCGTCTCACCGTCTTTT
<i>GAPDH</i>	Mouse	Forward: TGTGTCCGTCGTGGATCTGA Reverse: TTGCTGTTGAAGTCGCAGGAG
<i>hsa-miR-18a-3p</i>	Human	ACTGCCCTAAGTGCTCCTTCTGG
<i>hsa-miR-497-5p</i>	Human	CAGCAGCACACTGTGGTTTGT
<i>hsa-miR-3074-5p</i>	Human	GTTTCCTGCTGAACTGAGCCAG
<i>mmu-miR-18a-3p</i>	Mouse	ACTGCCCTAAGTGCTCCTTCTG
<i>mmu-miR-497-5p</i>	Mouse	CAGCAGCACACTGTGGTTTGT
<i>mmu-miR-3074-5p</i>	Mouse	GTTTCCTGCTGAACTGAGCCAGT

Table 2: The antibodies of WB applied in this study

Antibodies	Source	Catalog no	Working concentrations
Aggrecan	Abcam, Waltham, Massachusetts, USA	ab3778	1:1000
COL2	ABclonal, Woburn, Massachusetts, USA	A1560	1:1000
β -Actin	Santa Cruz Biotechnology, Dallas, TX, USA	SC-47778	1:10000
p-ERK	Santa Cruz Biotechnology, Dallas, TX, USA	SC-7383	1:1000
ERK	Santa Cruz Biotechnology, Dallas, TX, USA	SC-1647	1:1000
p-JNK	Santa Cruz Biotechnology, Dallas, TX, USA	SC-6254	1:1000
JNK	Santa Cruz Biotechnology, Dallas, TX, USA	SC-7345	1:1000
p-p38	Santa Cruz Biotechnology, Dallas, TX, USA	SC-166182	1:1000
p38	Santa Cruz Biotechnology, Dallas, TX, USA	SC-271120	1:1000

Table 3: The pharmacological inhibitor applied in this study

Inhibitors	Target	Source	Catalog no	Working concentrations
FR180204	ERK	Santa Cruz Biotechnology, Dallas, TX, USA	SC-203945	10 μ M
SP600125	JNK	Enzo Life Sciences, Inc. 10 Executive Blvd Farmingdale, NY 11735	BML-EI305-0010	10 μ M
SB203580	p38	Enzo Life Sciences, Inc. 10 Executive Blvd Farmingdale, NY 11735	BML-EI286-0001	10 μ M

Table 4: The pharmacological siRNA applied in this study

siRNA	Source	Catalog no	Working concentrations
ERK siRNA	Santa Cruz Biotechnology, Dallas, TX, USA	sc-35335	10 nM
JNK siRNA	Santa Cruz Biotechnology, Dallas, TX, USA	sc-29380	10 nM
p38 siRNA	Santa Cruz Biotechnology, Dallas, TX, USA	sc-29433	10 nM

Table 5: The correlation between has-miR-3074-5p to ERK, JNK, and p38 MAPK genes by using TargetScanHuman prediction tool (https://www.targetscan.org/vert_80/)

Binding position	Predicted consequential pairing of target region (top) and miRNA (bottom)	Site type	Context++ score percentile
Position 8185-8191 of MAPK1 3' UTR hsa-miR-3074-5p	5' ...ACUGUCUGGUCGGCAGCAGGAAG... 3' GACCGAGUCAAGUCGUCCUUG	7mer-m8	68
Position 3063-3070 of MAPK8 3' UTR hsa-miR-3074-5p	5' ...AUAGUGAAAUCAUCA--GCAGGAAA... 3' GACCGAGUCAAGUCGUCCUUG	8mer	81
Position 7566-7572 of MAPK14 3'UTR hsa-miR-3074-5p	5' ...ACUGAGGAGGCUGAGGCAGGAAG... 3' GACCGAGUCAAGUCGUCCUUG	7mer-m8	68