

Inhibitory effects of IL-6-mediated matrix metalloproteinase-3 and -13 by *Achyranthes japonica* Nakai root in osteoarthritis and rheumatoid arthritis mice models

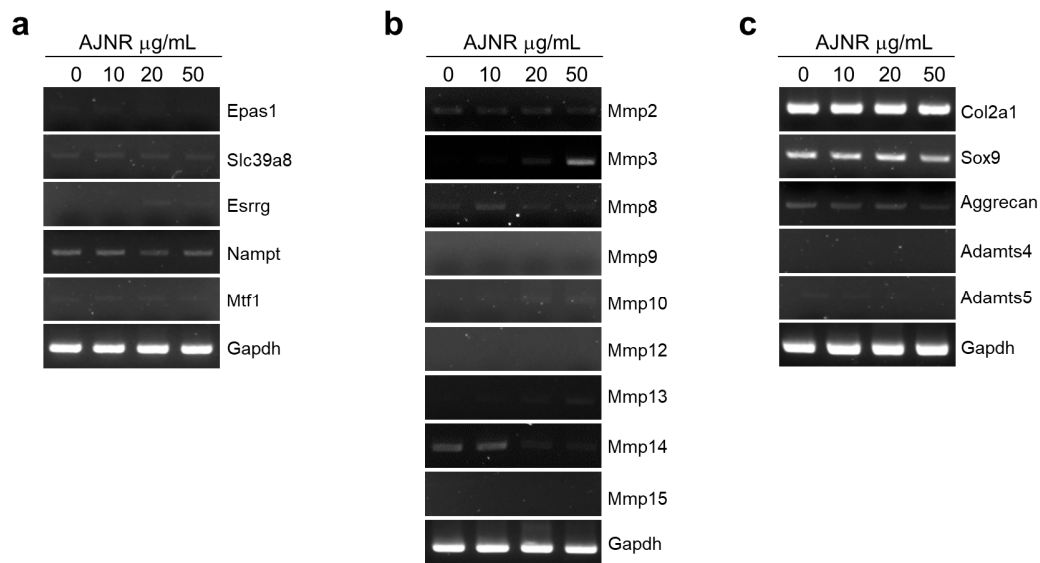
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Supplementary Information

Supplementary Table S1. PCR primers and conditions

Genes	Strand	Primer Sequences	Size (bp)	AT (°C)	Origin
Gapdh	A	5'-TCACTGCCACCCAGAAGAC-3'	450	57.3	Mouse
	AS	5'-TGTAGGCCATGAGGTCCAC-3'			
Mmp2	A	5'-CCAACTACGATGATGAC-3'	233	60.0	Mouse
	AS	5'-ACCAGTGTCAGTATCAG-3'			
Mmp3	A	5'-AGGGATGATGATGCTGGTATGG-3'	434	58.0	Mouse
	AS	5'-CCATGTTCTCCAAGTGCAGAG-3'			
Mmp9	A	5'-TGCACTGGGCTTAGATCATTCC-3'	450	58.4	Mouse
	AS	5'-CCGTCCTTGAAGAAATGCAGAG-3'			
Mmp10	A	5'-AGAAATGGACACTTGCACCCTCAG-3'	448	61.5	Mouse
	AS	5'-CTGTCCGTGTTGTGAGCCTCATAG-3'			
Mmp12	A	5'-CCCAGAGGTCAAGATGGATG-3'	482	60.0	Mouse
	AS	5'-GGCTCCATAGAGGGACTGAA-3'			
Mmp13	A	5'-TGATGGACCTTCTGGTCTTCTGG-3'	474	58.2	Mouse
	AS	5'-CATCCACATGGTTGGGAAGTTCT-3'			
Mmp14	A	5'-GTGCCCTATGCCTACATCCG-3'	580	58.0	Mouse
	AS	5'-TTGGGTATCCATCCATCACT-3'			
Mmp15	A	5'-GAGAGATGTTTGTGTTCAAGGG-3'	260	57.5	Mouse
	AS	5'-TGTTGCAATGCGGTCATAGGG-3'			
Adamts 4	A	5'-CATCCGAAACCCTGTCAACTT-3'	287	58.4	Mouse
	AS	5'-GCCCATCATCTTCCACAATAGC-3'			
Adamts 5	A	5'-GCCATTGTAATAACCCTGCACC-3'	292	58.4	Mouse
	AS	5'-TCAGTCCCATCCGTAACCTTTG-3'			
Aggrecan	A	5'-GAAGACGACATCACCATCCAG-3'	581	60.0	Mouse
	AS	5'-CTGTCTTTGTCACCCACACAT-3'			
Col2a1	A	5'-CACACTGGTAAGTGGGGCAAGACCG-3'	173	58.0	Mouse
	AS	5'-GGATTGTGTTGTTTCAGGGTTCGGG-3'			
Epas1	A	5'-CGAGAAGAACGACGTGGTGTTC-3'	333	64.0	Mouse
	AS	5'-GTGAAGGCTGGCAGGCTCC-3'			
Sox9	A	5'-ATGCTATCTTCAAGGCGCTG-3'	272	60.0	Mouse
	AS	5'-GACGTCGAAGGTCTCAATGT-3'			
Slc39a8	A	5'-GAACAATTGCCTGGATGATCACGC-3'	430	63.0	Mouse
	AS	5'-AAGCCGGTTAACATCCCTGCATTC-3'			

AT, annealing temperature; *S*, sense; *AS*, antisense



Supplementary Figure S1. Effects of AJNR on anabolic or catabolic factors in primary cultured articular chondrocytes. Primary cultured mouse chondrocytes were exposed to AJNR (0-50 $\mu\text{g/mL}$) for 24 h. Next, the levels of osteoarthritis inducer genes (A), matrix metalloproteinases (B), and anabolic/catabolic factors (C) were measured by RT-PCR. The results are representative of three independent experiments from different mouse pups. Glyceraldehyde-3-phosphate dehydrogenase (Gapdh) was used as an internal marker. Epas1, endothelial PAS domain protein 1; Slc39a8, solute carrier family 39 member 8; Esrrg, estrogen-related receptor gamma; Nampt, nicotinamide phosphoribosyltransferase; Mtf1, metal regulatory transcription factor 1; Mmp2, -3, -8, -9, -10, -12, -13, -14, and -15, matrix metalloproteinase-2, -3, -8, -9, -10, -12, -13, -14, and -15; Col2a1, collagen type II alpha 1 chain; Sox9, SRY-Box transcription factor 9; Adamts-4 and -5, ADAM metalloproteinase with thrombospondin type 1 motif-4 and -5