

Supplementary materials

Tab. S1. Animal groups

Groups	Number	Reagents	Concentration
Con	10	Distilled water	—
Vcon	10	Corn oil	—
L (LYC)	10	Lycopene	5mg/kg
ATR I	10	Atrazine	50mg/kg
ATR I +L	10	Lycopene	5mg/kg
		Atrazine	50mg/kg
ATR II	10	Atrazine	200mg/kg
ATR II +L	10	Lycopene	5mg/kg
		Atrazine	200mg/kg

Tab. S2. The sequences of housekeeping gene primers.

Gene Names	Sequence (5' → 3')	Amplicon size (bp)
β-actin1	GTGACGTTGACATCCGTAAGA	132 bp
	GCCGGACTCATCGTACTCC	
β-actin2	AGTACCCATTGAACACGGC	98 bp
	CTCCTCAGGGGCTACTCTCA	

Tab. S3. The sequences of AQPs gene primers.

Gene Names	Sequence (5' → 3')	Amplicon size (bp)
AQP1	ACCTGCTGGCGATTGACTAC	88 bp
	TGGTTTGAGAAGTTGCGGGT	
AQP2	TGTGGAGCTTTCCTGACCA	147 bp
	CAGCCGGTGAAATAGATCCCAA	
AQP3	CGTTGTGGGGAGATGCTTCA	95 bp
	CCACAGCCAAACATCACAAGG	
AQP4V2	TGTTTCCTACCCACCCTGCT	149bp
	CAGGAATGTCCACACTTACAGC	
AQP4V4	ATACTGTGCCTCACTGGATGG	80bp
	AGTTGAGCAGAGCGTAGGAC	
AQP6	AGTCCATTGGATCTTCTGGGT	104bp
	ATCGCTGGGCTACAGTCTTG	
AQP7	GGGTGATTCTGGGCTCTTTTC	147bp
	ATACTGATGCACGAAAGCCCT	
AQP11	GAAATGGGTGCCGTGAGGTT	147bp
	CATGTCGGTGTGGATGGGAT	

Tab. S4. The sequences of ATPase subunits gene primers.

Gene Names	Sequence (5' → 3')	Amplicon size (bp)
1A1	GGAGGCTTCTTCACTTACTT GCACTACCACAATACTGACA	199 bp
1A2	TTGGAGACGCGCAATATCTGT CCATCACTGTCCGGTCACCT	94 bp
1B1	AGCCCTGCATCATTATCAAGCTC CCAAAGTACTCTATGTTCCCGACT	178 bp
1B2	GGGCGATATTATGAGCAACCTGA CTGCATAGAAGTTGATGACCCGAT	178bp
1B4	CTAGCCATCAGTCCTTACATGC GCTGCCAAGTTTCAGGTTC	124bp
2A2	ATCACACCGCTGAATCTGACC AGGCTGCACACACTCTTTAC	132bp
2A3	CCCACTGAAAGAAAGCATCTCGT TTGTACACACCCAAGAAAGAGCTA	163bp
2B1	GAAGTCCATGAGCACAGTCCT TGCCTCGCCATTAGCACT	118bp
2C1	GCCTGAGTATACTGGATCTGTTGT CCCGGCTCCTTTCAACCT	93bp
2C2	CATCTGCTCTGACAAGACA GTATCCGACACCACTGAC	103bp

Tab. S5. Evaluation of renal pathological injury.

Lesion range	Atrophy of renal tubular epithelial cells	Glomerular atrophy	Interstitial inflammatory cell infiltration	Interstitial fibrosis	Perivascular capillary congestion
Normal	0	0	0	0	0
<10%	1	1	1	1	1
10%-25%	2	2	2	2	2
25%-50%	3	3	3	3	3
50%-75%	4	4	4	4	4
>75%	5	5	5	5	5