

## *Supplementary Material*

**Supplementary Table S1. The content of flavonoids, polysaccharides, phenols in AL.**

constituents	Content(mg/mL)
Flavonoids (apigenin)	0.2 ± 0.02
Terpene (oleanolic acid)	9.33 ± 0.59
Polysaccharides (glucose)	1.02 ± 0.02
polyphenols (gallate)	0.31 ± 0.00

**Supplementary Table S2. Gene-specific primers.**

Gene	Forward (5' to 3')	Reverse(5' to 3')
AQP3	GGGGAGATGCTCCACATCC	AAAGGCCAGGTTGATGGTGAG
HAS2	CTCTTTTGGACTGTATGGTGCC	AGGGTAGGTTAGCCTTTTCACA
HAS3	CAGCCTATGTGACGGGCTAC	CCTCCTGGTATGCGGCAAT
TGM-1	GCACCACACAGACGAGTATGA	GGTGATGCGATCAGAGGATTC
TJP-1	ACCAGTAAGTCGTCCTGATCC	TCGGCCAAATCTTCTCACTCC
SOD2	CTGCTGGGGATTGATGTGTGG	TGCAAGCCATGTATCTTTCAGT
FLG	GGACAGGAACAATCATCGGGG	CAACCTCTCGGAGTCGTCTG

**Supplementary Table S2 (continued)**

<b>Gene</b>	<b>Forward (5' to 3')</b>	<b>Reverse(5' to 3')</b>
GPX1	AGTCGGTGTATGCCTTCTCGG	GCAGCTCGTTCATCTGGGTGTA
Nrf2	TCAGCGACGGAAAGAGTATGA	CCACTGGTTTCTGACTGGATGT
HO-1	AAGACTGCGTTCCTGCTCAAC	AAAGCCCTACAGCAACTGTCG
$\beta$ -actin	AAATCGTGCGTGACATCAAAGA	GCCATCTCCTGCTCGAAGTC