

Supplementary file

Efficacy Confirmation Test of Immature Asian Pear (*Pyrus pyrifolia* Nakai) Extract on Ovalbumin-Induced Asthma in Mice

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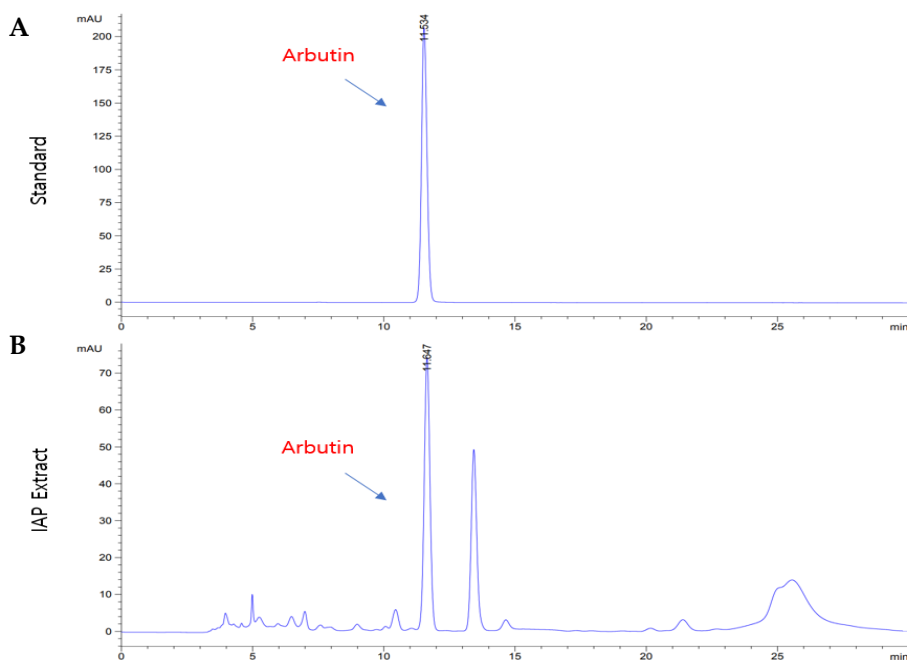


Figure S1. HPLC analysis of standard arbutin (A) and arbutin in the IAP extract (B).

Table S1. Oligonucleotides used for quantitative RT-PCR analysis.

Target	5' – 3'	Sequence	GenBank Accession Number
NF-κB	Sense	GCTGCCAAAGAAGGACACGACA	NM_008689
	Antisense	GGCAGGCTATTGCTCATCACAG	
PTEN	Sense	TGAGTTCCTCAGCCATTGCCT	NM_008960
	Antisense	GAGGTTTCCTCTGGTCCTGGTA	
p38 MAPK	Sense	CCGAACGATACCAGAACCTGTC	NM_011951
	Antisense	ACGCAACTCTCGGTAGGTCCTT	
PI3K	Sense	ACCATCAGTGGCTCTGCGGTTT	NM_008840
	Antisense	GTGGTCTTCTGGGAACCTCACCT	
Akt	Sense	GGACTACTTGCCTCCGAGAAG	NM_009652
	Antisense	CATAGTGGCACCCTCCTTGATC	
IL-4	Sense	ATCATCGGCATTTTGAACGAGGTC	NM_021283
	Antisense	ACCTTGGAAGCCCTACAGACGA	
IL-5	Sense	GATGAGGCTTCCTGTCCCTACT	NM_010558
	Antisense	TGACAGGTTTGGGAATAGCATTTC	
β-actin	Sense	CATTGCTGACAGGATGCAGAAGG	NM_007393
	Antisense	TGCTGGAAGGTGGACAGTGAGG	

RT-PCR: Reverse transcription polymerase chain reaction; NF-κB: Nuclear factor kappa-light-chain-enhancer of activated B cells; PTEN: Phosphatase and TENsin homolog deleted on chromosome 10; MAPK: Mitogen-activated protein kinases; PI3K: Phosphoinositide 3-kinase; Akt: Protein kinase B; IL: Interleukin.

Table S2. Body weight gains in intact or OVA-induced allergic asthma mice.

Groups	Body weights at			Body weight gains [B-A]
	Initial test article administration [A]*	Last test material administration	24 h after last test material administration [B]*	
Controls				
Intact vehicle	14.56 ± 0.57	18.68 ± 0.31	16.52 ± 0.49	1.96 ± 0.64
OVA	14.55 ± 0.74	18.85 ± 0.59	16.63 ± 0.29	2.08 ± 0.55
Reference				
DEXA	14.40 ± 0.61	17.41 ± 0.58 ^{ab}	15.54 ± 0.47 ^{de}	1.14 ± 0.55 ^c
Test material groups				
IAP ₄₀₀	14.30 ± 0.59	18.67 ± 0.89	16.55 ± 0.96	2.25 ± 0.88
IAP ₂₀₀	14.46 ± 0.64	18.64 ± 0.44	16.55 ± 0.33	2.09 ± 0.62
IAP ₁₀₀	14.29 ± 0.37	18.48 ± 0.44	16.39 ± 0.47	2.10 ± 0.63

* All animals were fasted overnight; ^a*p* < 0.01 as compared with intact vehicle control by THSD test; ^b*p* < 0.01 and ^c*p* < 0.05 as compared with OVA control by THSD test; ^d*p* < 0.01 as compared with intact vehicle control by DT3 test; ^e*p* < 0.01 as compared with OVA control by DT3 test.

Table S3. Lung weight and gross inspection in intact or OVA-induced allergic asthma mice.

Groups	Lung weights		Congestional regions (%) – gross findings
	Absolute (g)	Relative (%)	
Controls			
Intact vehicle	0.114 ± 0.005	0.693 ± 0.038	2.50 ± 1.53
OVA	0.168 ± 0.011 ^a	1.013 ± 0.085 ^a	47.47 ± 10.21 ^d
Reference			
DEXA	0.122 ± 0.009 ^c	0.784 ± 0.069 ^{ac}	8.40 ± 2.24 ^{de}
Test material groups			
IAP ₄₀₀	0.127 ± 0.008 ^{ac}	0.771 ± 0.060 ^{bc}	8.73 ± 2.88 ^{de}
IAP ₂₀₀	0.139 ± 0.006 ^{ac}	0.840 ± 0.041 ^{ac}	18.81 ± 5.35 ^{de}
IAP ₁₀₀	0.147 ± 0.005 ^{ac}	0.895 ± 0.031 ^{ac}	25.96 ± 5.98 ^{de}

^a*p* < 0.01 and ^b*p* < 0.05 as compared with intact vehicle control by THSD test; ^c*p* < 0.01 as compared with OVA control by THSD test; ^d*p* < 0.01 as compared with intact vehicle control by DT3 test; ^e*p* < 0.01 as compared with OVA control by DT3 test.