



Figure. S1. UPLC-MS/MS of (A) standard phillygenin (10µg/mL), (B) standard phenacitin (50 µg/mL), (C) blank mouse plasma, and (D) blank mouse plasma spiked with standard phillygenin (10 µg/mL) and internal standard (Phillygenin, retention time = 10.0 min; internal standard, retention time = 8.6 min).

Table S1. Precision, accuracy, extraction recovery and matrix effects for the determination of phillygenin in mouse plasma (n = 6).

Concentration	Intra-day		Inter-day		Extraction recovery		Matrix effect	
	RSD (%)	Accuracy (%)	RSD (%)	Accuracy (%)	Mean ±SD (%)	RSD (%)	Mean ±SD (%)	RSD (%)
0.01	6.41	103.3	12.9	92.6	101 ± 3.27	6.94	89.6 ± 4.02	5.42
1	6.86	103.7	5.42	106	103 ± 2.58	4.86	96.2 ± 3.64	6.98
10	3.53	102.3	2.36	101	101 ± 2.03	2.97	102 ± 3.95	7.52

Table S2. Stability of phillygenin in mouse plasma under various conditions (n = 6)

Stability conditions	Concentration (µg/mL)	Calculated concentration		
		Mean ± SD (µg/mL)	RSD (%)	Accuracy (%)
Short-term (RT, 4h)	0.01	0.0090 ± 0.0021	10.30	90.10
	1	0.98 ± 0.0058	6.56	98.01
	10	9.65 ± 0.72	3.26	96.51
Long-term	0.01	0.0092 ± 0.0026	7.86	92.15
	1	1.03 ± 0.704	8.41	103.12
	10	10.01 ± 0.63	5.33	100.14
Freeze-thaw cycles (from -80 °C to RT)	0.01	0.0954 ± 0.0007	9.64	95.44
	1	1.02 ± 0.050	6.84	102.31
	10	10.12 ± 0.231	2.97	101.20