

supplemental information available section

Supplementary Table

Supplementary Table 1. Experimental results of T2D rats model and control group after 8 weeks

	Weight(g)	Water intake(mL/d)	Food intake(g/d)	FBG(mmol/L)	FINS(mU/L)	HOMA-IR
NR(n=6)	299.8 ± 10.2	22.5 ± 3.1	30.3 ± 3.9	5.8 ± 0.6	12.4 ± 1.8	2.9 ± 1.5
T2D(n=24)	228.8 ± 35.9	149.1 ± 6.5**	23.6 ± 0.9**	23.6 ± 7.6**	27.2 ± 2.2**	29.8 ± 5.4**

NR: normal rats; T2D: type 2 diabetes rats. Normal rats were given ordinary feed, type 2 diabetes rats were given high-calorie diets. Differences were assessed by One-way ANOVA and denoted as follows: * $p < 0.05$, ** $p < 0.01$.

Supplementary Table 2. Intra and inter-day precision and accuracy of PHZ and PHT in rat plasma

Nominal concentration ($\mu\text{g/mL}$)	Intra-day (n = 6)			Inter-day (n = 6)			
	Concentration found ($\mu\text{g/mL}$)	RSD (%)	RE (%)	Concentration found ($\mu\text{g/mL}$)	RSD (%)	RE (%)	
PHZ	0.40	0.41	10.36	0.32	0.42	9.06	3.87
	10	9.73	6.00	-2.71	9.70	6.59	-3.09
	80	77.80	4.08	-2.75	78.74	4.23	-1.57
PHT	0.128	0.15	1.87	17.19	0.15	1.31	17.28
	16	15.66	5.08	-2.14	16.13	7.52	0.81
	96	95.55	2.48	-0.47	96.07	2.09	0.07

PHZ: phlorizin; PHT: phloretin

Supplementary Table 3. The extraction recovery of PHZ, PHT and IS (PHZ, PHT, n = 3; IS, n = 3*)

	Nominal concentration ($\mu\text{g/mL}$)	Extraction recovery (%)
PHZ	0.4	82.71 ± 2.19
	10	85.44 ± 0.94
	80	83.94 ± 0.08
PHT	0.128	81.02 ± 1.80
	16	89.60 ± 1.23
	96	84.15 ± 1.18
IS	12.5	75.55 ± 3.76

PHZ: phlorizin; PHT: phloretin

Supplementary Table 4. Stability tests of PHZ and PHT in rat plasma (n = 4).

Conc. (ng/mL)	Room temperature, 4 h Autosampler		Room temperature, 24 h Autosampler		Three freeze–thaw		–20°C, 30 days	
	RSD (%)	RE (%)	RSD (%)	RE (%)	RSD (%)	RE (%)	RSD (%)	RE (%)
0.4	10.47	2.86	10.37	7.57	6.57	-0.51	11.70	-0.05
PHZ 10	6.00	-2.71	7.55	-4.11	6.94	-3.56	7.68	-4.32
80	4.08	-2.75	5.54	-1.03	4.69	-3.13	4.18	-3.23
0.128	3.53	19.31	2.18	18.31	1.74	18.44	2.12	16.77
PHT 16	5.08	-2.14	10.62	0.42	7.92	3.07	6.89	3.15
96	2.48	-0.47	2.74	-0.09	1.81	0.42	1.89	0.76

PHZ: phlorizin; PHT: phloretin