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SUPPORTING INFORMATION

Crateva unilocalaris Buch. shoots attenuate D-galactose-induced brain injury and cognitive disorders of mice through PI3K/Akt/Nrf2 pathway

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Fig. S1 Negative ion current chromatogram of ethanol extract of *Crateva unilocalaris* shoots Peaks identification and their MS data are shown in Table S1.

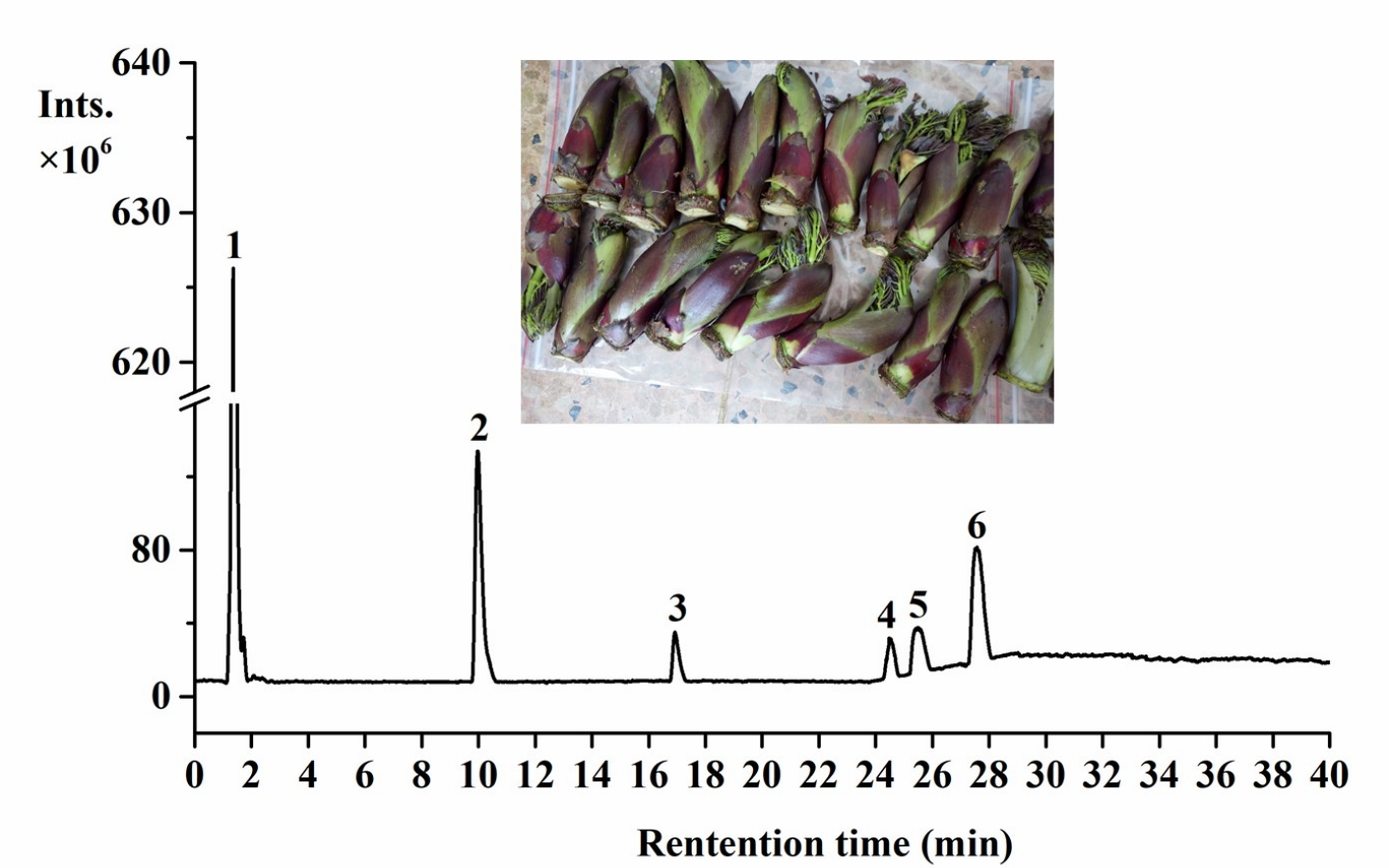


Table S1 Phytochemical compounds identified in *Crateva unilocalaris* shoots by UHPLC-ESI-HRMS/MS in negative mode.

Peak No.	Compounds	Molecular formula	Retention time (min)	$[M-H]^-$ (*m/z*)	Error (ppm)	MS/MS ion fragments	Reference
1	Quinic acid	$C_7H_{12}O_6$	1.36	191.0552	0.918	67.0176, 85.0280, 93.0330	Standard
2	Chlorogenic acid	$C_{16}H_{18}O_9$	9.96	353.0876	2.496	85.0281, 93.0332, 191.0552	Standard
3	3,4-Dicaffeoylquinic acid	$C_{25}H_{24}O_{12}$	16.92	515.1193	1.665	135.0440, 179.0341, 191.0553	Standard
4	Achyranthoside D	$C_{53}H_{82}O_{25}$	24.48	1117.5436	2.793	301.0544, 455.3529, 523.3817	1
5	Ginsenoside Ro	$C_{48}H_{76}O_{19}$	25.51	955.4911	1.061	75.0073, 101.0230, 523.3792	2
6	Chikusetsusaponin IVa	$C_{42}H_{66}O_{14}$	27.57	793.4382	1.698	569.3849, 570.3878, 631.3858	Standard

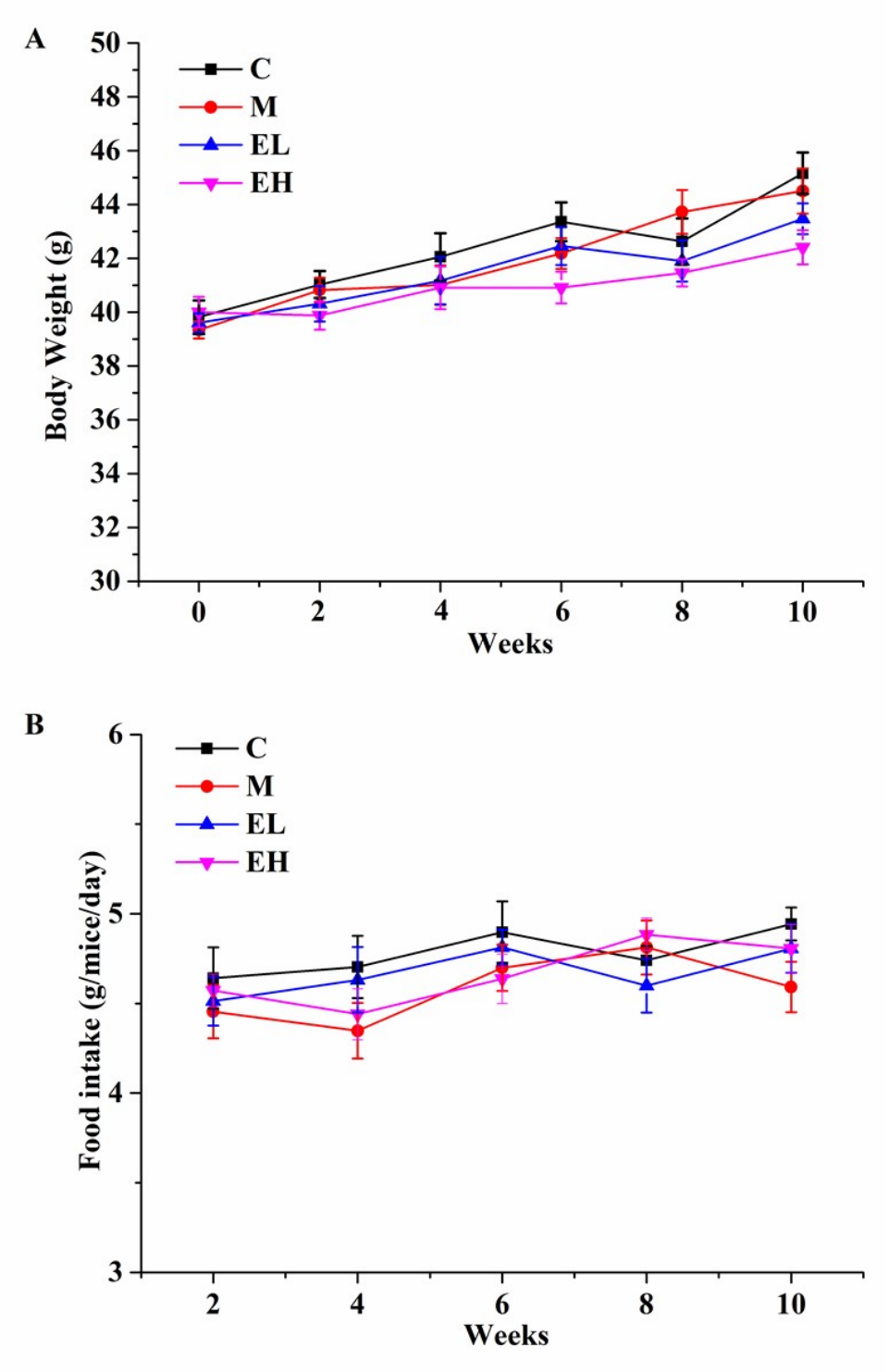
All standards were purchased from Must bio-technology CO., LTD (Chengdu, Sichuan, China) with purity ≥ 97%.

Reference:

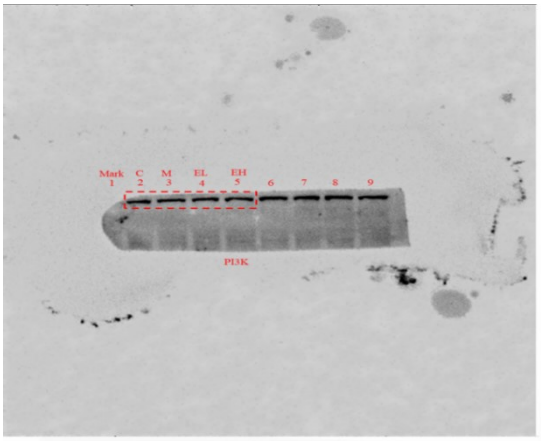
1. F. Allen, R. Greiner, & D. Wishart. Competitive fragmentation modeling of ESIMS/MS spectra for putative metabolite identification. *Metabolomics*, 2015, **11**, 98–110.

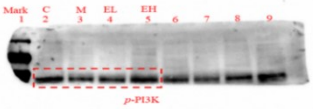
2. Y. J. Li, H. L. Wei, L. W. Qi, J. Chen, M. T. Ren, & P. Li. Characterization and identification of saponins in Achyranthes bidentata by rapid-resolution liquid chromatography with electrospray ionization quadrupole time-of-flight tandem mass spectrometry. *Rapid Commun. in Mass Sp.*, 2010, **24**, 2975–2985

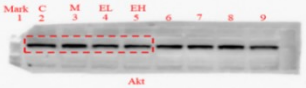
Fig. S2 Effects of *Crateva unilocalaris* shoots administration on the body weights and food intake of mice; C, the control group; M, the model group; EL, the low dose of ethanol extract (200 mg/kg); EH, the high dose of ethanol extract (600 mg/kg).

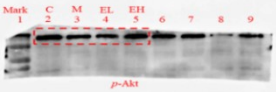


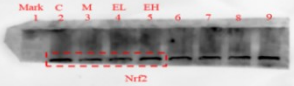
Raw images of western blot in Figure 4

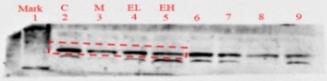

Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
PI3K

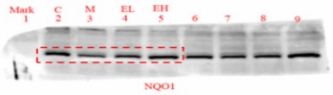

Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
p-PI3K

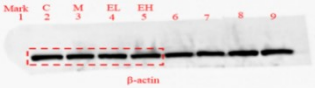

Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
Akt


Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
p-Akt

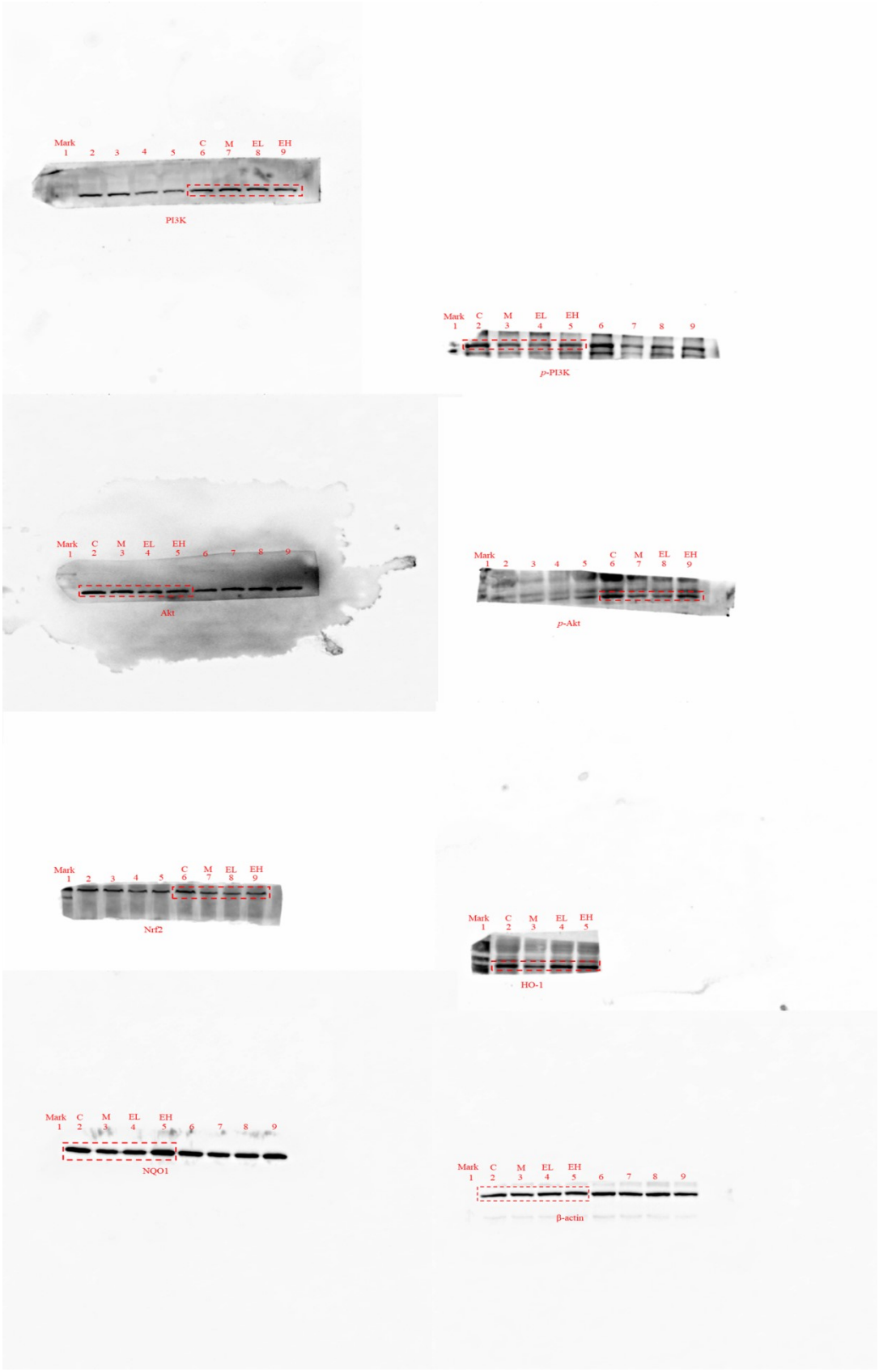

Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
Nrf2


Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
HO-1


Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
NQO1


Mark 1
C 2
M 3
EL 4
EH 5
6
7
8
9
β-actin

Raw images of western blot in Figure 5A



Raw images of western blot in Figure 5E