

1 Table S1. The DP of HPC and reference substance (procyanidins B2)

Sample	Actual DP	Determined DP	Average DP
Procyanidins B2 (reference substance)	2	1.992	2.030 ± 0.129
		2.013	
		2.087	
		2.252	
HPC	-	2.397	2.337 ± 0.132
		2.363	

3 Table S2. LC-EI-MS characteristics of HPC

Retention time (min)	Main compounds	[M-H] ⁻ (m/z)	Typical MS2 ions (m/z)	Content (%)
10.953	Procyanidins B2	577.000	289.200	21.80 ± 0.98
14.089	(-)-Epicatechin	288.900	204.900, 244.900	36.89 ± 1.59
15.434	Procyanidins C1	865.200	712.900, 577.000	11.05 ± 1.00

5 Table S3. Significantly changed selected KEGG pathways among CON, HFD and HPC group.

KEGG ID	Pathways	Mean gene content (%)		
		CON	HFD	HPC
KO04657	IL-17 signaling pathway	0.0013	0.0016*	0.0008##
KO0061	Fatty acid biosynthesis	0.0396	0.0518*	0.0491
KO01230	Biosynthesis of amino acids	0.0178	0.0252*	0.0201#
KO0020	Citrate cycle (TCA)	0.1556	0.0987*	0.1213#
KO00540	Lipopolysaccharide biosynthesis	0.0003	0.0009**	0.0007#

6 Compared with the control group: * $P < 0.05$ and ** $P < 0.01$; compared with the model control group: # P
7 < 0.05 and ## $P < 0.01$.

9 SFigure Captions

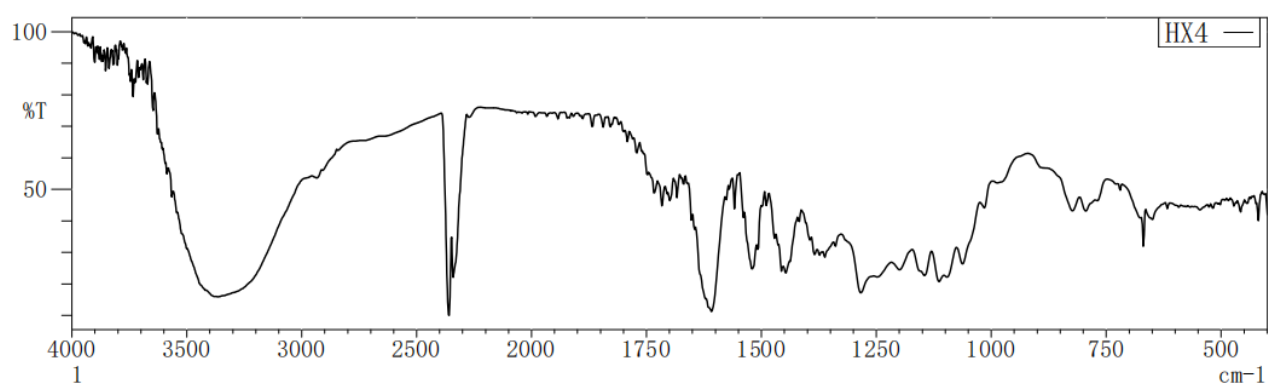
10 Figure S1. The FTIR spectra of HPC.

11 Figure S2. Typical HPLC chromatogram (280 nm) of HPC.

12 Figure S3. HPLC chromatogram of the standard mixture (EC, procyanidin B2, procyanidin C1 and
13 procyanidin B5).

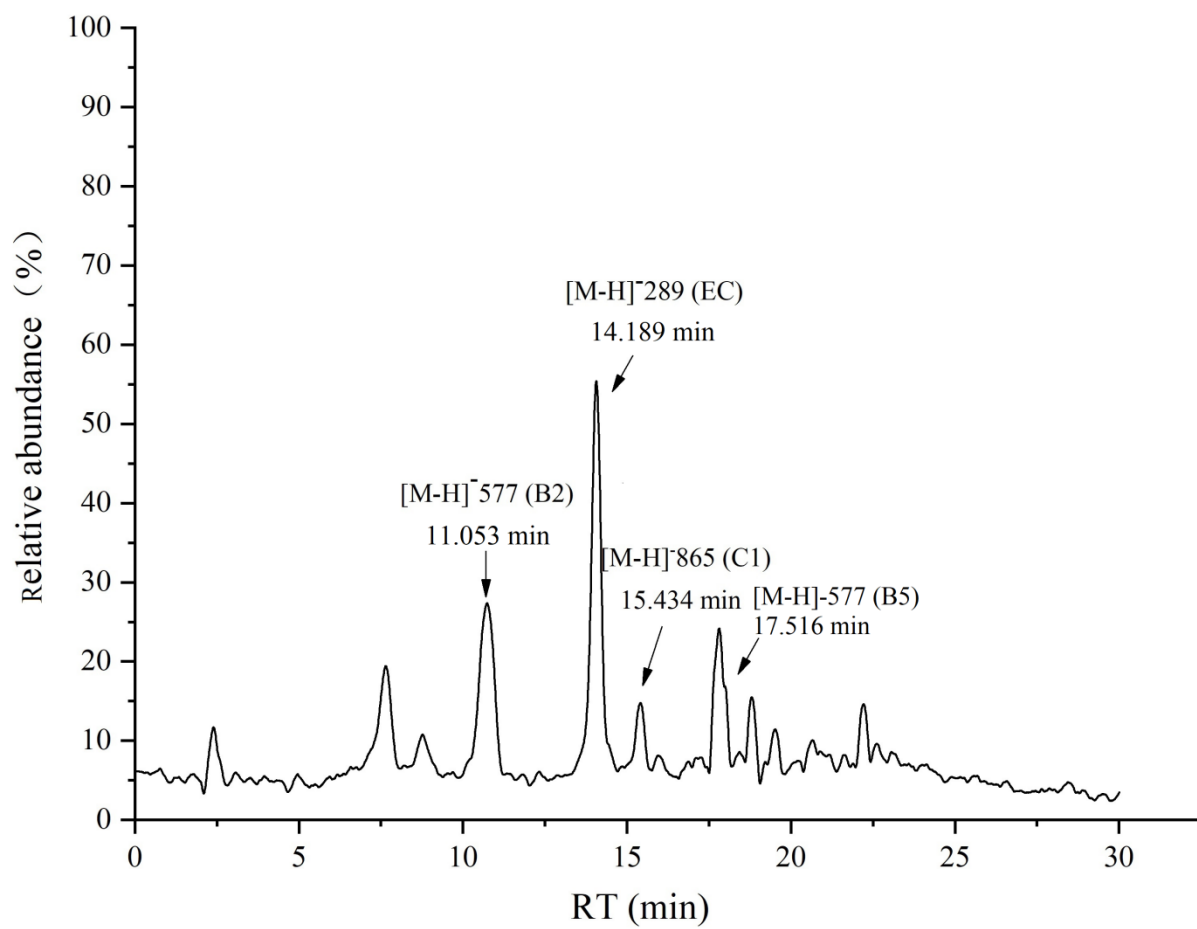
14 Figure S4. Mass spectrum of HPC sample.

16 Figure S1.

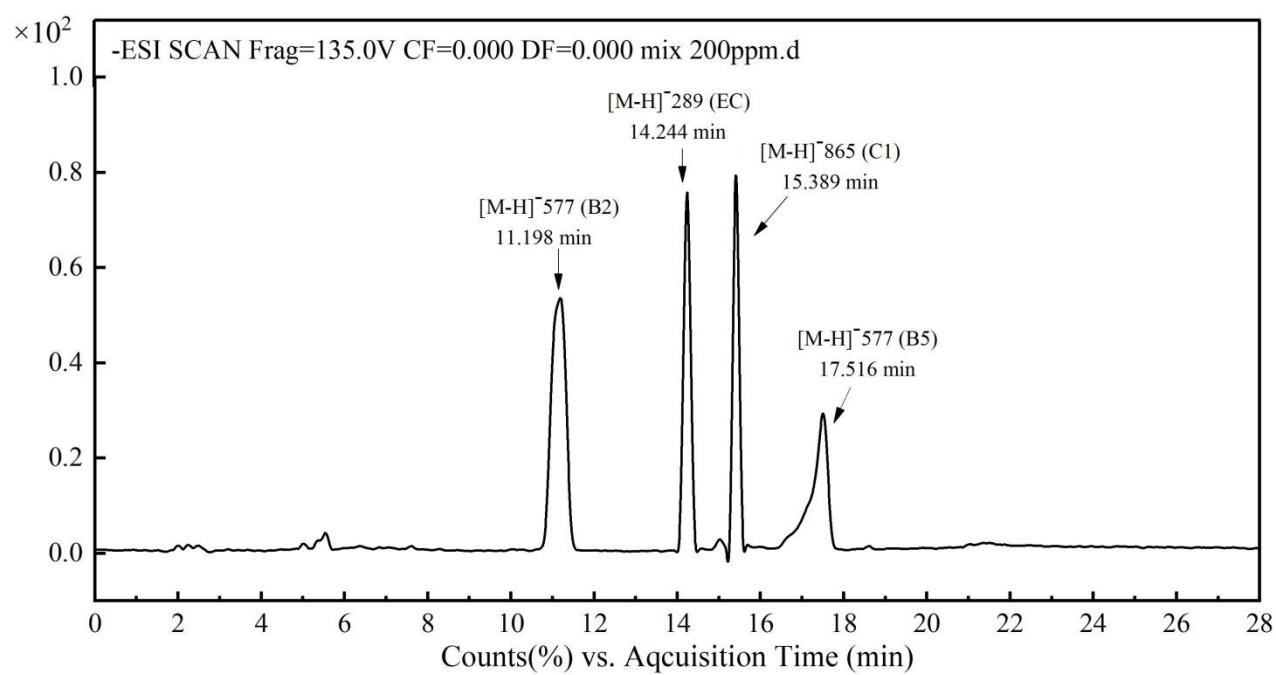


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20 Figure S3.



22 Figure S4.

