Supplementary material

Bioactivity-guided fractionation and NMR-based identification of the immunomodulatory isoflavone from the roots of *Uraria crinita* (L.) Desv. ex DC.

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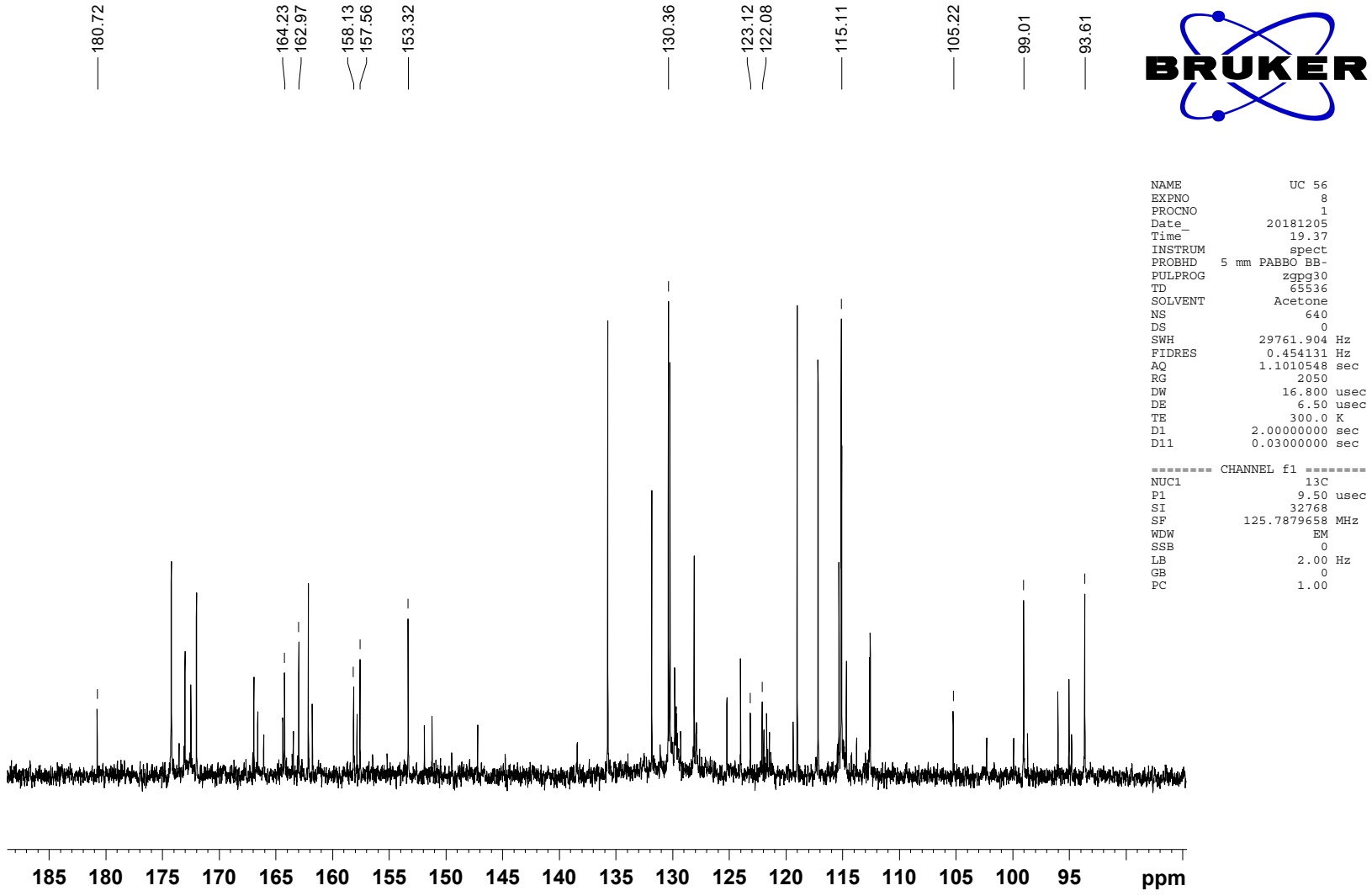
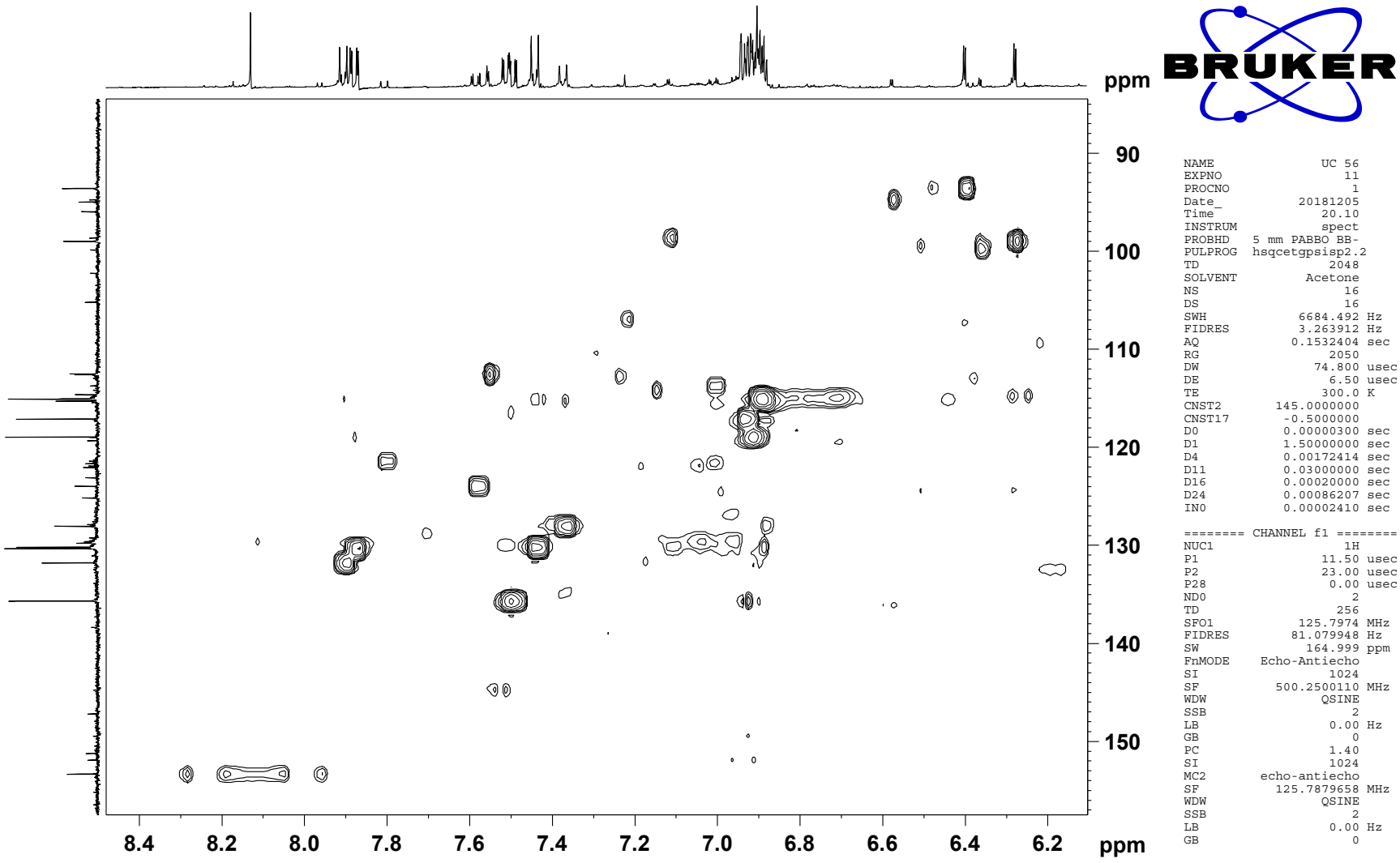


Fig. S1 Selected ^{13}C NMR spectrum (acetone-d_6, 125 MHz) of subfraction D-4.



BRUKER

NAME	UC 56
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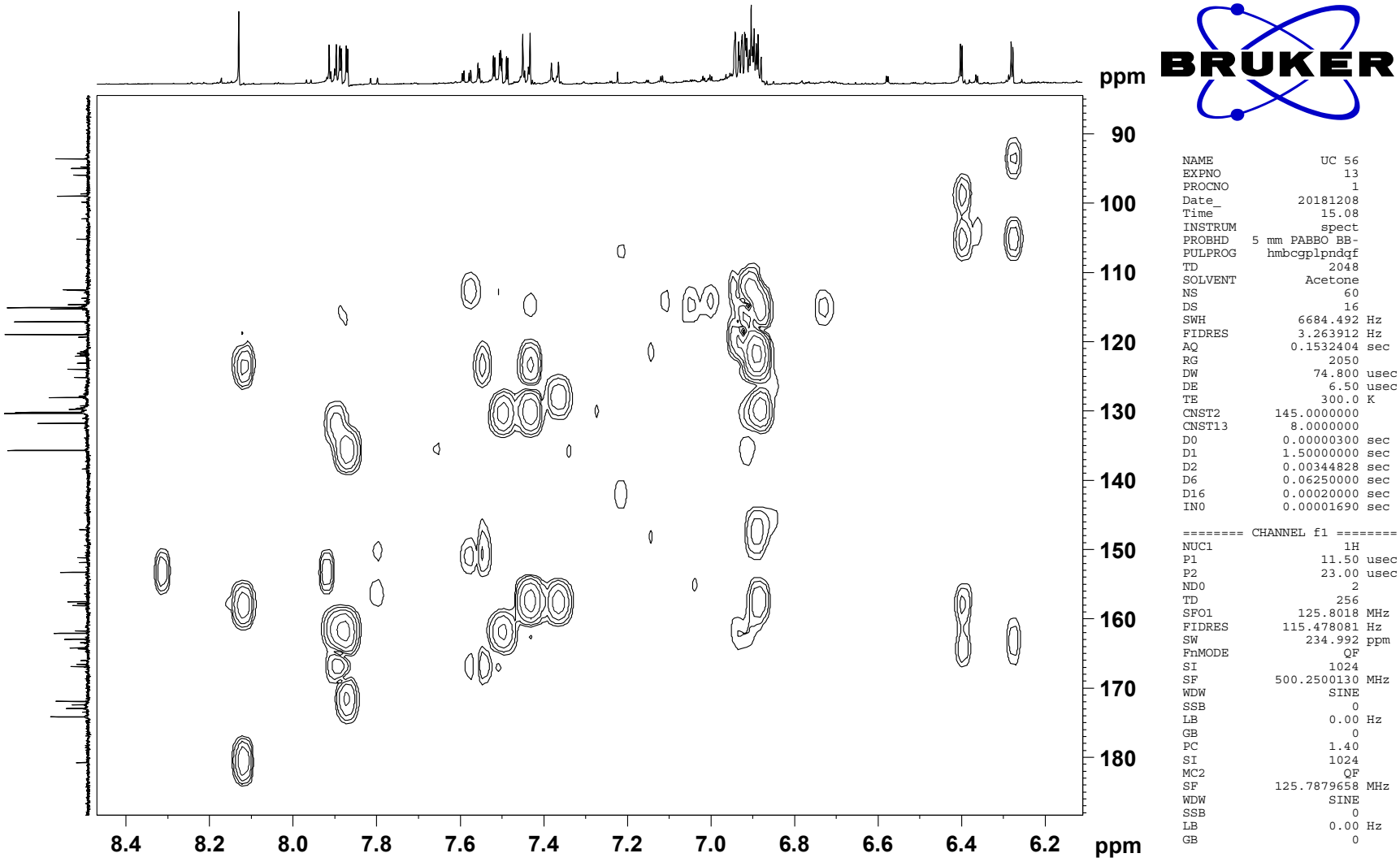
PROCNO	1
Date_	20181205
Time	20.10
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	hsqcetgpsisp2.2
TD	2048
SOLVENT	Acetone
NS	16
DS	16
SWH	6684.492 Hz
FIDRES	3.263912 Hz
AQ	0.1532404 sec
RG	2050
DW	74.800 usec
DE	6.50 usec
TE	300.0 K
CNST2	145.0000000
CNST17	-0.5000000
D0	0.00000300 sec
D1	1.50000000 sec
D4	0.00172414 sec
D11	0.03000000 sec
D16	0.00020000 sec
D24	0.00086207 sec
IN0	0.00002410 sec
======== CHANNEL f1 ========	
NUC1	1H
P1	11.50 usec
P2	23.00 usec
P28	0.00 usec
ND0	2
TD	256
SFO1	125.7974 MHz
FIDRES	81.079948 Hz
SW	164.999 ppm
FnMODE	Echo-Antiecho
SI	1024
SF	500.2500110 MHz
WDW	QSINE
SSB	2
LB	0.00 Hz
GB	0
PC	1.40
SI	1024
MC2	echo-antiecho
SF	125.7879658 MHz
WDW	QSINE
SSB	2
LB	0.00 Hz
GB	0

Fig. S2 Selected HSQC spectrum (acetone-d_6) of subfraction D-4.



BRUKER

NAME	UC 56
EXPNO	13
PROCNO	1
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TD	2048
SOLVENT	Acetone
NS	60
DS	16
SWH	6684.492 Hz
FIDRES	3.263912 Hz
AQ	0.1532404 sec
RG	2050
DW	74.800 usec
DE	6.50 usec
TE	300.0 K
CNST2	145.0000000
CNST13	8.0000000
D0	0.00000300 sec
D1	1.50000000 sec
D2	0.00344828 sec
D6	0.06250000 sec
D16	0.00020000 sec
IN0	0.00001690 sec
======== CHANNEL f1 ========	
NUC1	1H
P1	11.50 usec
P2	23.00 usec
ND0	2
TD	256
SFO1	125.8018 MHz
FIDRES	115.478081 Hz
SW	234.992 ppm
FnMODE	QF
SI	1024
SF	500.2500130 MHz
WDW	SINE
SSB	0
LB	0.00 Hz
GB	0
PC	1.40
SI	1024
MC2	QF
SF	125.7879658 MHz
WDW	SINE
SSB	0
LB	0.00 Hz
GB	0

Fig. S3 Selected HMBC spectrum (acetone-d_6) of subfraction D-4.

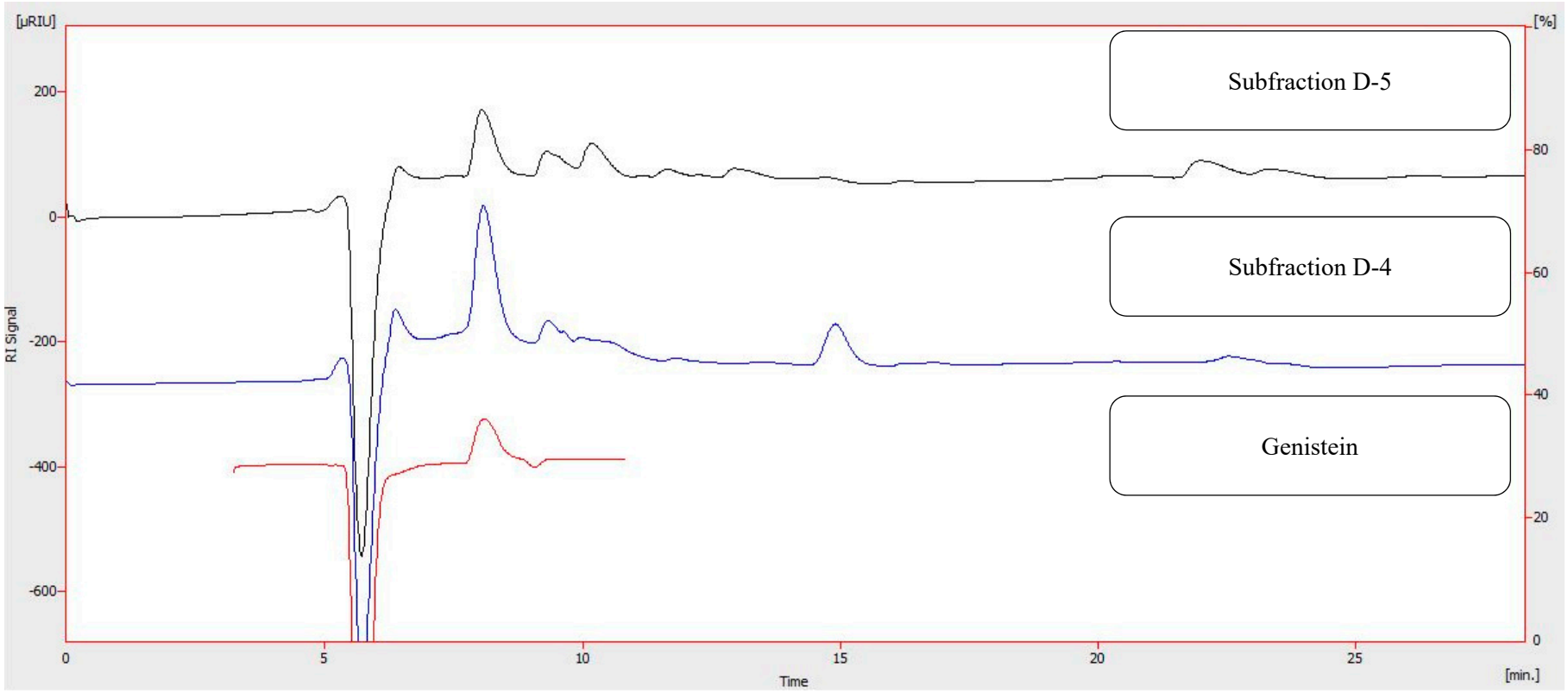

Fig. S4 Chromatogram of genistein-containing subfractions D-4 and D-5.

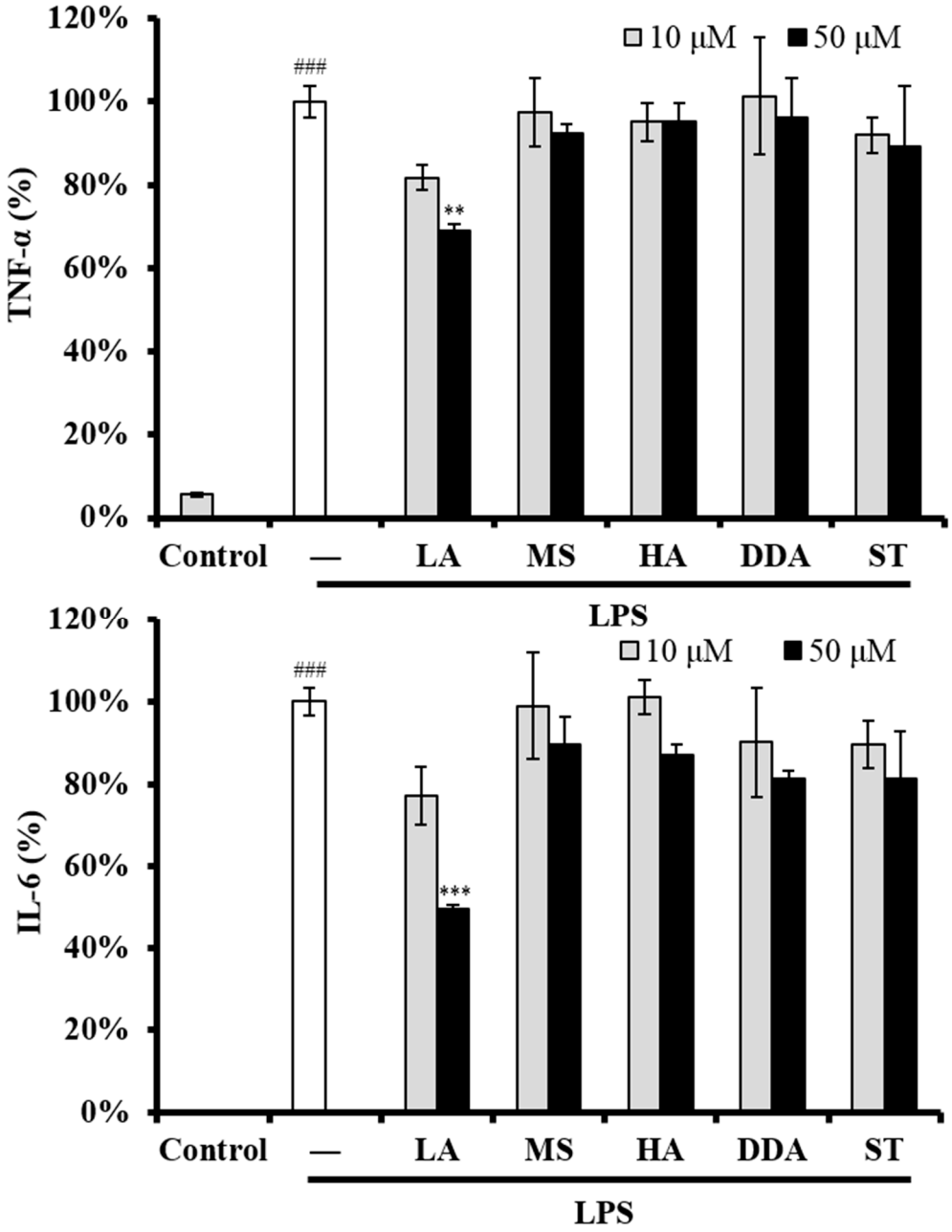

Fig. S5 The effects of the compounds LA (lupinalbin A), MS (*p*-hydroxybenzoic acid), HA (*p*-hydroxybenzoic acid), DDA (*p*-hydroxybenzoic acid), and ST (a mixture of *β*-sitosterol and stigmasterol) on the production of pro-inflammatory cytokines in LPS-stimulated DCs.

DCs were untreated or treated with LPS (100 ng/mL, white bar), LPS + LA, MS, HA, DDA, and ST (10 μM, gray bar or 50 μM, black bar) as indicated. Supernatants were collected at 6 h after the treatment. The production of cytokines (TNF-*α* and IL-6) were measured by ELISA and expressed as percentage inhibition. Data shown are the mean ± SD of three independent experiments. $^{###}p < 0.001$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$ (Scheffe's test) are comparisons between sample-treated and non-treated LPS-stimulated DCs.

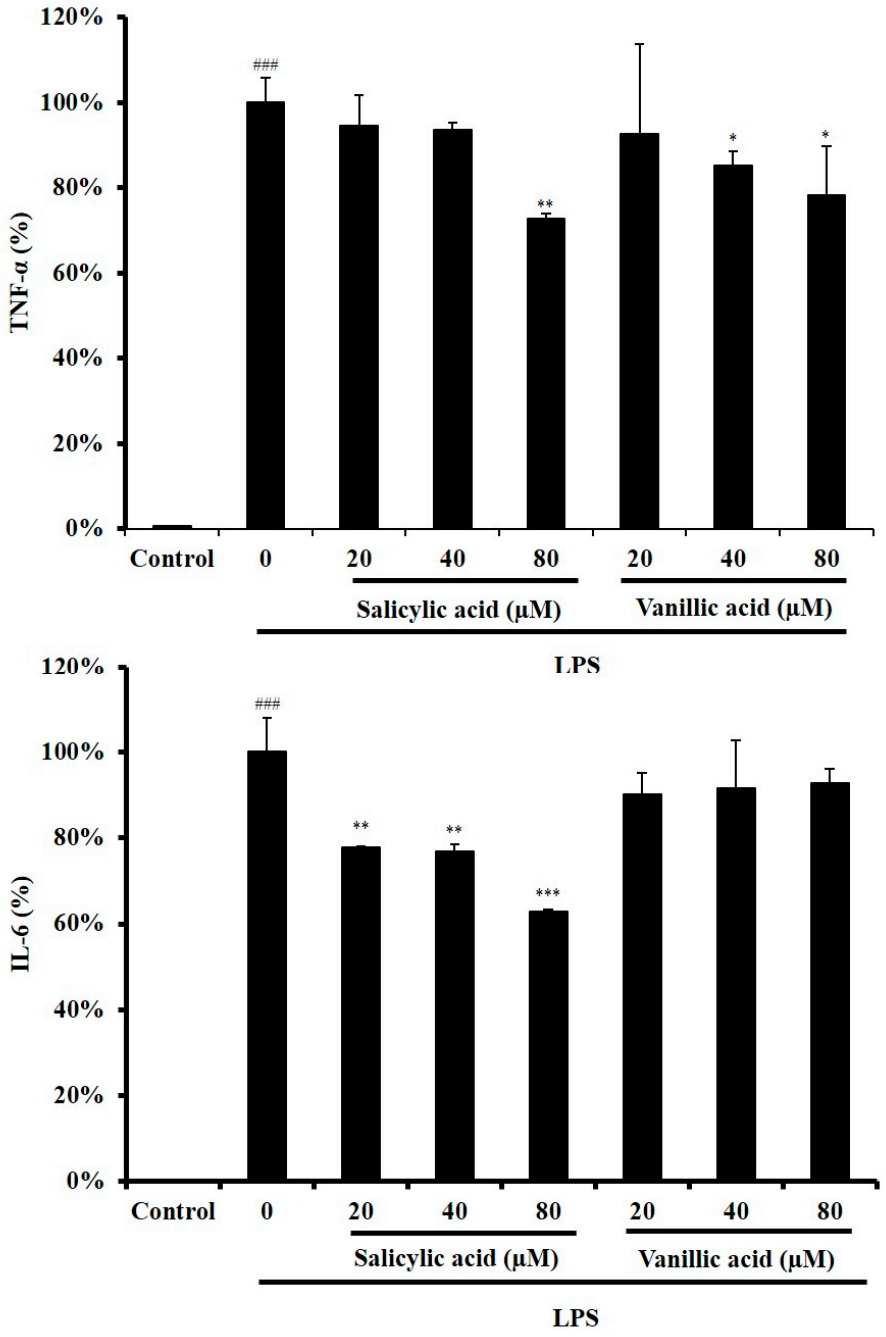

Fig. S6 The effects of the compounds SA (salicylic acid) and VA (vanillic acid) on the production of pro-inflammatory cytokines in LPS-stimulated DCs.

DCs were untreated or treated with LPS (100 ng/mL, white bar), LPS + SA and VA (20, 40, and 80 μM) as indicated. Supernatants were collected at 6 h after the treatment. The production of cytokines (TNF-α and IL-6) were measured by ELISA and expressed as percentage inhibition. Data shown are the mean ± SD of three independent experiments. $^{###}p < 0.001$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$ (Scheffe's test) are comparisons between sample-treated and non-treated LPS-stimulated DCs.