

## Supplementary Materials: Two new proline-containing catechin glucosides from water soluble extract of *Codonopsis pilosula*

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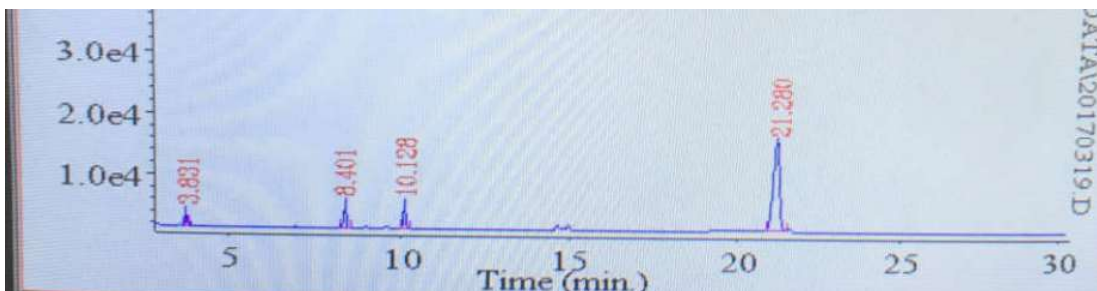


Figure S1. GC analysis of the derivative of D-glucose

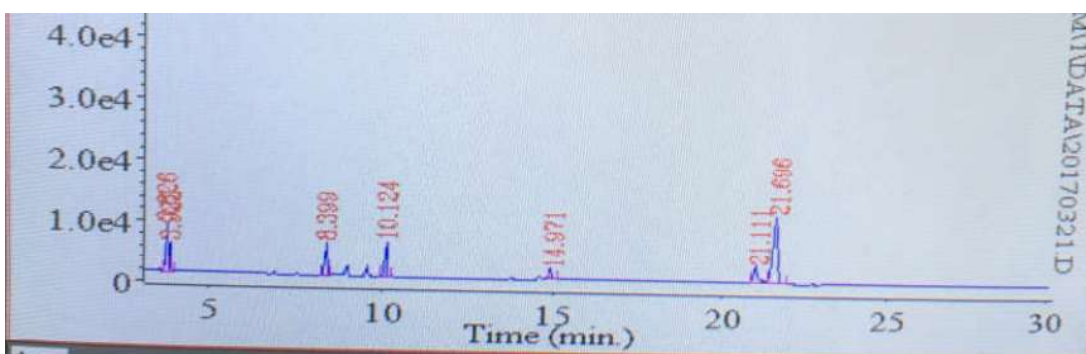


Figure S2. GC analysis of the derivative of L-glucose

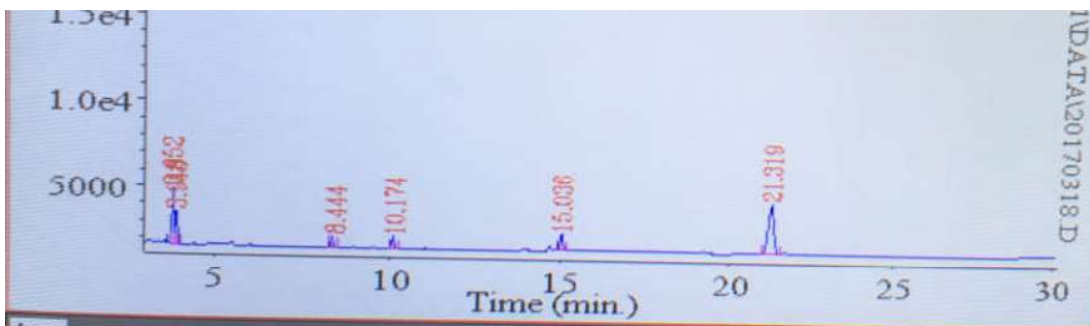


Figure S3. GC analysis of the derivative of compound 1 after hydrolysis

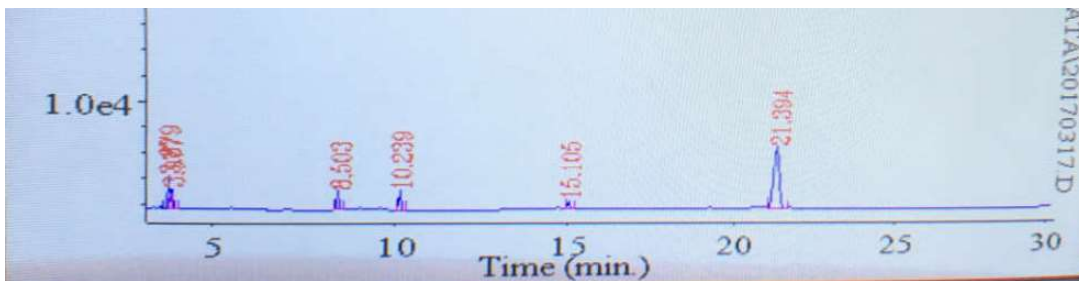


Figure S4. GC analysis of the derivative of compound **2** after hydrolysis

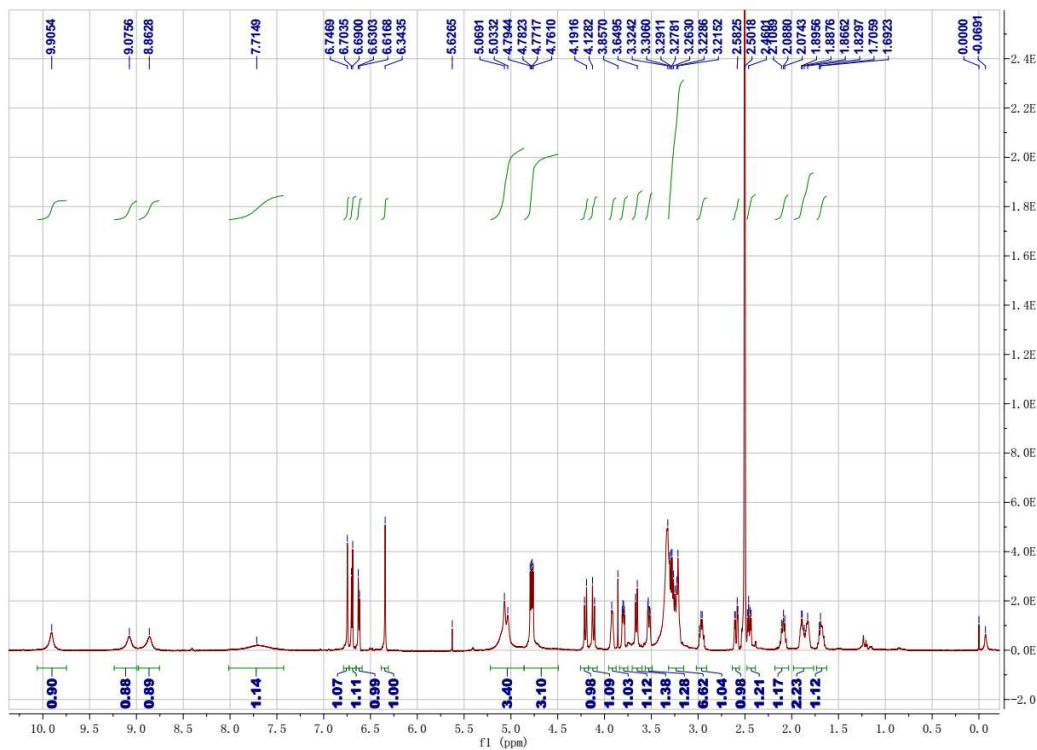


Figure S5. <sup>1</sup>H NMR spectrum of **1** in DMSO-*d*<sub>6</sub>

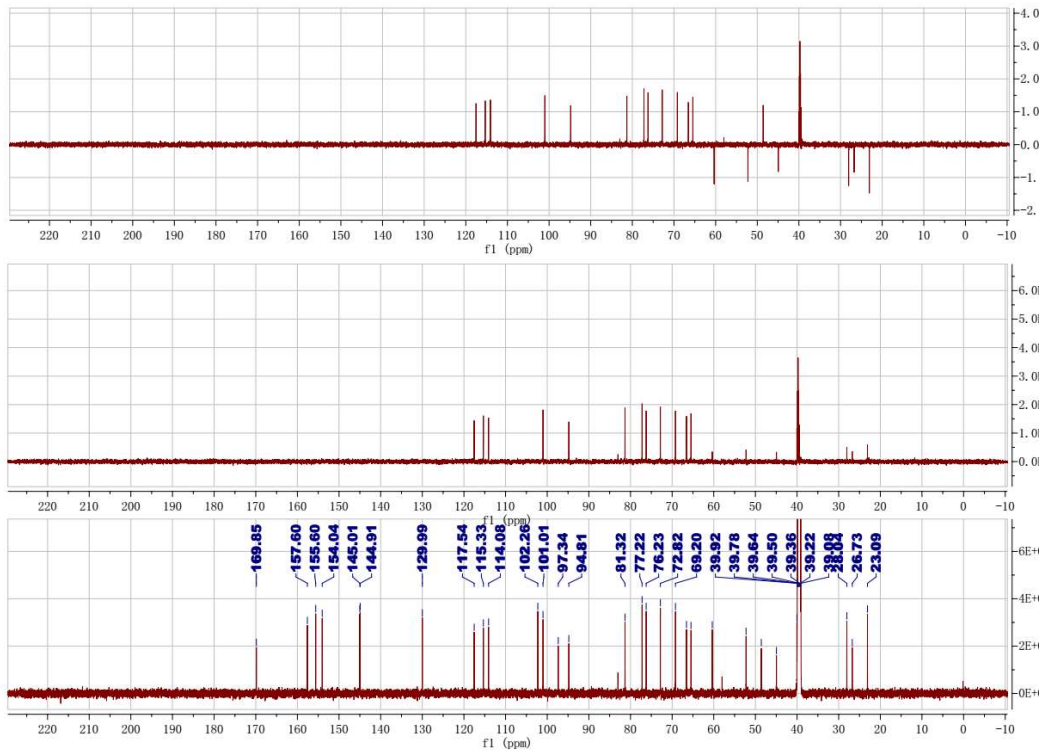


Figure S6.  $^{13}\text{C}$  NMR and DEPT spectra of **1** in  $\text{DMSO-}d_6$

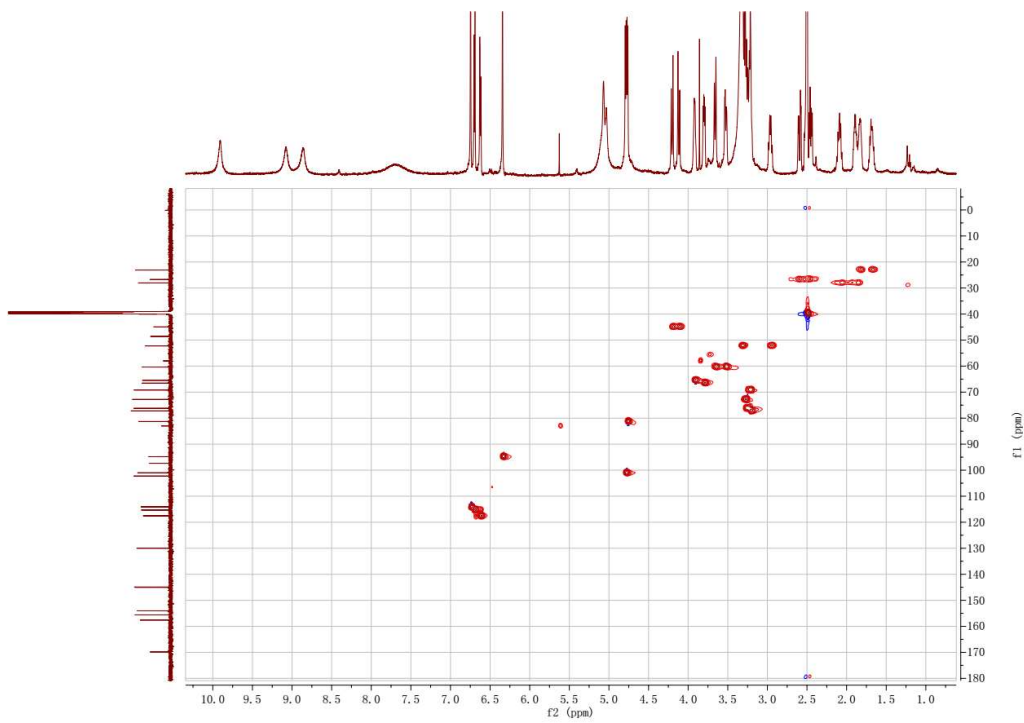


Figure S7. HSQC spectrum of **1** in  $\text{DMSO-}d_6$

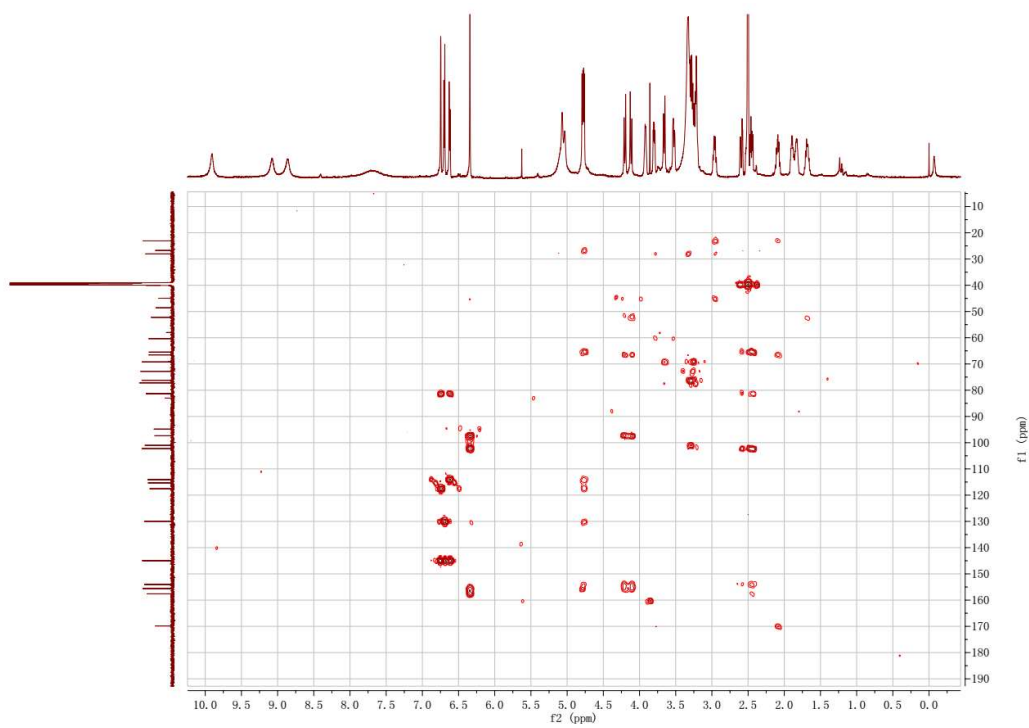


Figure S8. HMBC spectrum of **1** in DMSO-*d*<sub>6</sub>

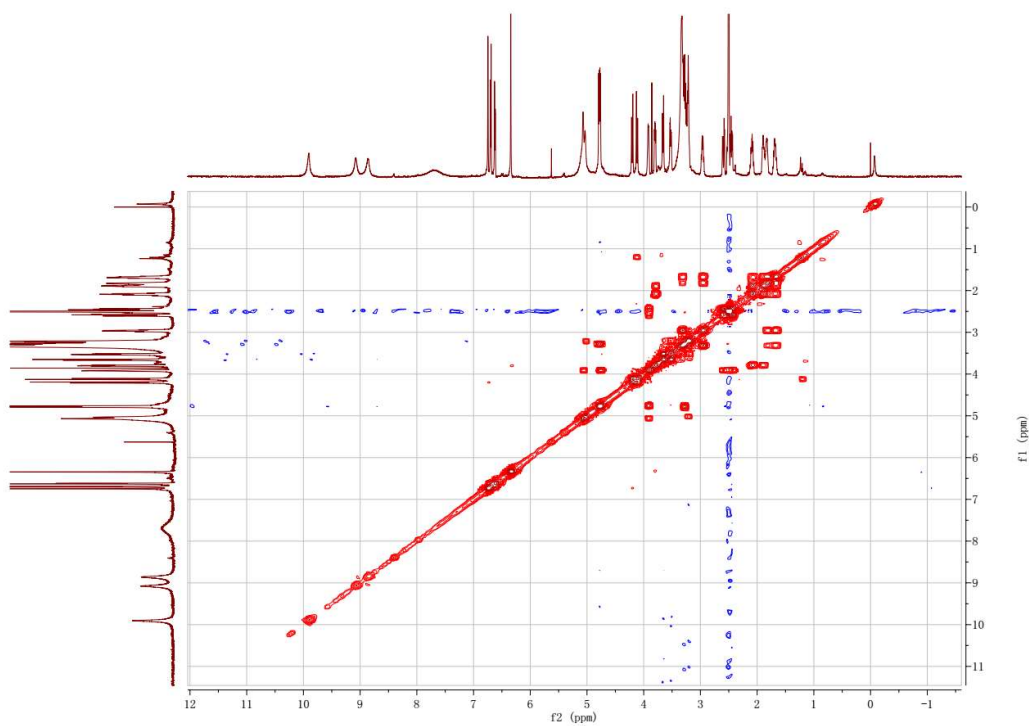


Figure S9. <sup>1</sup>H-<sup>1</sup>H COSY spectrum of **1** in DMSO-*d*<sub>6</sub>

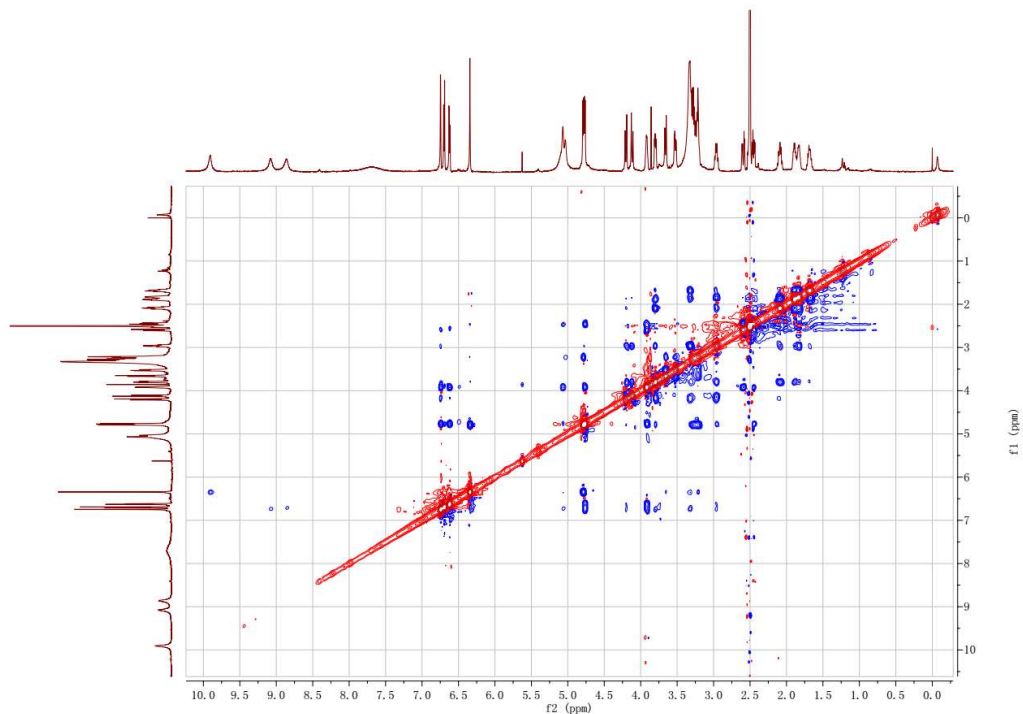


Figure S10. ROESY spectrum of **1** in DMSO-*d*<sub>6</sub>

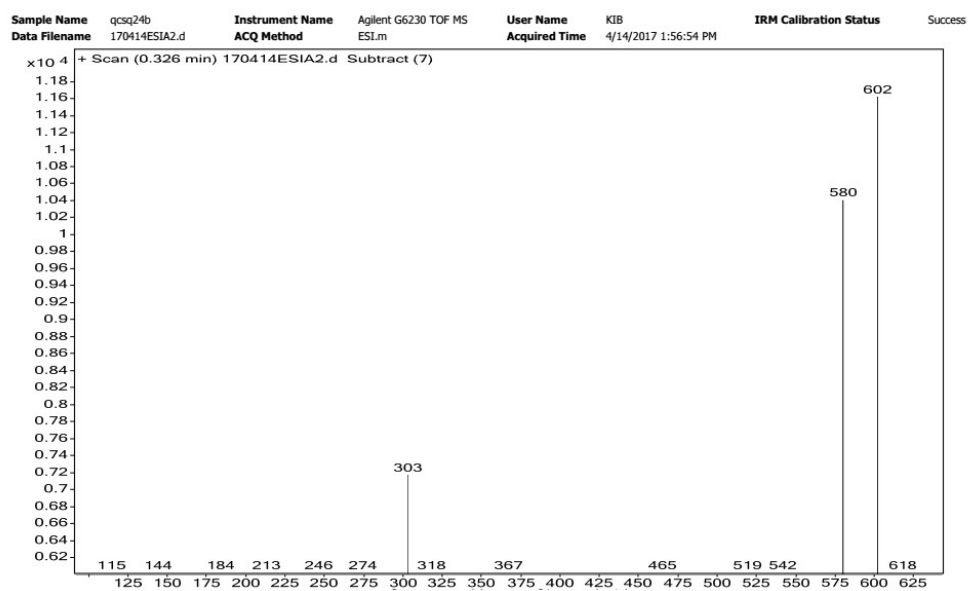
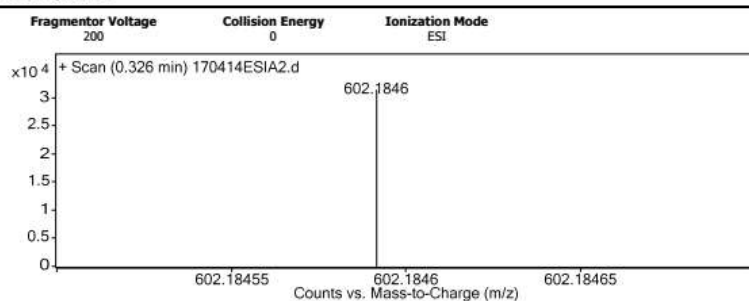


Figure S11. ESIMS of 1

### Qualitative Analysis Report

<b>Data Filename</b>	170414ESIA2.d	<b>Sample Name</b>	qcsq24b
<b>Sample Type</b>	Sample	<b>Position</b>	
<b>Instrument Name</b>	Agilent G6230 TOF MS	<b>User Name</b>	KIB
<b>Acq Method</b>	ESI.m	<b>Acquired Time</b>	4/14/2017 1:56:54 PM
<b>IRM Calibration Status</b>	Success	<b>DA Method</b>	ESI.m
<b>Comment</b>			
<b>Sample Group</b>		<b>Info.</b>	
<b>Acquisition SW</b>	6200 series TOF/6500 series		
<b>Version</b>	Q-TOF B.05.01 (B5125.2)		

#### User Spectra



#### Peak List

m/z	z	Abund	Formula	Ion
121.0509		17087.65		
122.5475	2	15280.45		
143.0606	2	17177.86		
144.0598	2	9992.36		
274.274	1	26189.18		
303.086	1	11699.11		
318.3003	1	22738.51		
580.2022	1	17918.62		
602.1846	1	31253.29	C27 H33 N Na O13	M+
922.0098	1	16979.9		

#### Formula Calculator Element Limits

Element	Min	Max
C	0	200
H	0	400
O	9	15
Na	1	1
N	1	1

#### Formula Calculator Results

Formula	CalculatedMass	Mz	Diff.(mDa)	Diff. (ppm)	DBE
C27 H33 N Na O13	602.1850	602.1846	0.4	0.6	11.5

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Figure S12. HRESIMS of 1

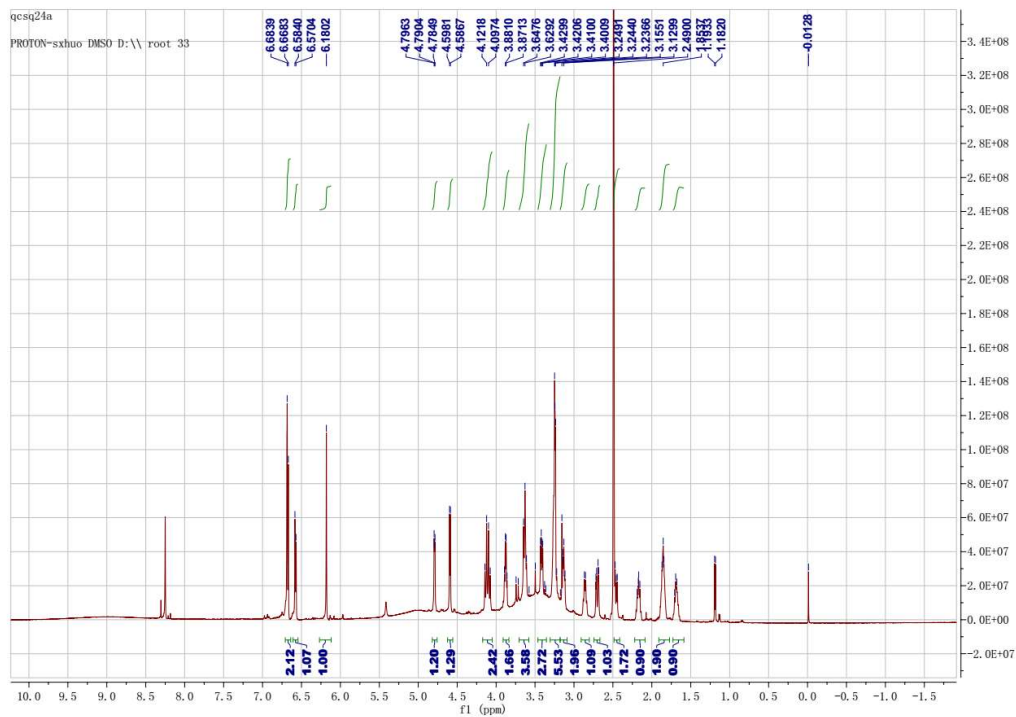


Figure S13.  $^1\text{H}$  NMR spectrum of **2** in  $\text{DMSO-}d_6$

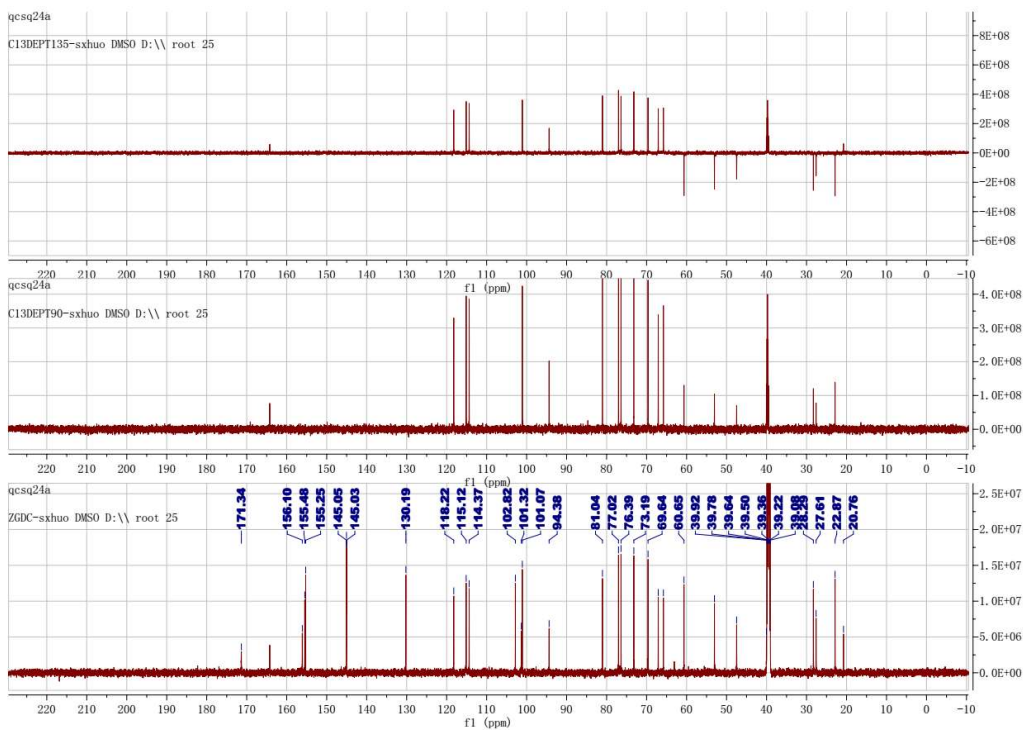


Figure S14.  $^{13}\text{C}$  NMR and DEPT spectra of **2** in  $\text{DMSO-}d_6$

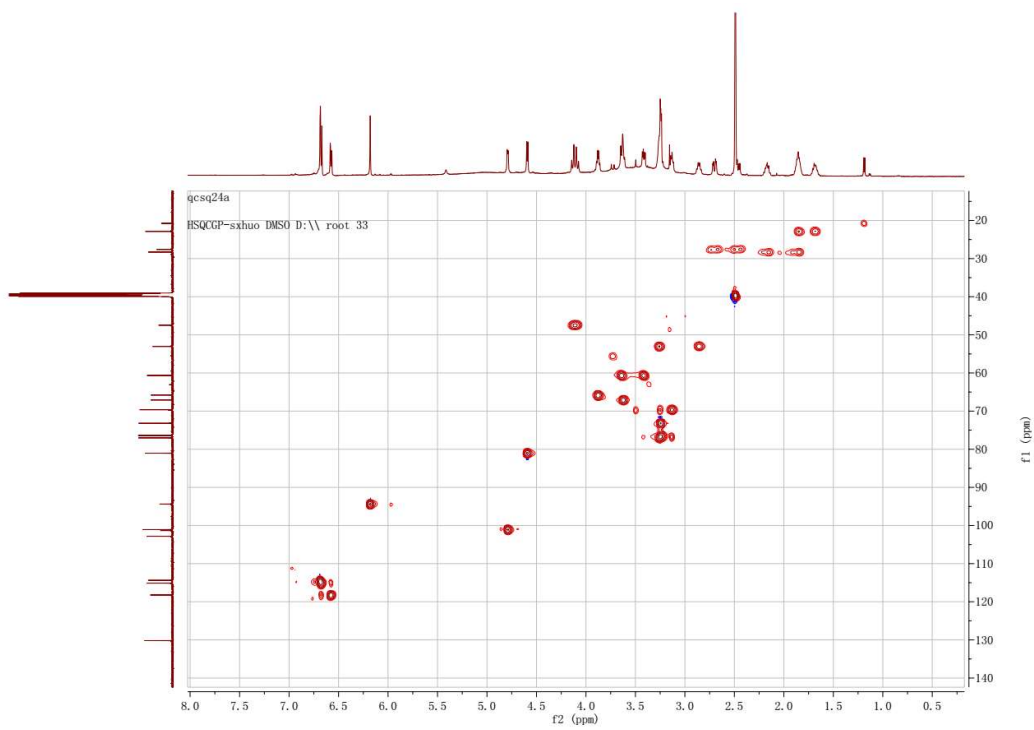


Figure S15. HSQC spectrum of **2** in DMSO-*d*<sub>6</sub>

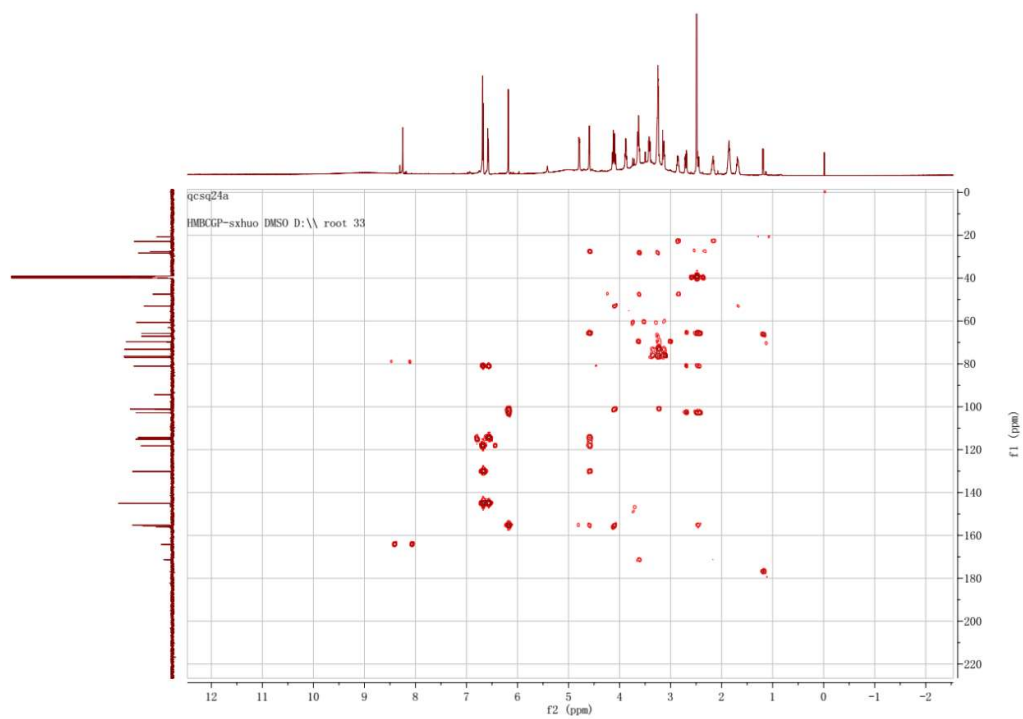


Figure S16. HMBC spectrum of **2** in DMSO-*d*<sub>6</sub>



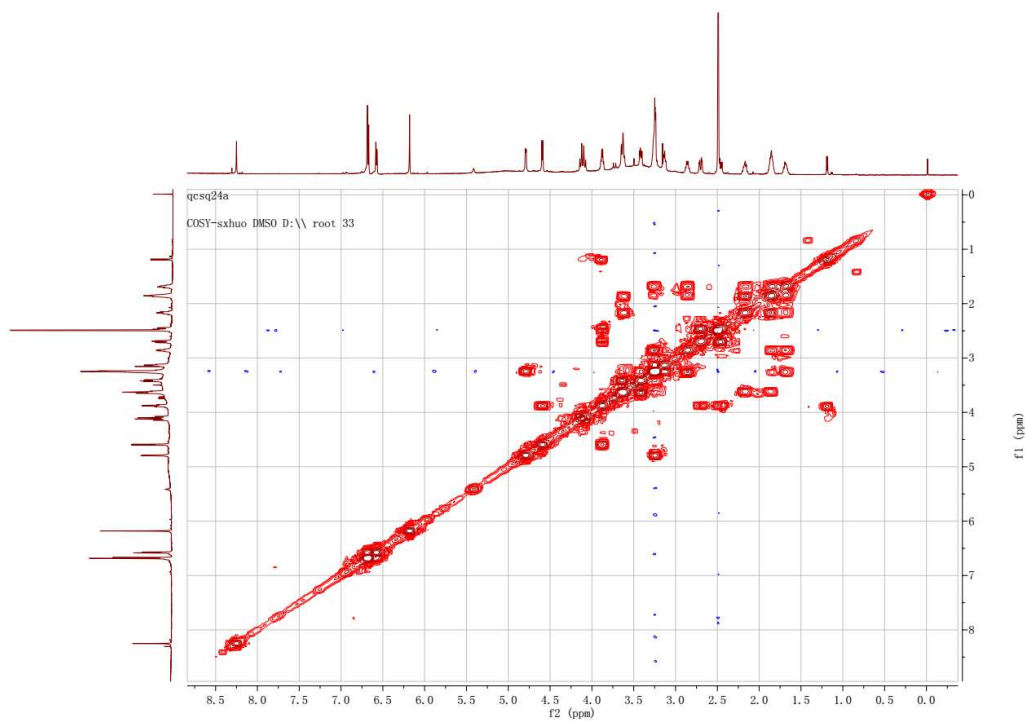


Figure S17.  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **2** in  $\text{DMSO-}d_6$

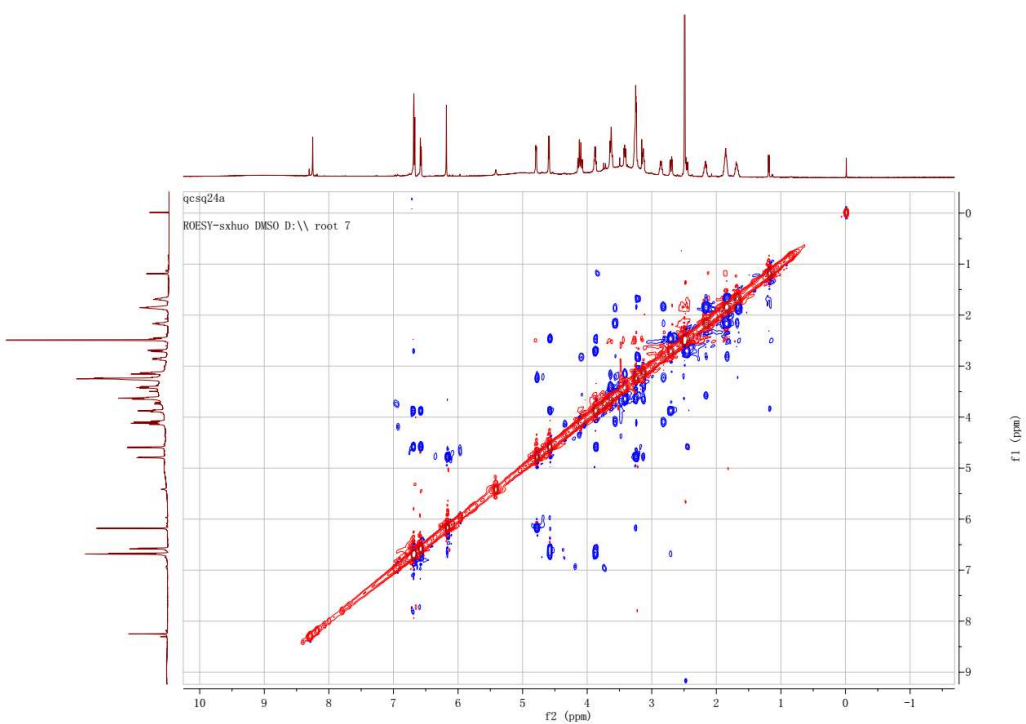


Figure S18. ROESY spectrum of **2** in  $\text{DMSO-}d_6$

Sample Name qcsq24a Instrument Name Agilent G6230 TOF MS User Name KIB IRM Calibration Status Success  
Data Filename 170314ESIA1.d ACQ Method ES.Lm Acquired Time 3/13/2017 2:07:23 PM

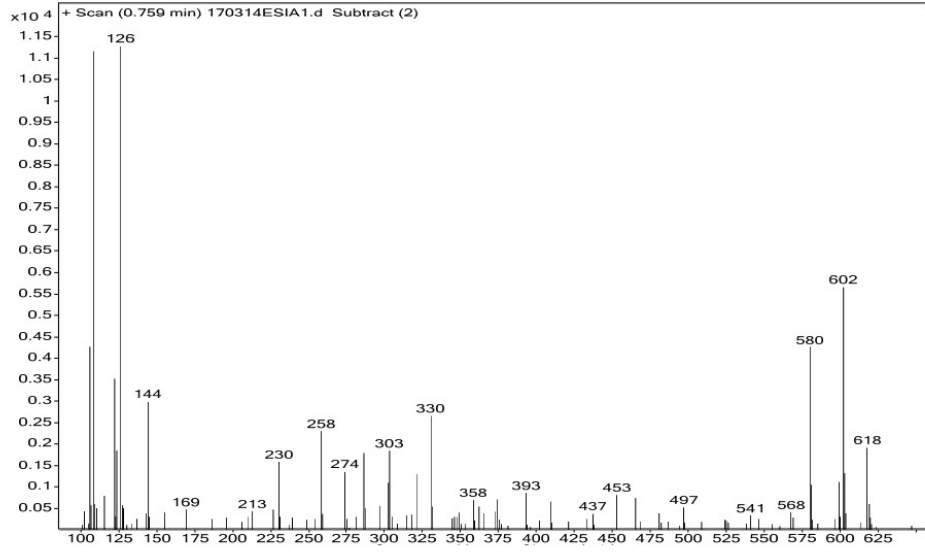
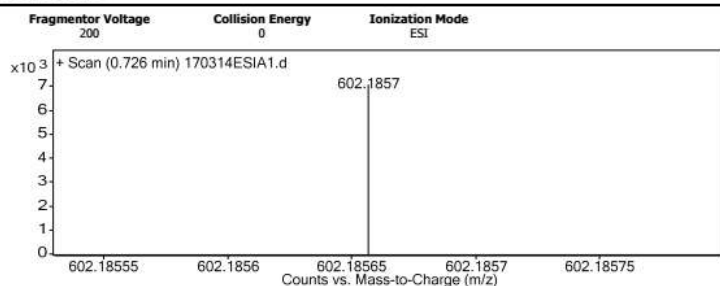


Figure S19. ESIMS of 2

## Qualitative Analysis Report

<b>Data Filename</b>	170314ESIA1.d	<b>Sample Name</b>	qcsq24a
<b>Sample Type</b>	Sample	<b>Position</b>	
<b>Instrument Name</b>	Agilent G6230 TOF MS	<b>User Name</b>	KIB
<b>Acq Method</b>	ESI.m	<b>Acquired Time</b>	3/13/2017 2:07:23 PM
<b>IRM Calibration Status</b>	Success	<b>DA Method</b>	ESI.m
<b>Comment</b>			
<b>Sample Group</b>		<b>Info.</b>	
<b>Acquisition SW</b>	6200 series TOF/6500 series		
<b>Version</b>	Q-TOF B.05.01 (B5125.2)		

### User Spectra



#### Peak List

m/z	z	Abund	Formula	Ion
121.0509		6373.15		
258.2793	1	4615.45		
286.3106	1	4008.49		
330.3375	1	6854.11		
349.1842	1	4156.34		
368.4257	1	8757.31		
393.2099	1	5436.61		
437.2344	1	4927.79		
481.2624	1	3878.74		
602.1857	1	7046.48	C27 H33 N Na O13	M+

#### Formula Calculator Element Limits

Element	Min	Max
C	0	200
H	0	400
O	9	16
Na	1	1
N	1	1

#### Formula Calculator Results

Formula	CalculatedMass	Mz	Diff. (mDa)	Diff. (ppm)	DBE
C27 H33 N Na O13	602.1850	602.1857	-0.7	1.2	11.5

--- End Of Report ---

Figure S20. HRESIMS of 2