

# **Secondary Metabolites with $\alpha$ -Glucosidase Inhibitory Activity From the Mangrove Fungus *Mycosphaerella* sp. SYSU-DZG01**

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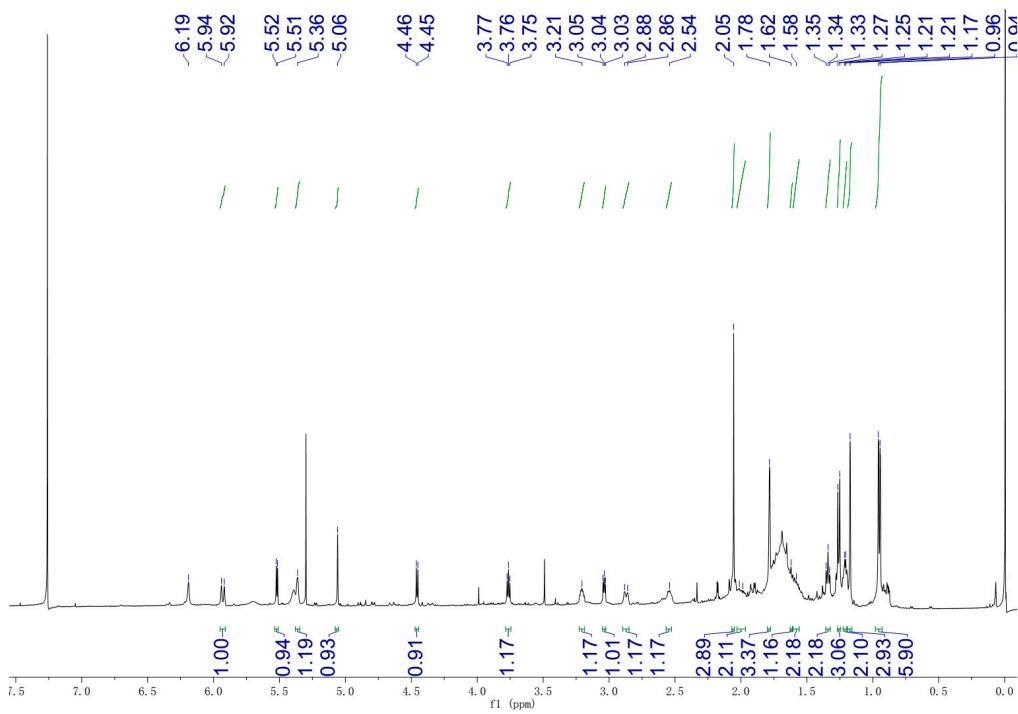
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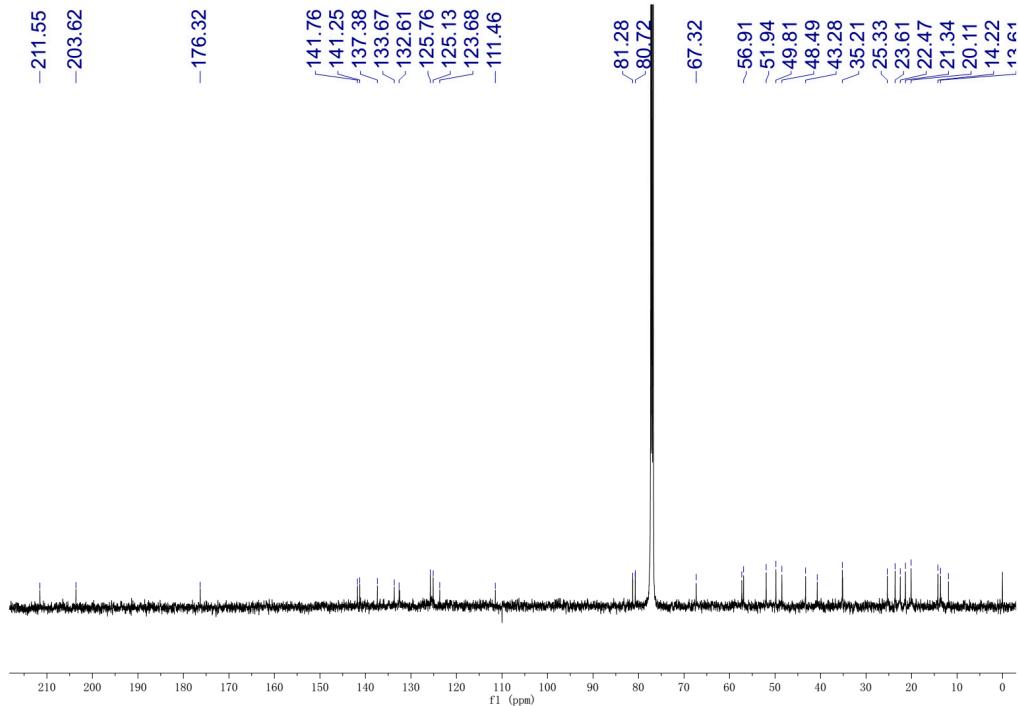
E-mail address: chgying123@163.com (G-Y.C.); cesshzg@mail.sysu.edu.cn (Z.S.)

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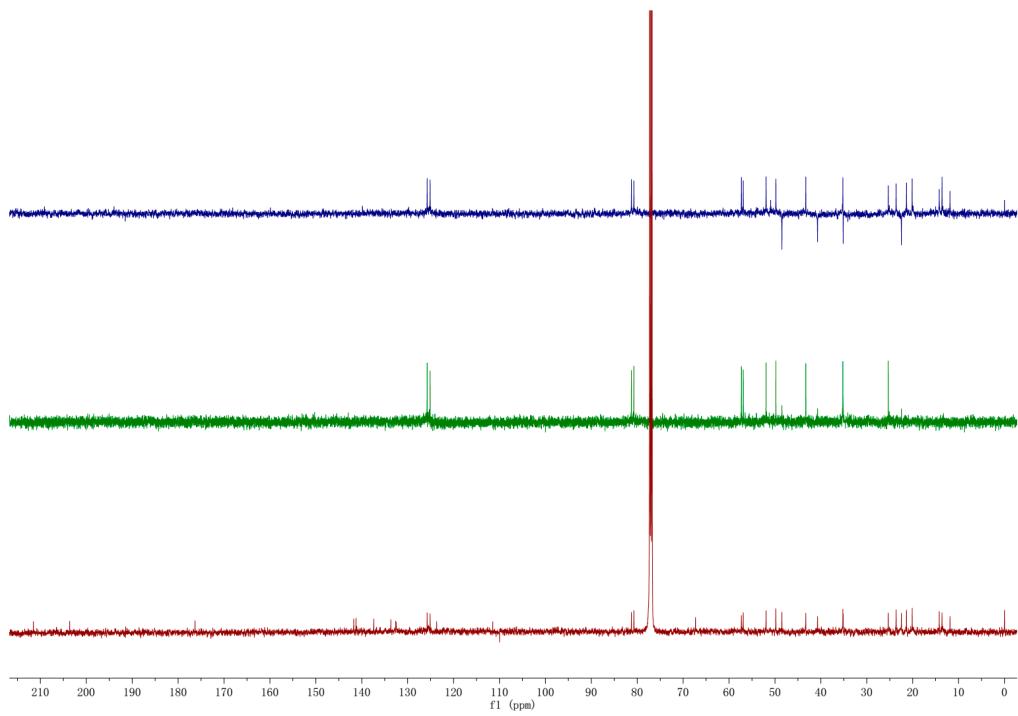
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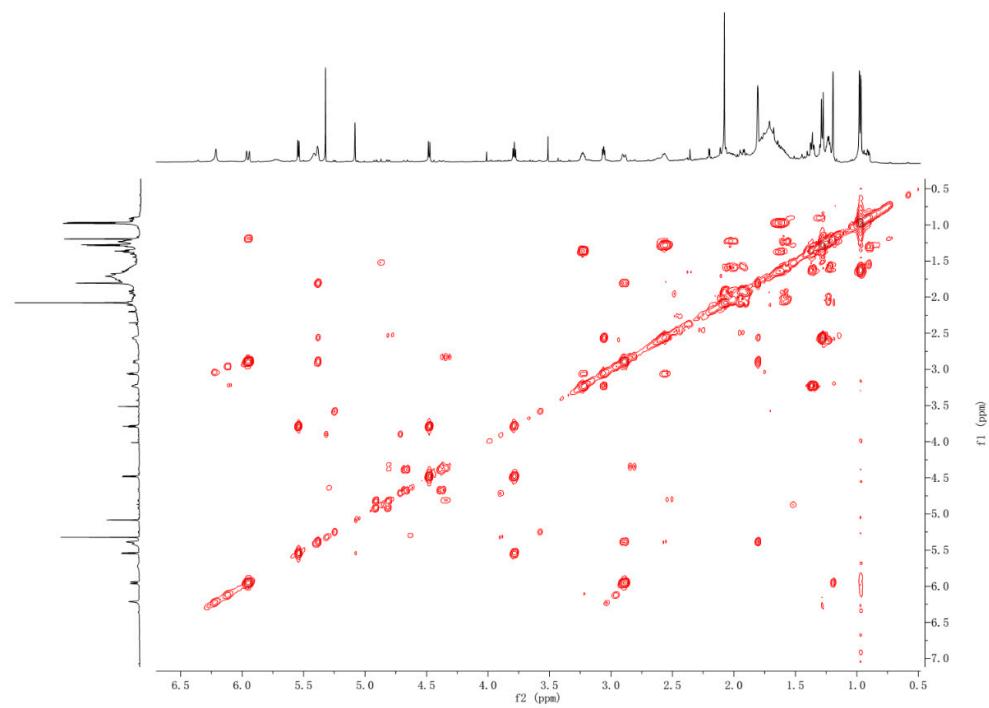
**Fig.S1**  $^1\text{H}$  NMR spectrum of compound **1** (500 MHz,  $\text{CDCl}_3$ ).



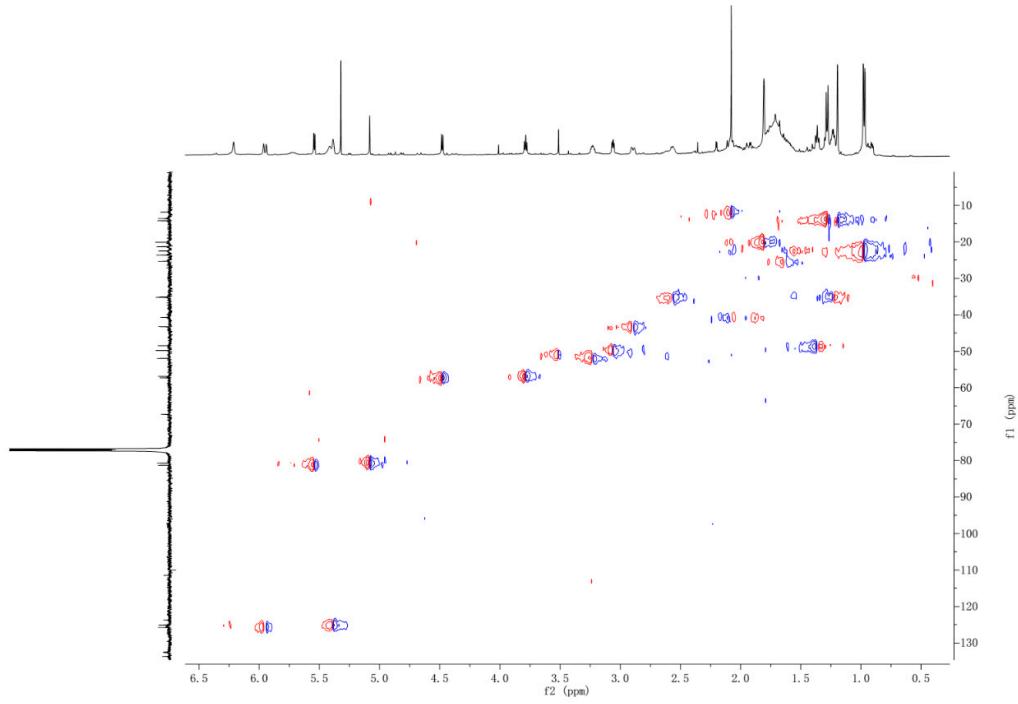
**Fig.S2**  $^{13}\text{C}$  NMR spectrum of compound **1** (125 MHz,  $\text{CDCl}_3$ ).



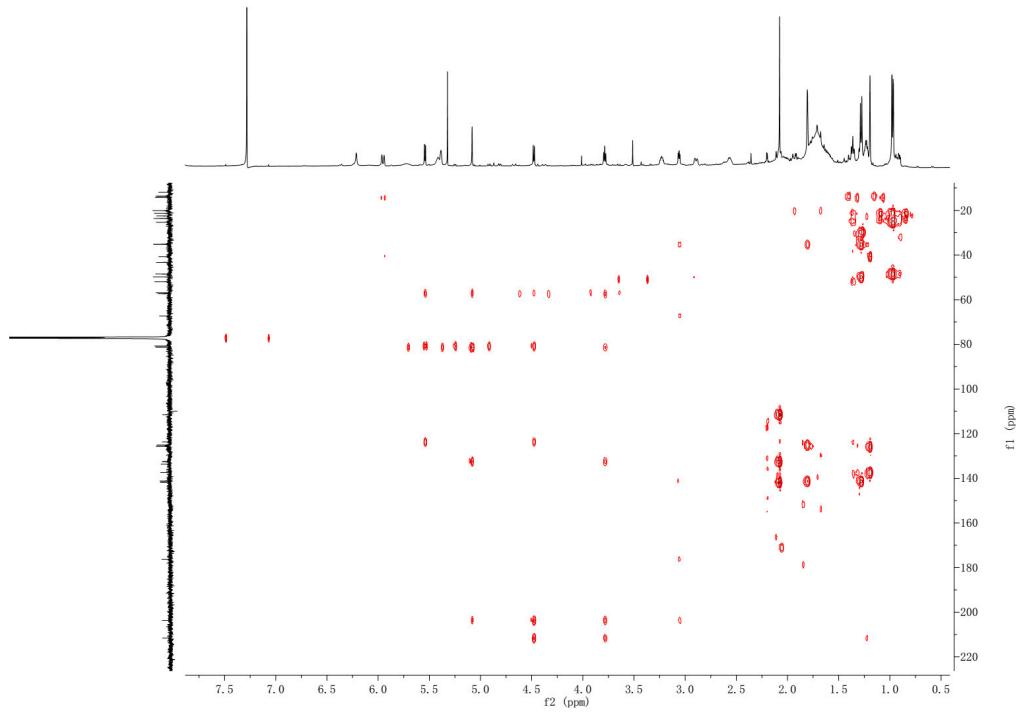
**Fig.S3** DEPT 135, DEPT 90 and  $^{13}\text{C}$  NMR spectrum of compound **1** (125 MHz,  $\text{CDCl}_3$ ).



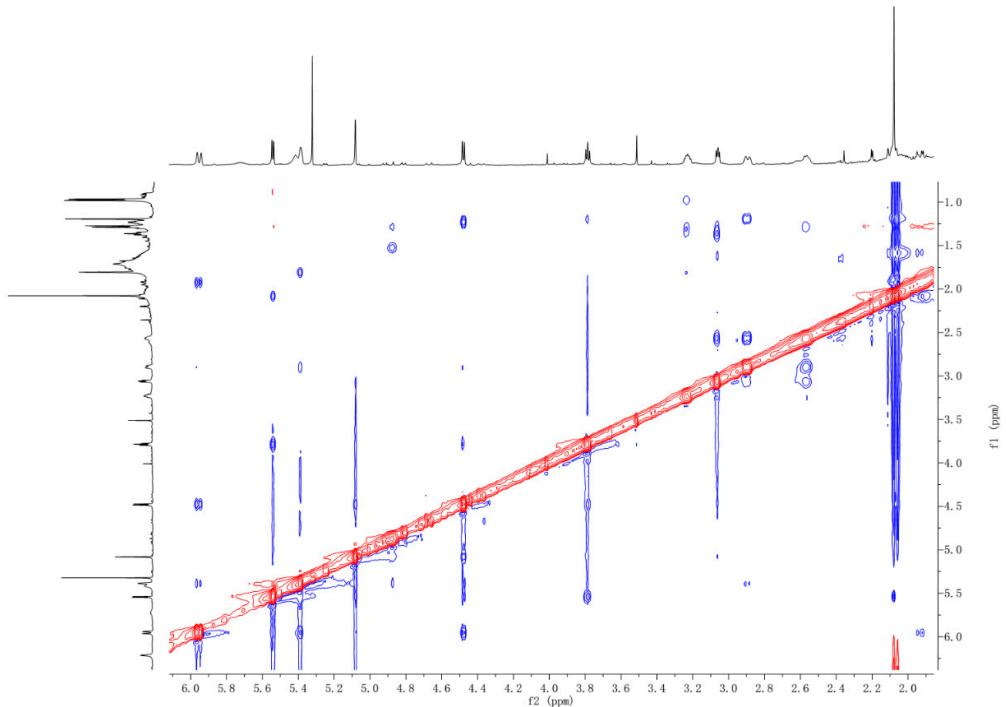
**Fig.S4**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **1** ( $\text{CDCl}_3$ ).



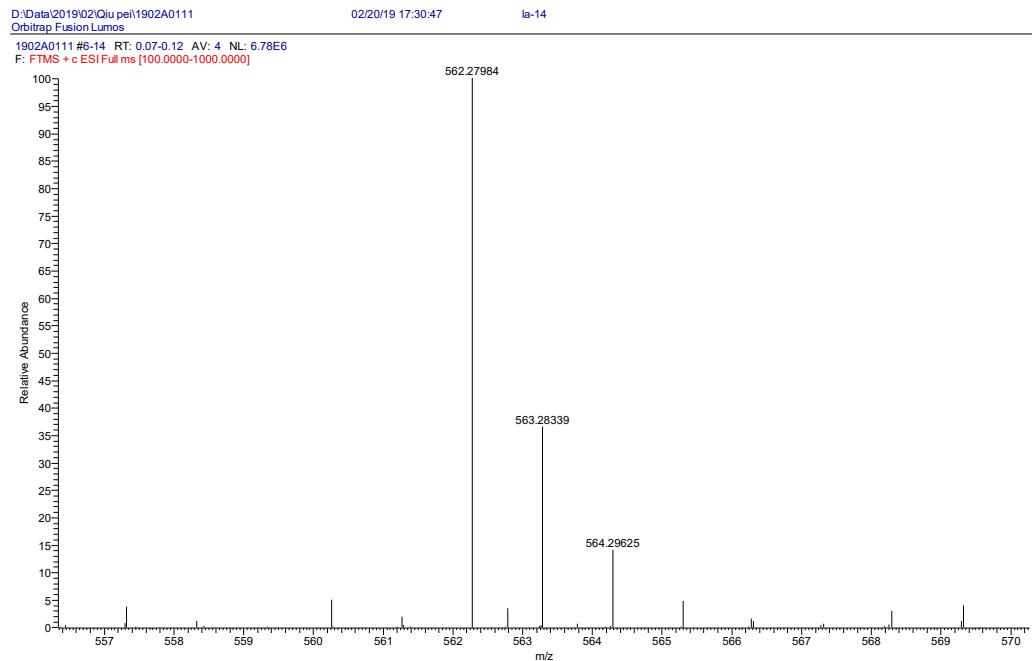
**Fig.S5** HSQC spectrum of compound **1** ( $\text{CDCl}_3$ ).



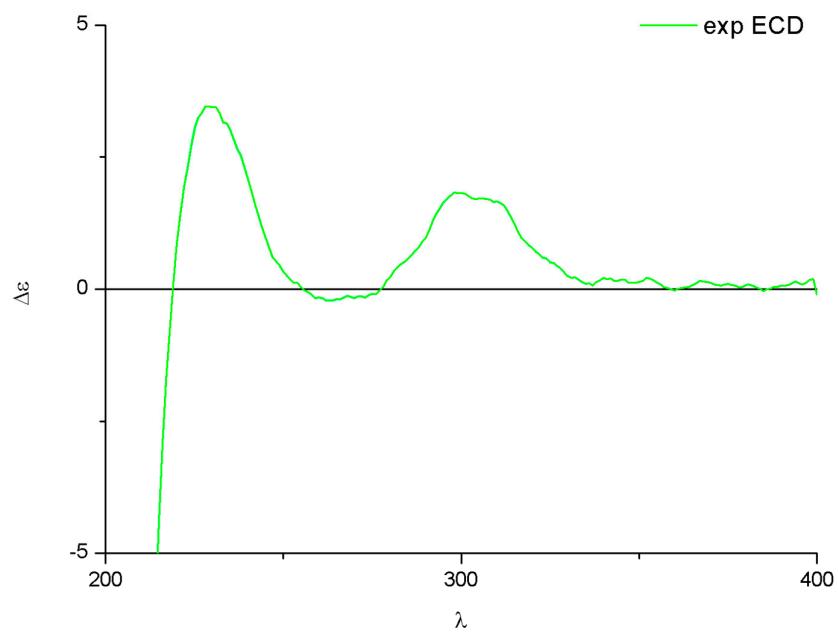
**Fig.S6** HMBC spectrum of compound **1** ( $\text{CDCl}_3$ ).



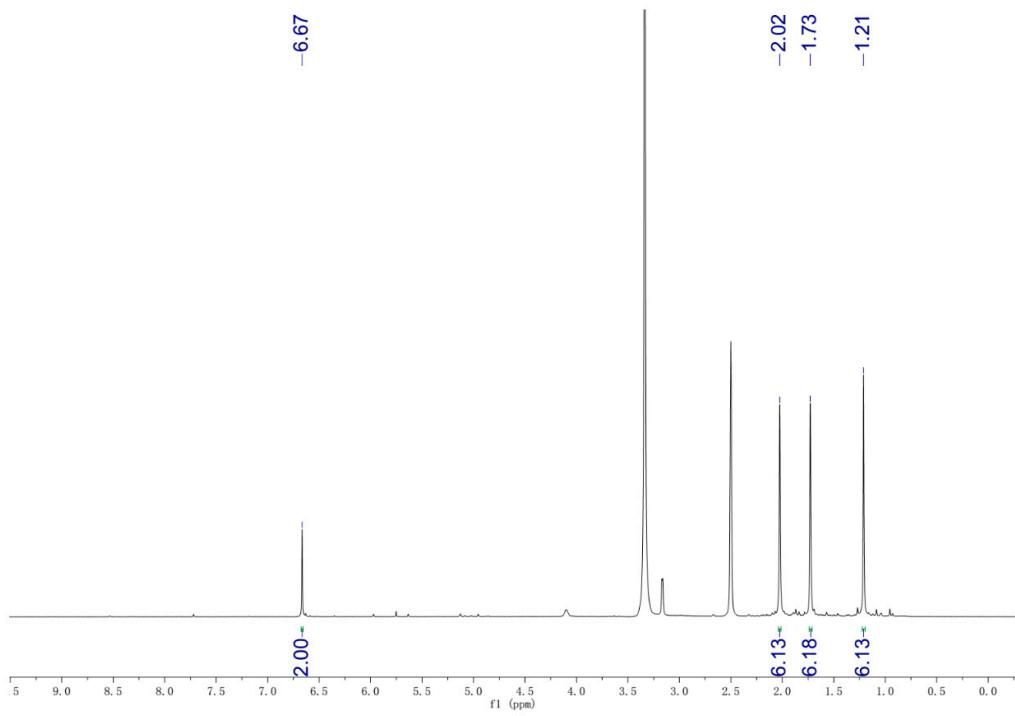
**Fig.S7** NOESY spectrum of compound **1** ( $\text{CDCl}_3$ ).



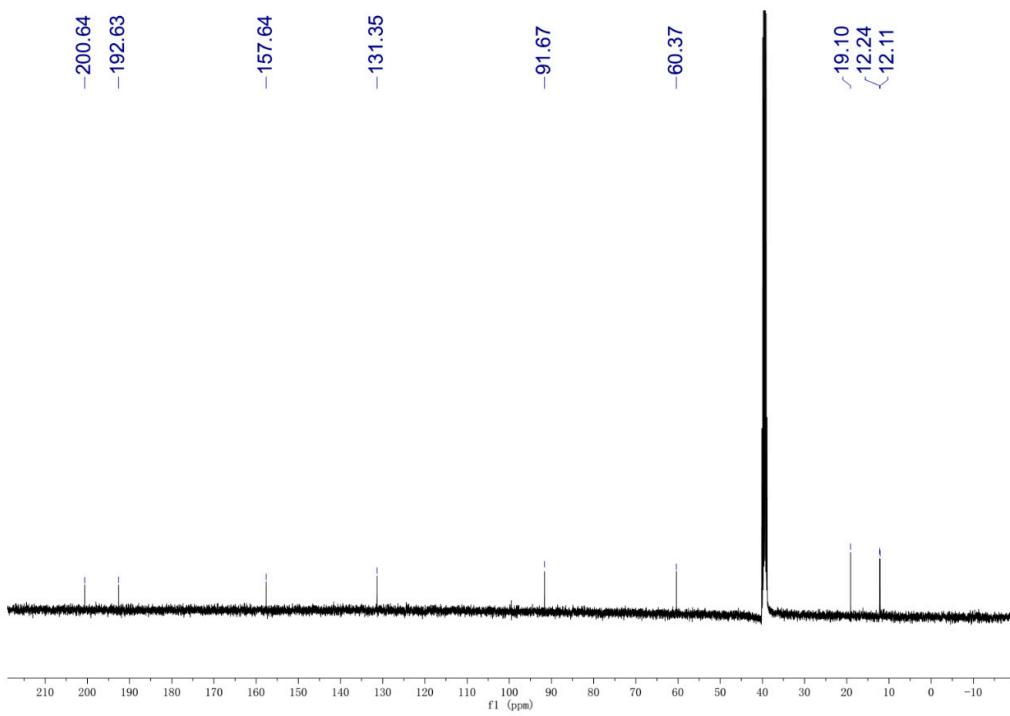
**Fig.S8** HRESIMS spectrum of compound **1**.



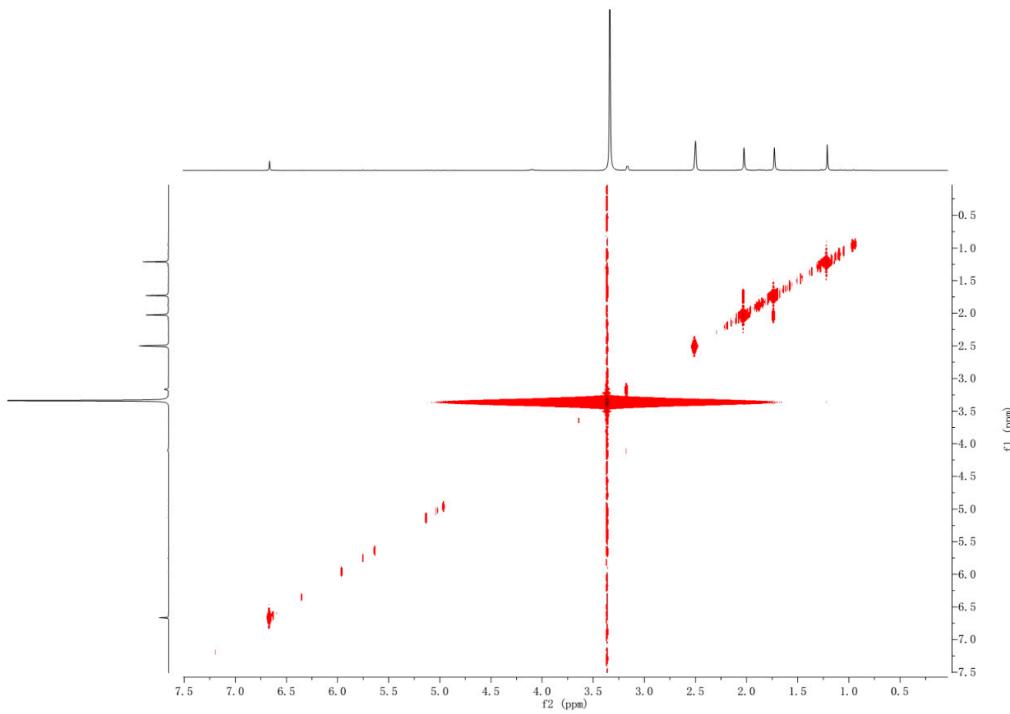
**Fig.S9** Experiment ECD spectrum of compound 1.



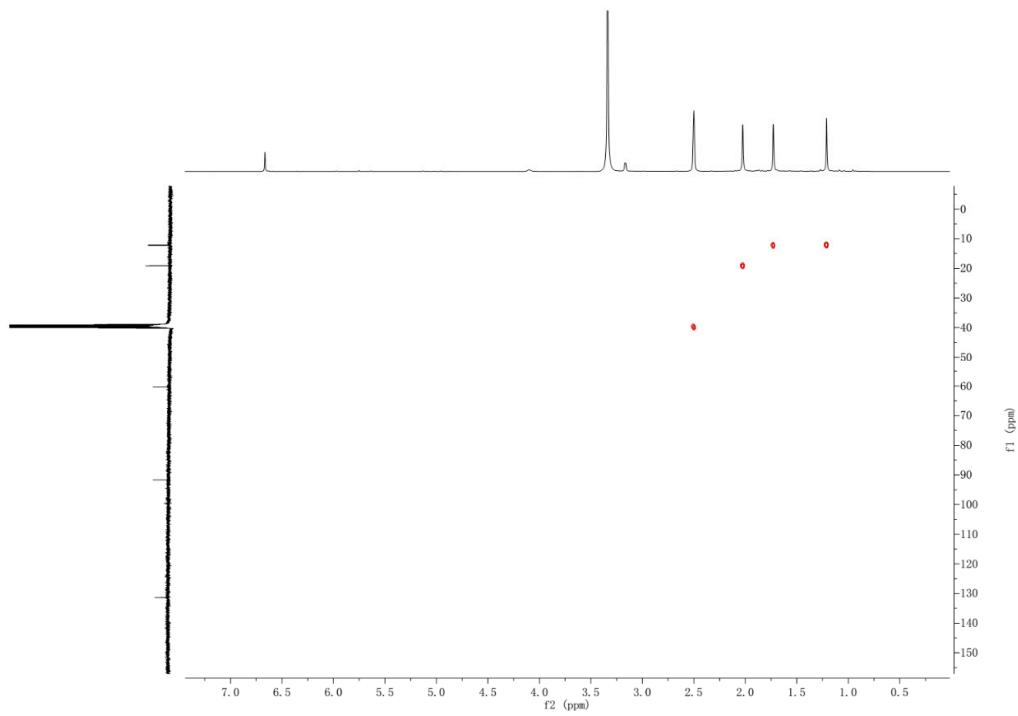
**Fig.S10**  $^1\text{H}$  NMR spectrum of compound 2 (400 MHz, DMSO- $d_6$ ).



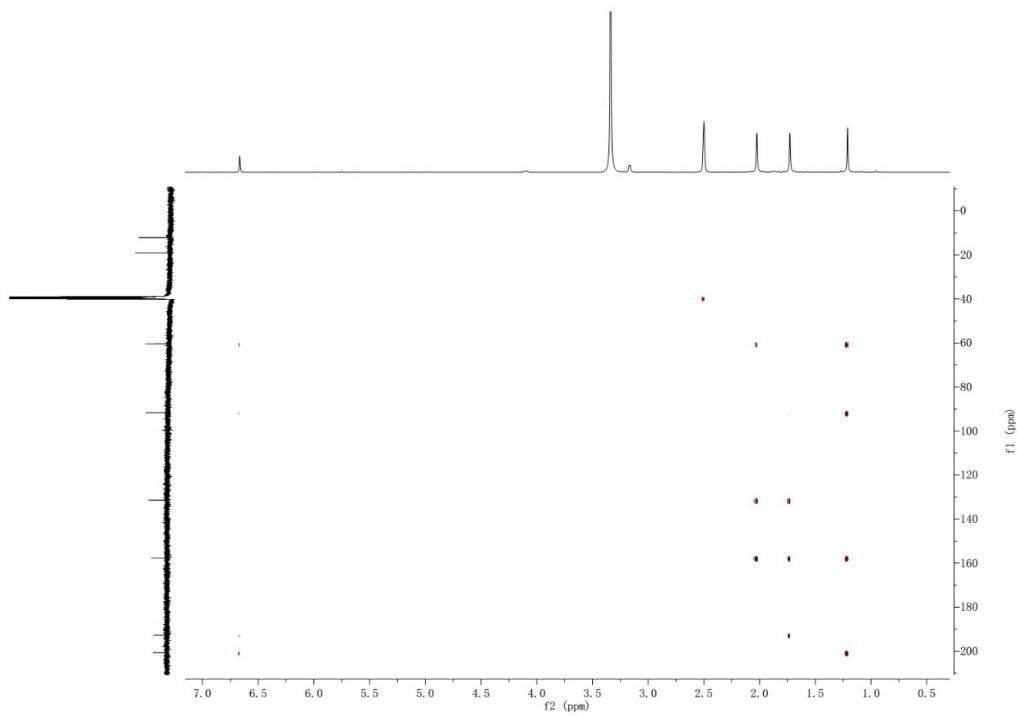
**Fig.S11** <sup>13</sup>C NMR spectrum of compound 2 (100 MHz, DMSO-*d*<sub>6</sub>).



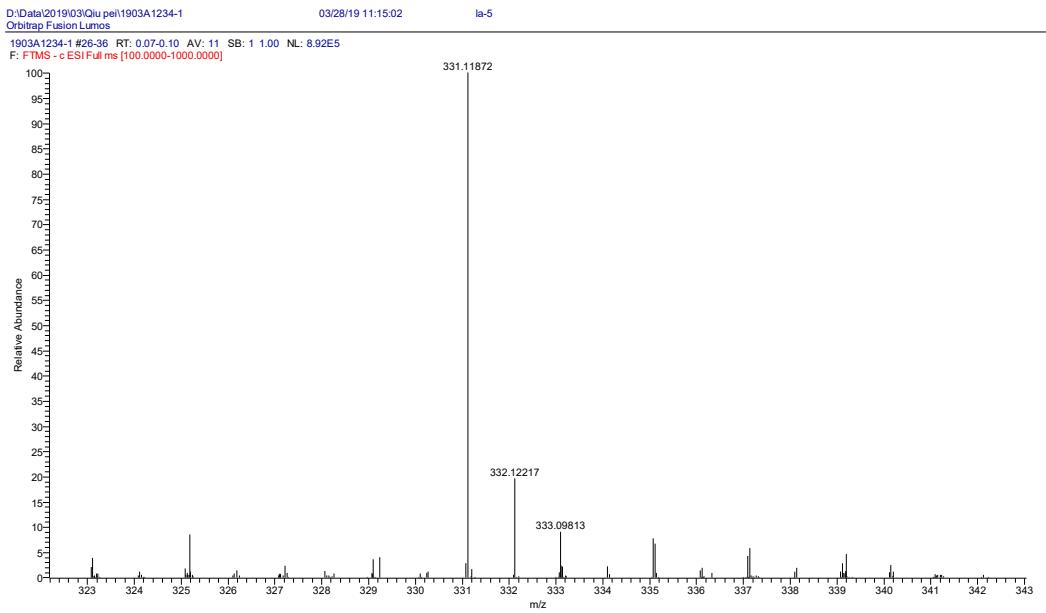
**Fig.S12** <sup>1</sup>H-<sup>1</sup>H COSY spectrum of compound 2 (DMSO-*d*<sub>6</sub>).



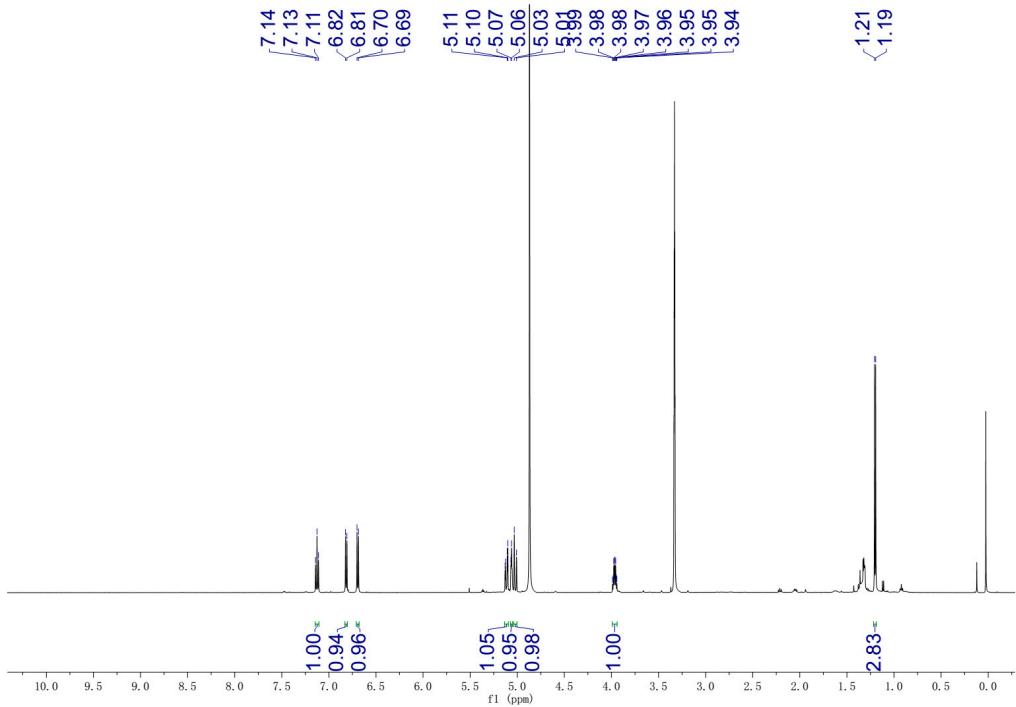
**Fig.S13** HSQC spectrum of compound **2** (DMSO-*d*<sub>6</sub>).



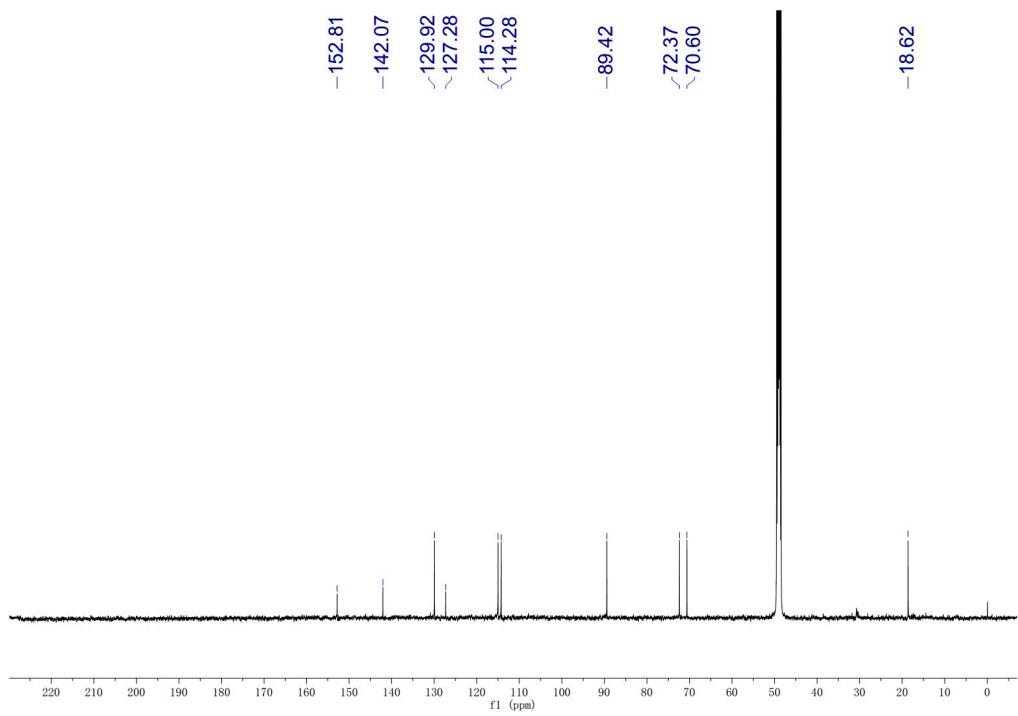
**Fig.S14** HMBC spectrum of compound **2** (DMSO-*d*<sub>6</sub>).



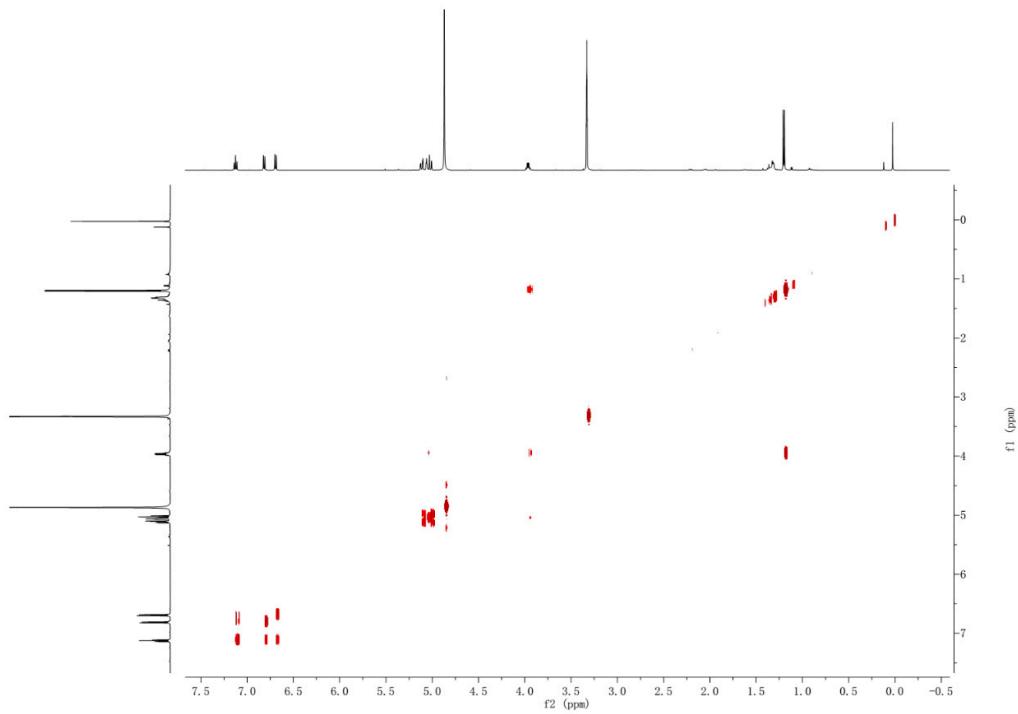
**Fig.S15** HRESIMS spectrum of compound 2.



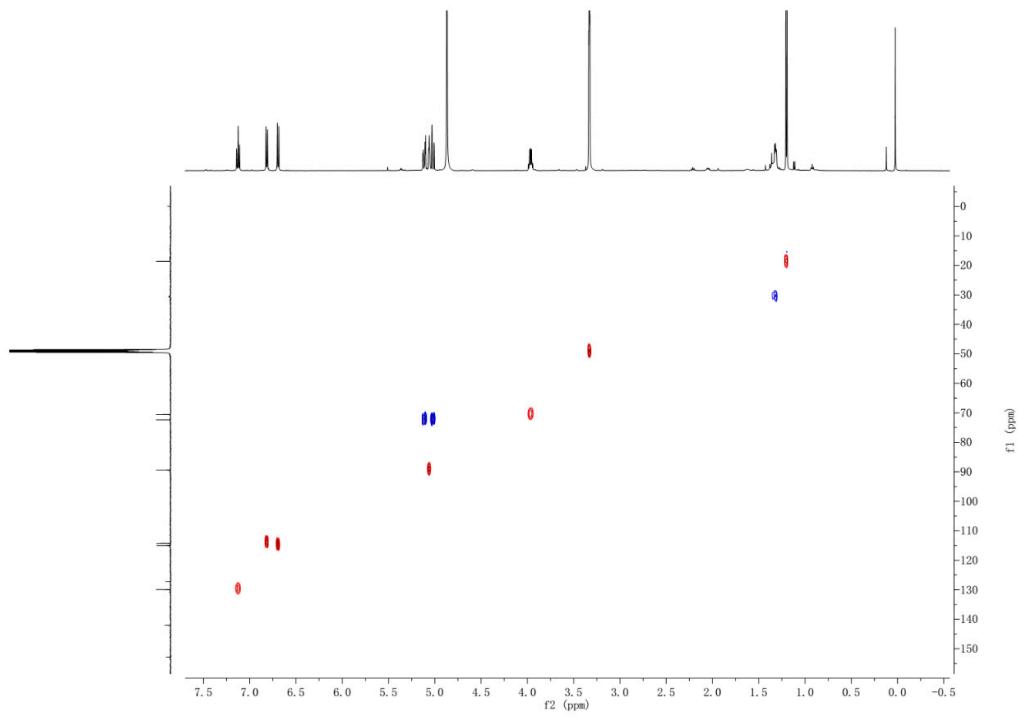
**Fig.S16**  $^1\text{H}$  NMR spectrum of compound 3 (500 MHz, MeOH- $d_4$ ).



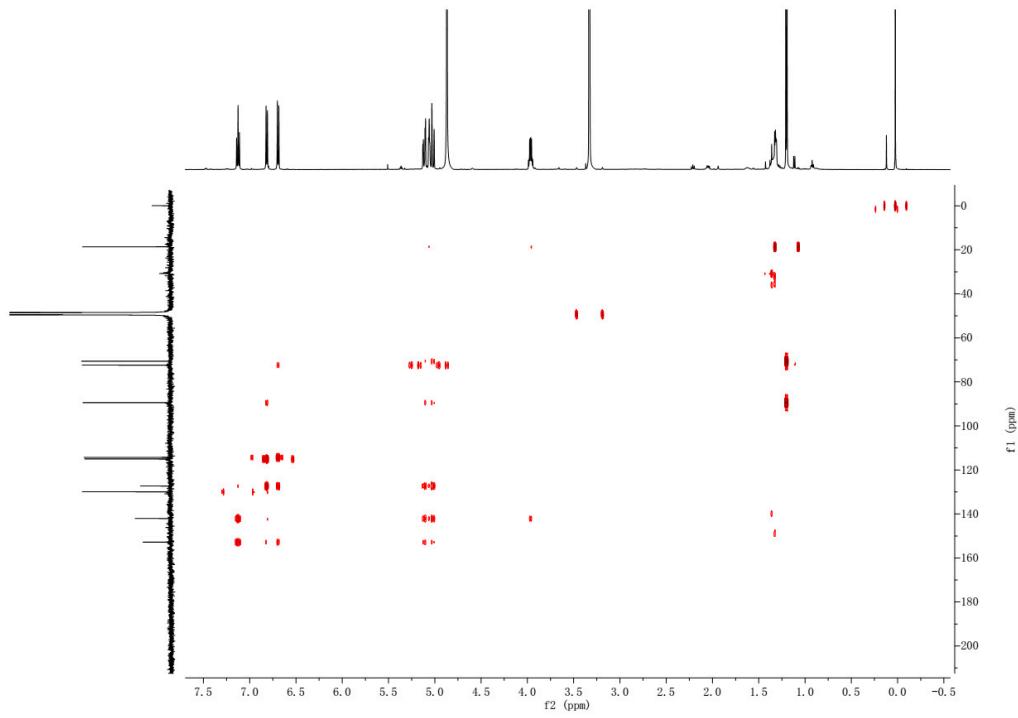
**Fig.S17**  $^{13}\text{C}$  NMR spectrum of compound 3 (125 MHz,  $\text{MeOH-}d_4$ ).



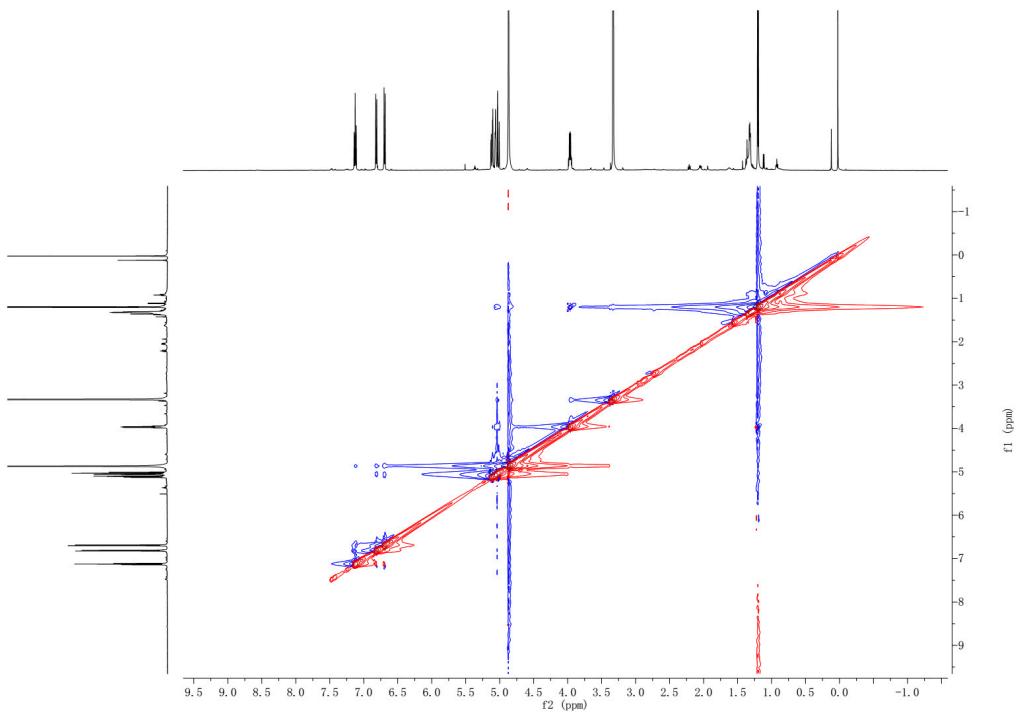
**Fig.S18**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound 3 ( $\text{MeOH-}d_4$ ).



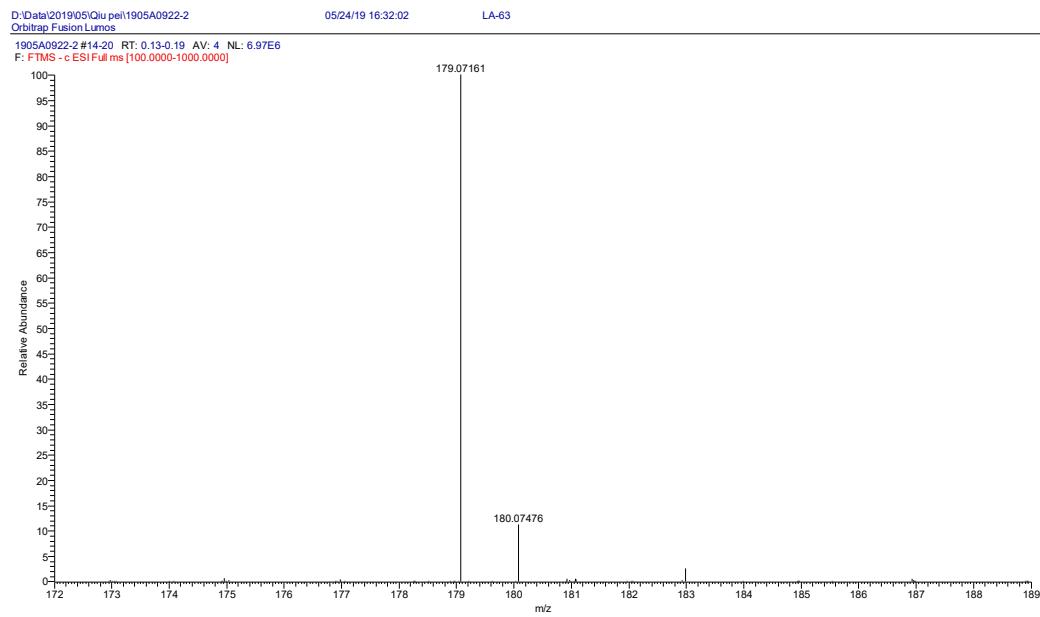
**Fig.S19** HSQC spectrum of compound 3 (MeOH-*d*4).



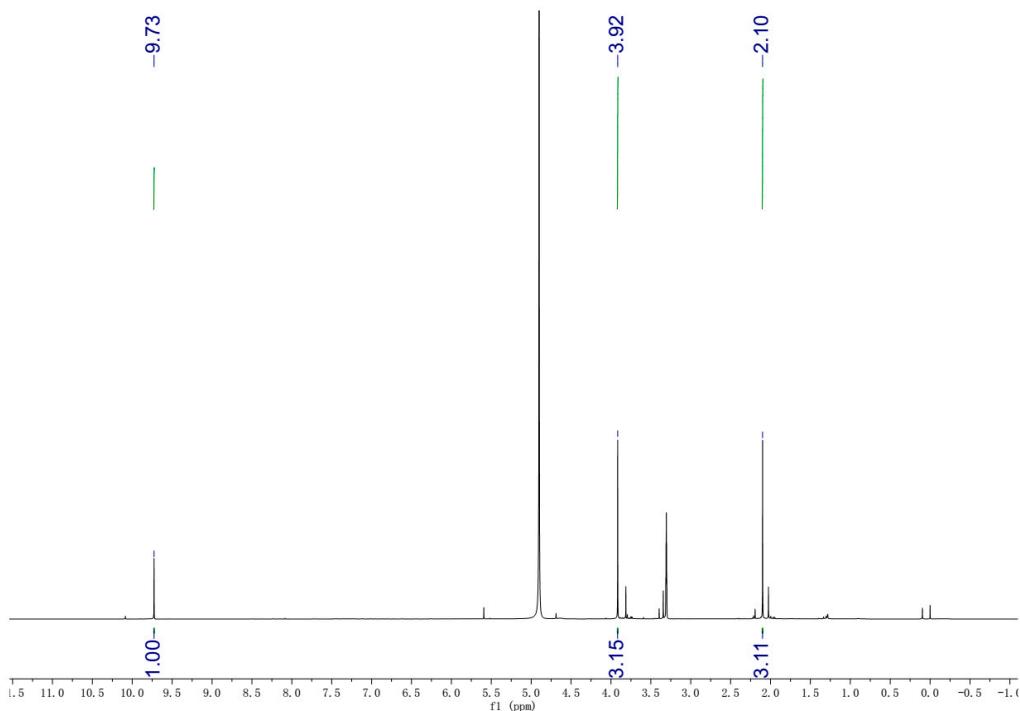
**Fig.S20** HMBC spectrum of compound 3 (MeOH-*d*4).



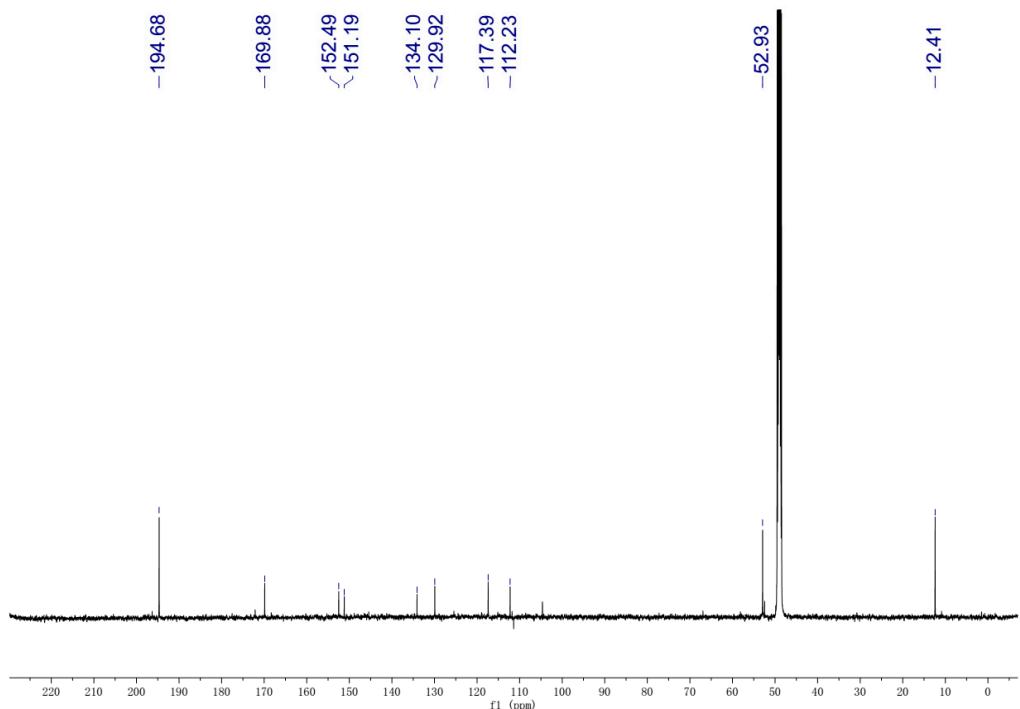
**Fig.S21** NOESY spectrum of compound 3 (MeOH-*d*4).



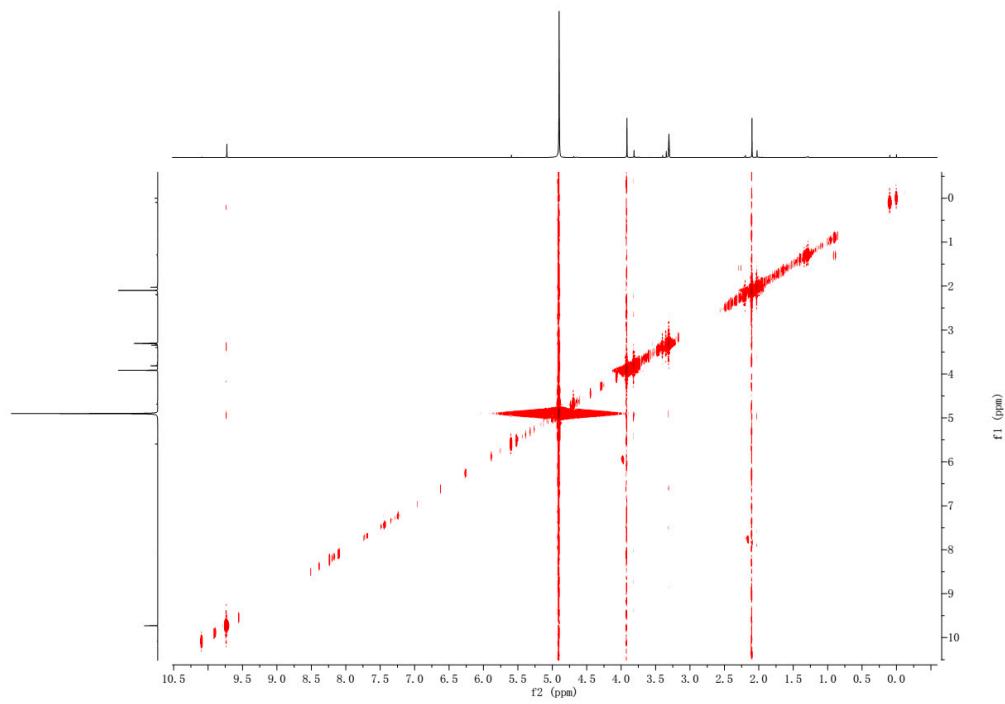
**Fig.S22** HRESIMS spectrum of compound 3.



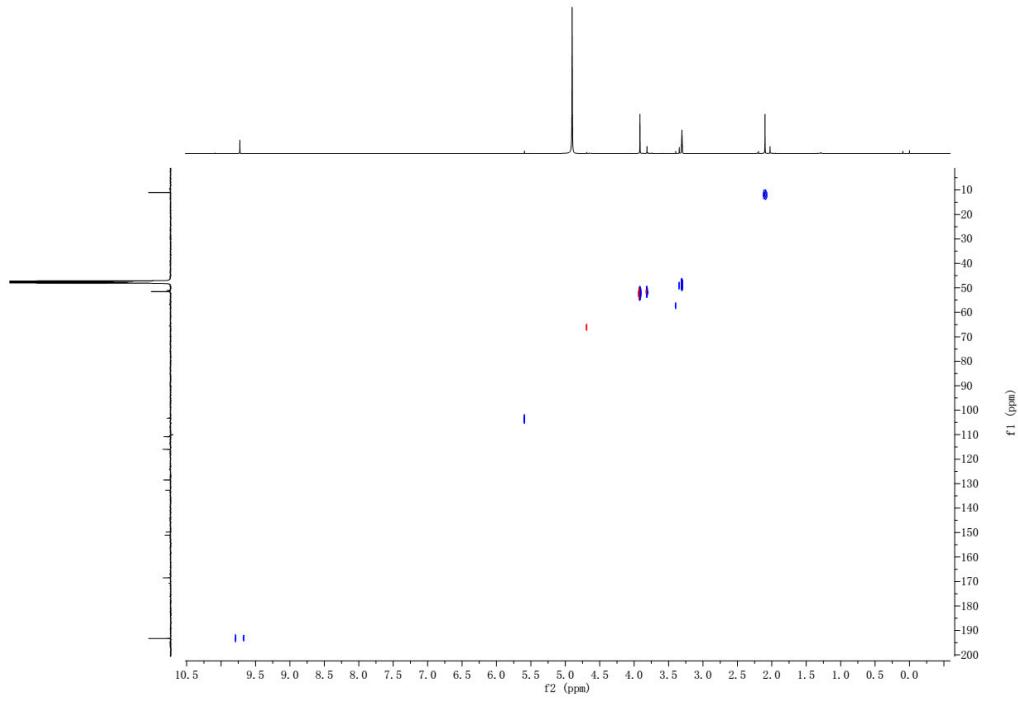
**Fig.S23** <sup>1</sup>H NMR spectrum of compound 4 (400 MHz, MeOH-*d*<sub>4</sub>).



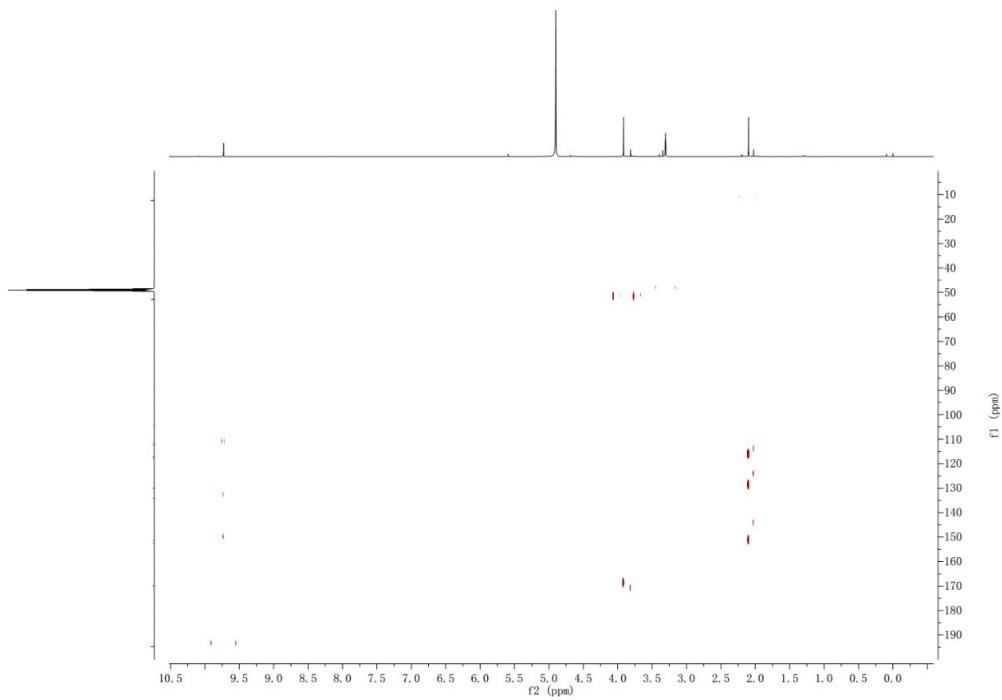
**Fig.S24** <sup>13</sup>C NMR spectrum of compound 4 (100 MHz, MeOH-*d*<sub>4</sub>).



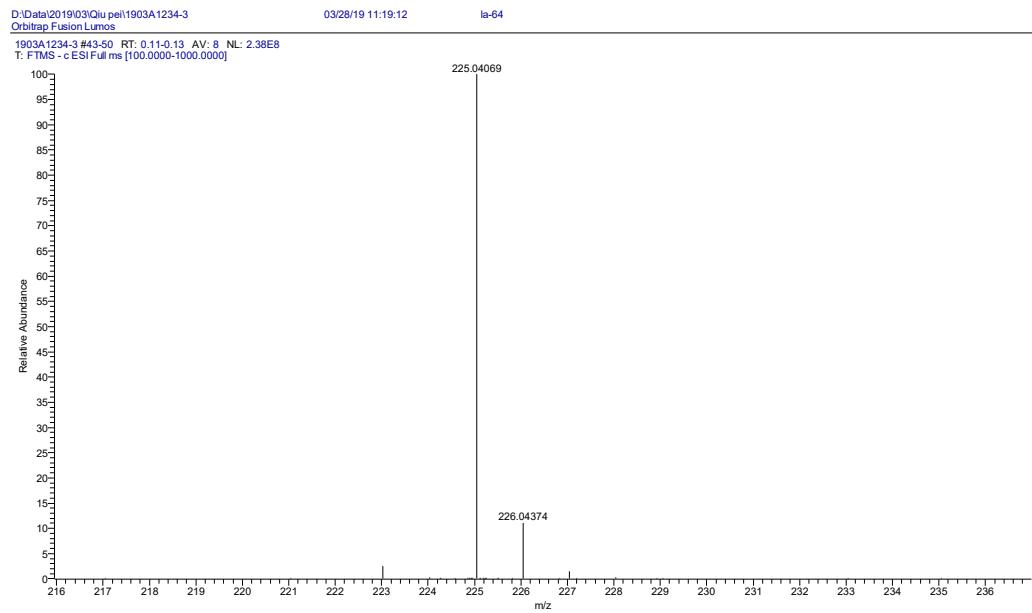
**Fig.S25** <sup>1</sup>H-<sup>1</sup>H COSY spectrum of compound 4 (MeOH-*d*<sub>4</sub>).



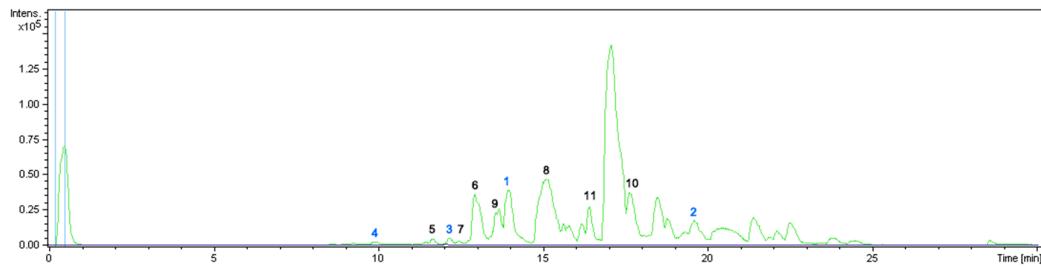
**Fig.S26** HSQC spectrum of compound 4 (MeOH-*d*<sub>4</sub>).



**Fig.S27** HMBC spectrum of compound 4 (MeOH-*d*4).



**Fig.S28** HRESIMS spectrum of compound 4.



Retention time	Compounds	Mass [M+H] <sup>+</sup>	Calc. Mass	Element composition
9.8	4	227.0558	227.0550	C <sub>10</sub> H <sub>10</sub> O <sub>6</sub>
11.7	5	197.0448	197.0444	C <sub>9</sub> H <sub>8</sub> O <sub>5</sub>
12.1	3	181.0853	181.0859	C <sub>10</sub> H <sub>12</sub> O <sub>3</sub>
12.4	7	317.1239	317.1231	C <sub>14</sub> H <sub>20</sub> O <sub>8</sub>
12.9	6	197.0817	197.0808	C <sub>10</sub> H <sub>12</sub> O <sub>4</sub>
13.5	9	977.5152	977.5158	C <sub>57</sub> H <sub>72</sub> N <sub>2</sub> O <sub>12</sub>
13.9	1	564.2861	564.2956	C <sub>33</sub> H <sub>41</sub> NO <sub>7</sub>
15.1	8	359.0771	359.0761	C <sub>18</sub> H <sub>14</sub> O <sub>8</sub>
16.4	11	348.0849	348.0857	C <sub>17</sub> H <sub>16</sub> O <sub>8</sub>
17.7	10	418.2582	418.2588	C <sub>24</sub> H <sub>35</sub> NO <sub>5</sub>
19.6	2	333.1337	333.1333	C <sub>18</sub> H <sub>20</sub> O <sub>6</sub>

**Fig.S29** The LC-HRESIMS analysis profile of crude extract.