

## Supporting Information

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### Secondary Metabolites with Tyrosinase and Acetylcholinesterase Inhibitory Activities from Leonuri Fructus

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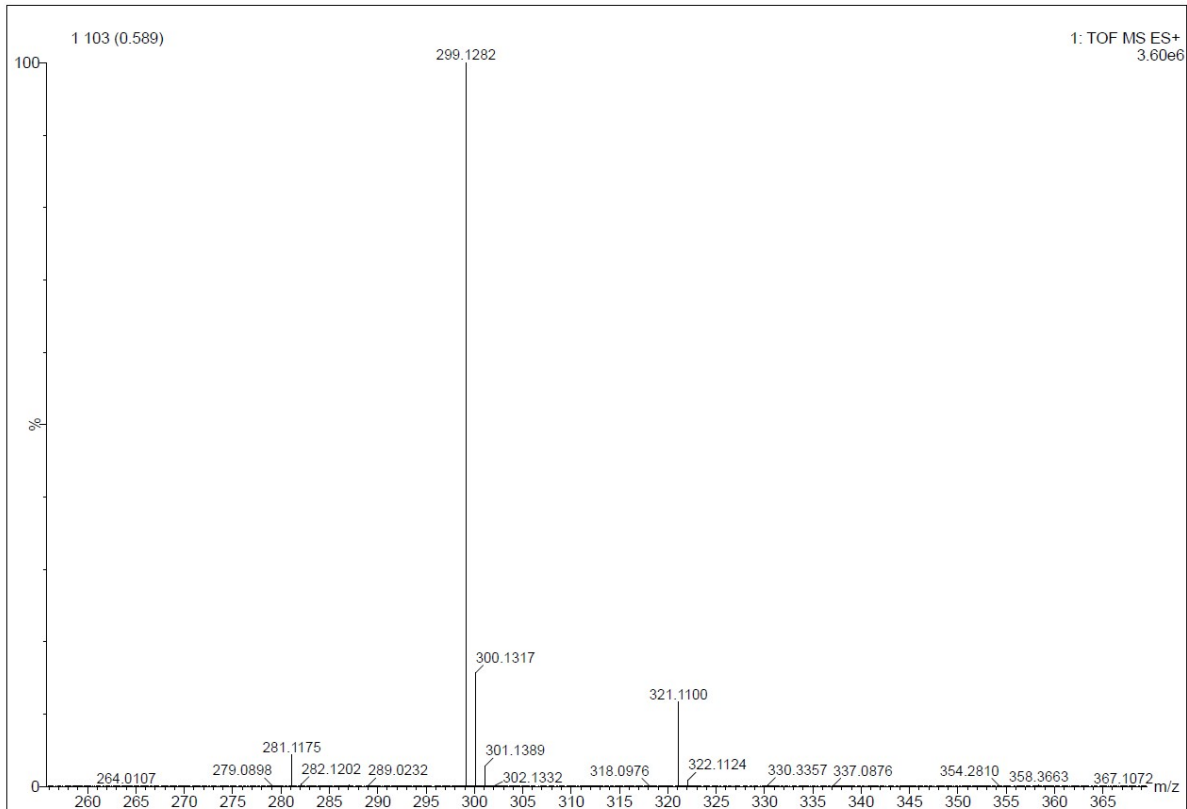
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**Elemental Composition Report**

**Single Mass Analysis**

Tolerance = 10.0 PPM / DBE: min = -1.5, max = 50.0

Element prediction: Off

Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Even Electron Ions

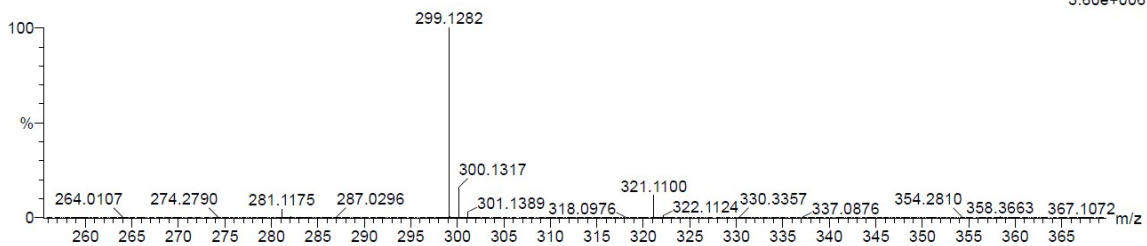
13 formula(e) evaluated with 1 results within limits (up to 50 best isotopic matches for each mass)

Elements Used:

C: 5-18 H: 5-80 O: 3-7

1 103 (0.589)  
1: TOF MS ES+

3.60e+006



Minimum: -1.5  
Maximum: 5.0 10.0 50.0

Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Norm	Conf(%)	Formula
299.1282	299.1283	-0.1	-0.3	9.5	965.4	n/a	n/a	C18 H19 O4

**Figure S1: HR-ESI-MS spectrum of 1**

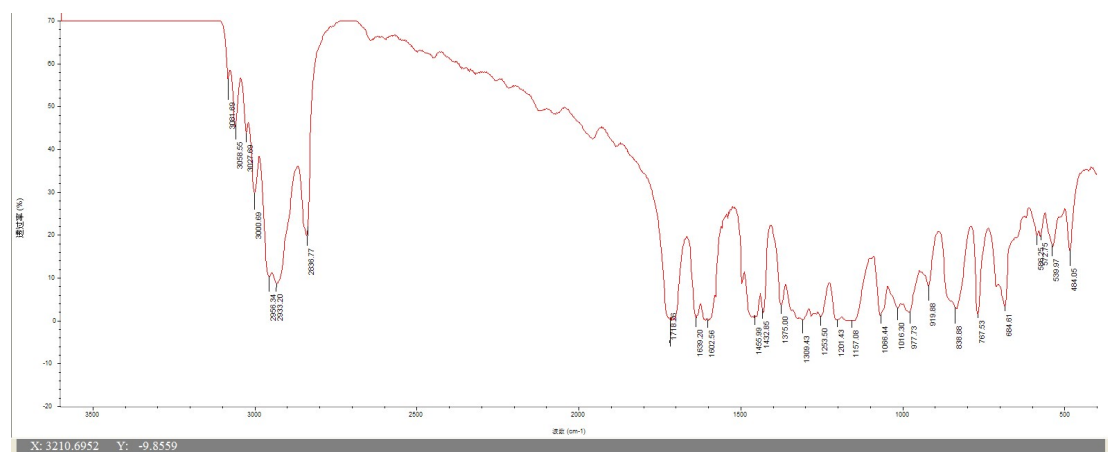
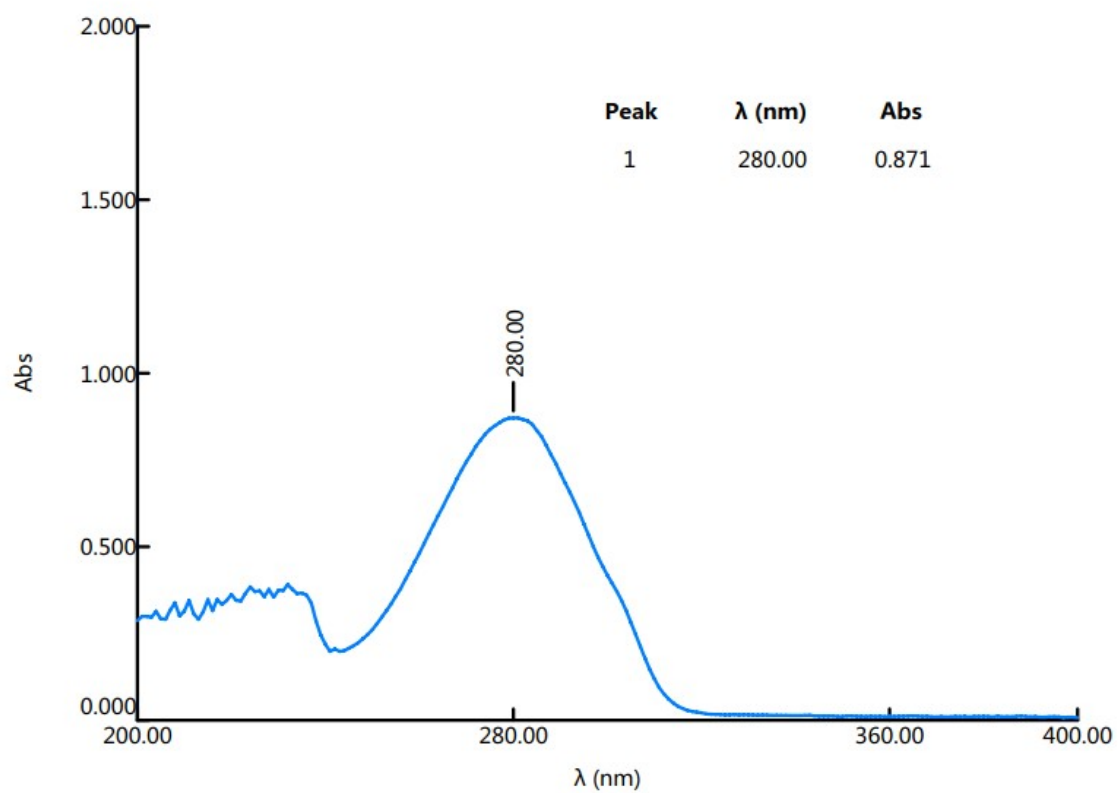
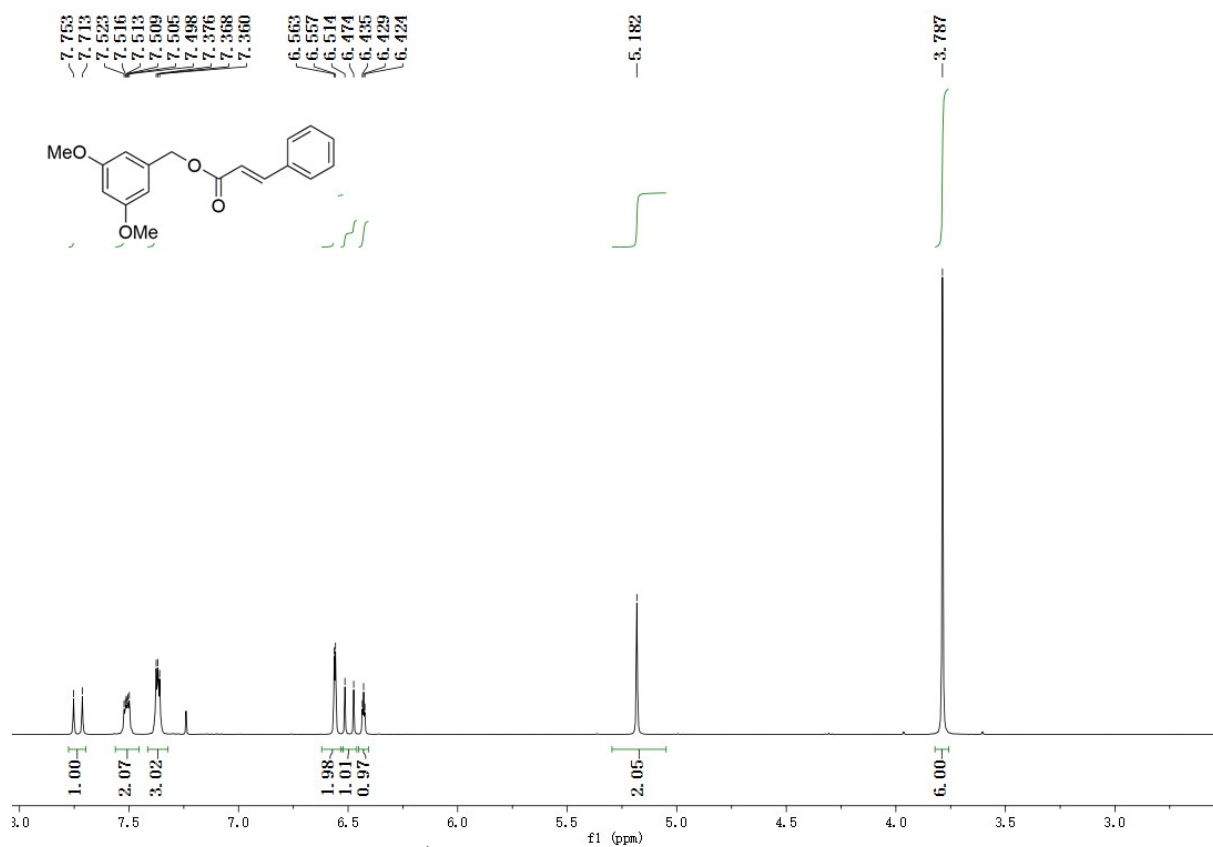


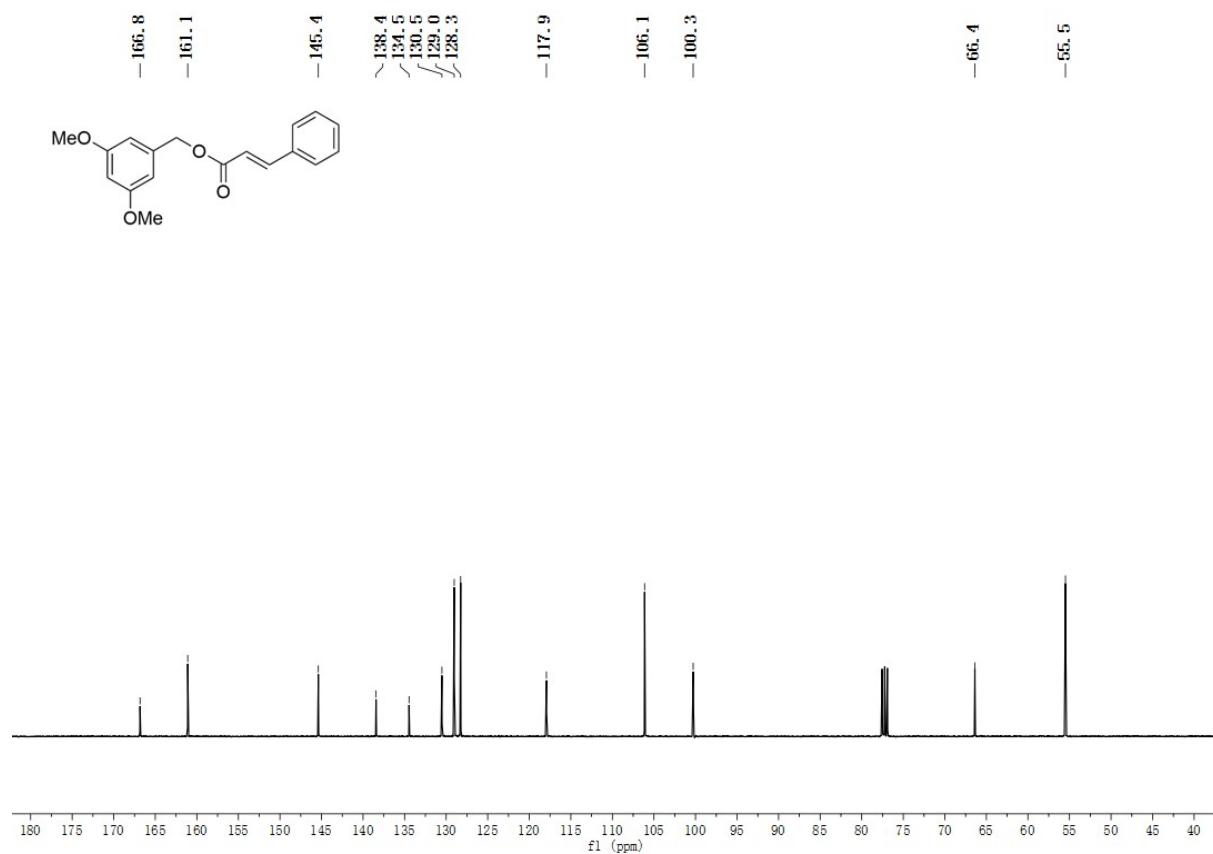
Figure S2: IR spectrum of 1



**Figure S3:** UV spectrum of **1** in CHCl<sub>3</sub>



**Figure S4:** <sup>1</sup>H NMR spectrum (400 MHz) of **1** in CDCl<sub>3</sub>



**Figure S5:**  $^{13}\text{C}$  NMR spectrum (100 MHz) of **1** in  $\text{CDCl}_3$

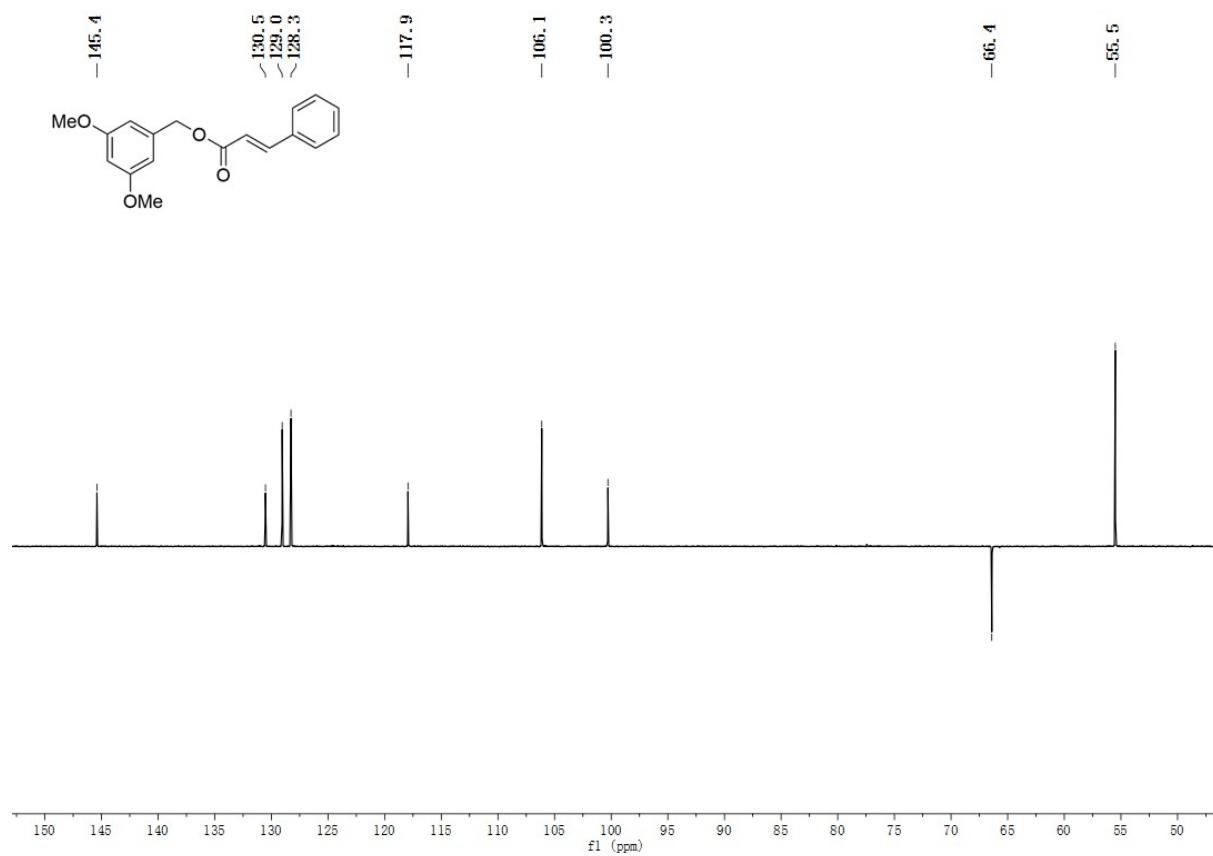
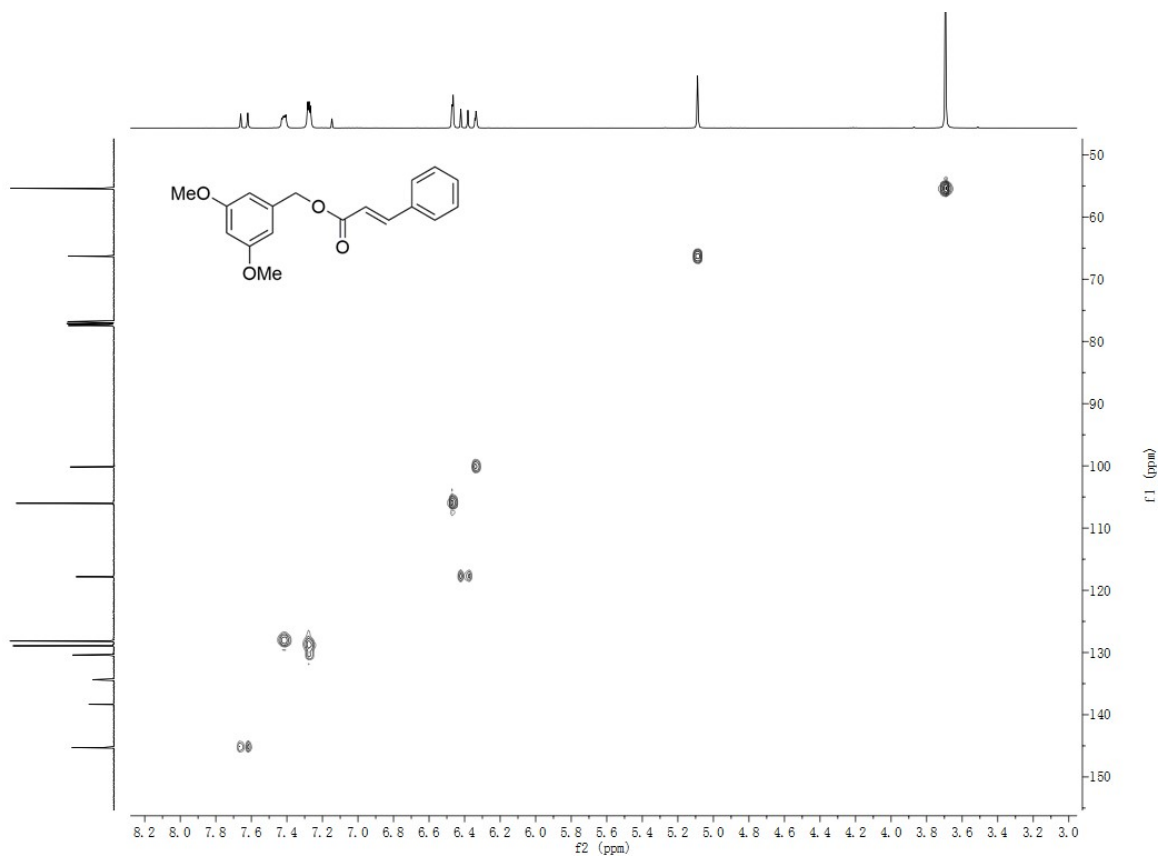


Figure S6: DEPT 135 spectrum of 1 in CDCl<sub>3</sub>





**Figure S7:** HSQC spectrum of **1** in  $\text{CDCl}_3$

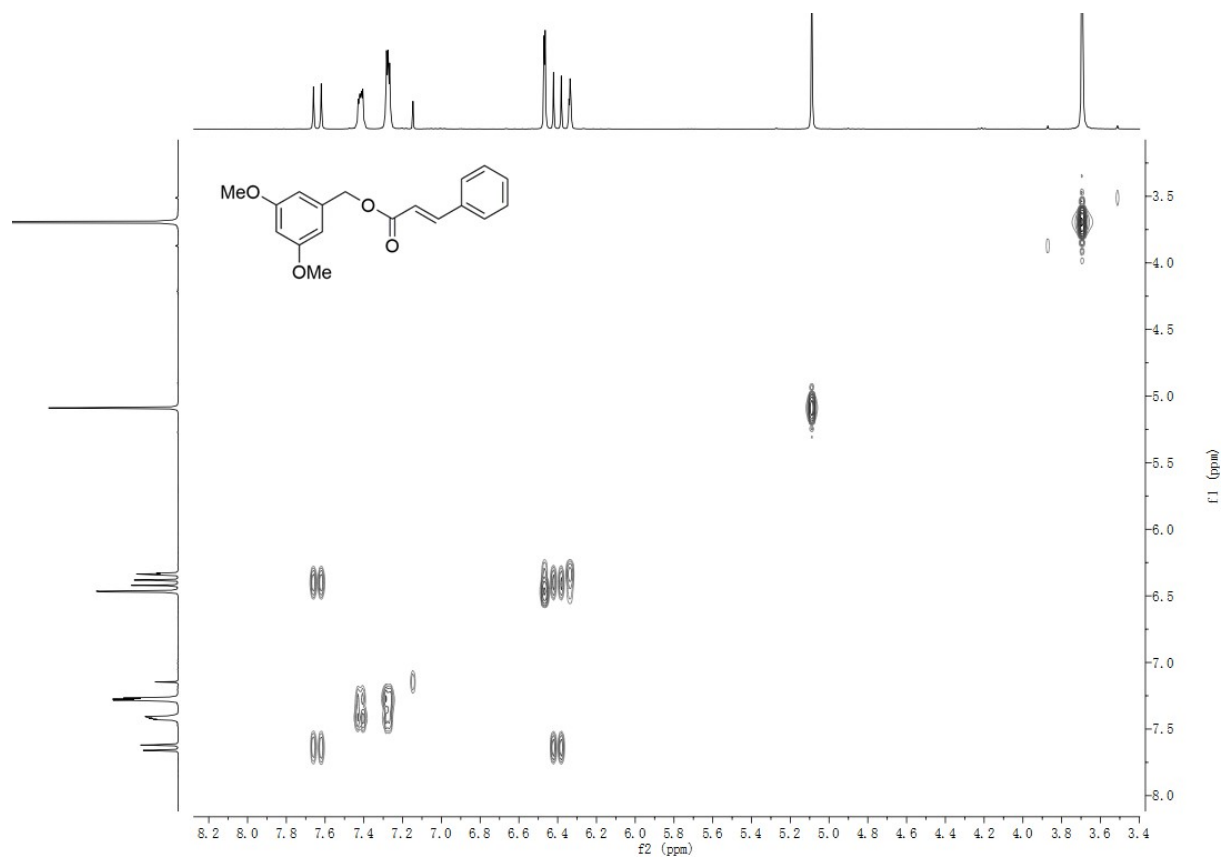
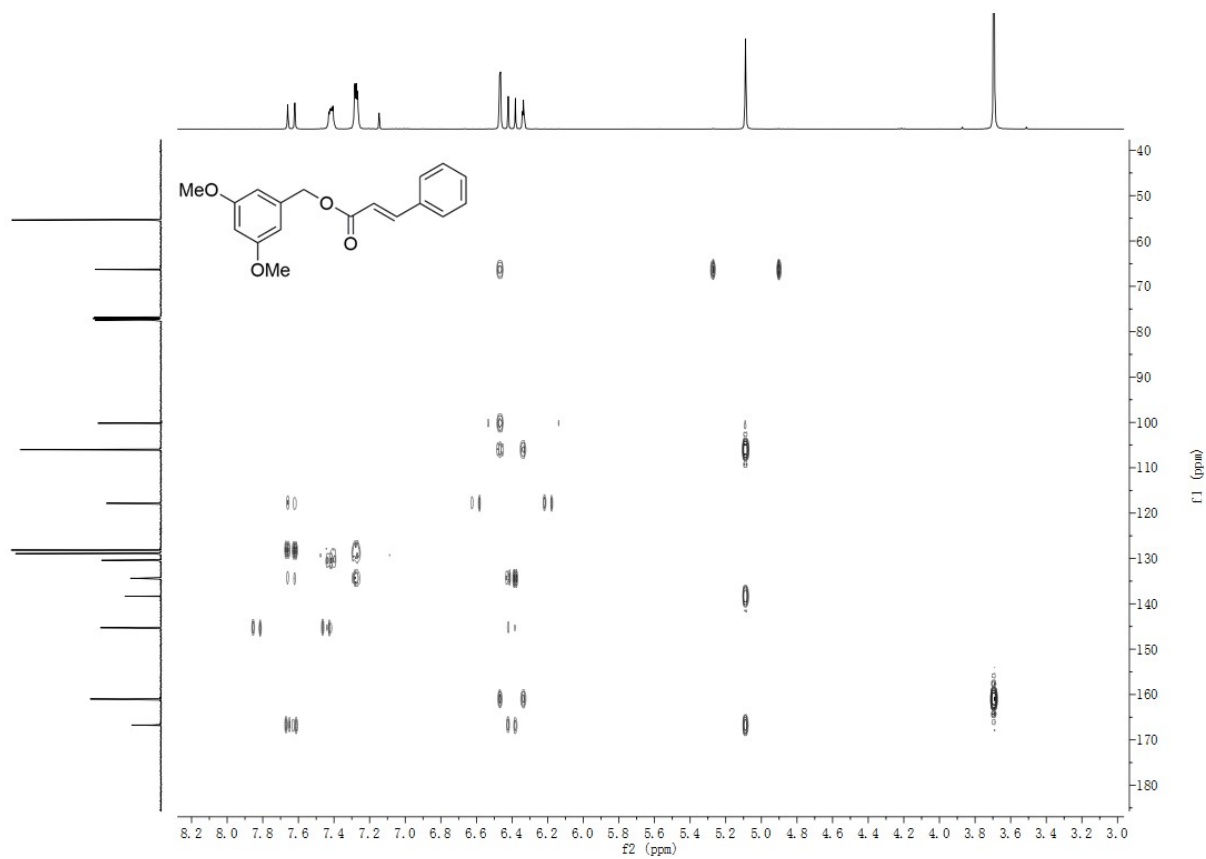
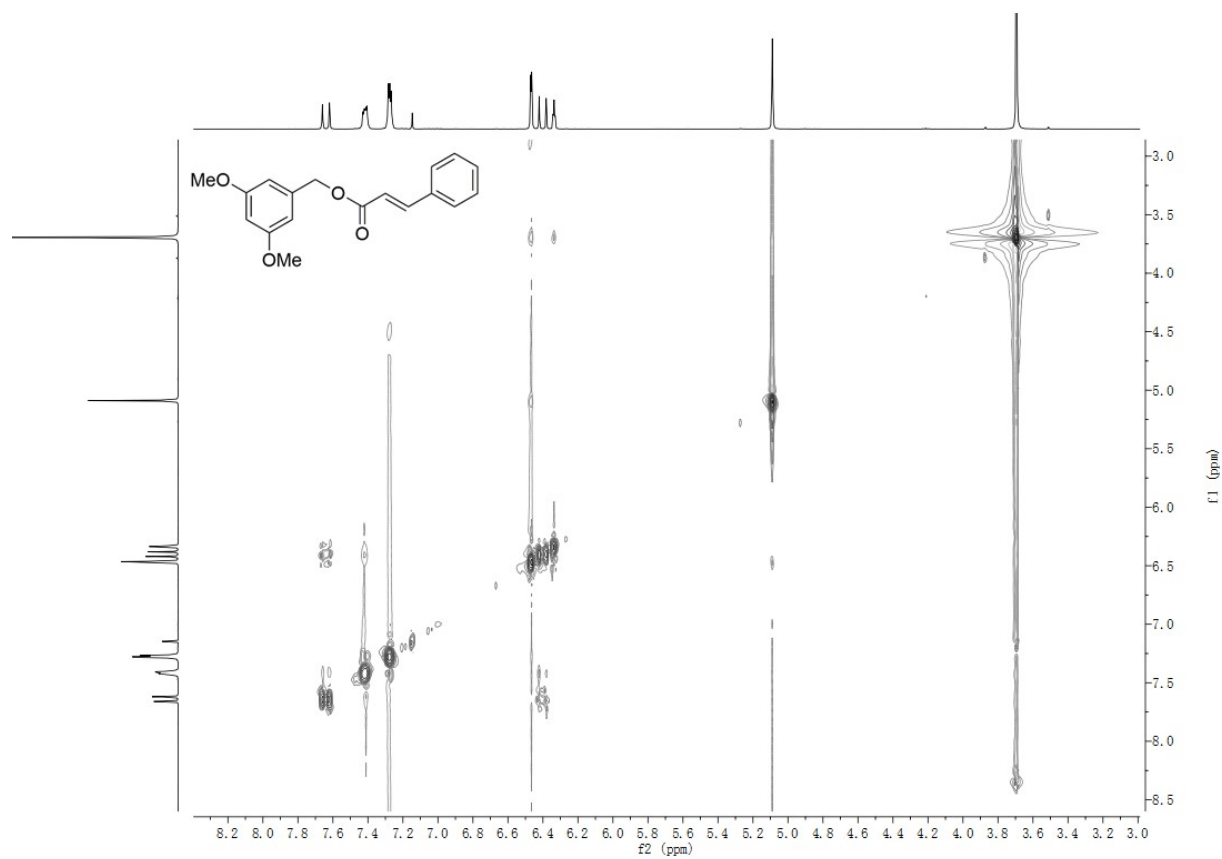
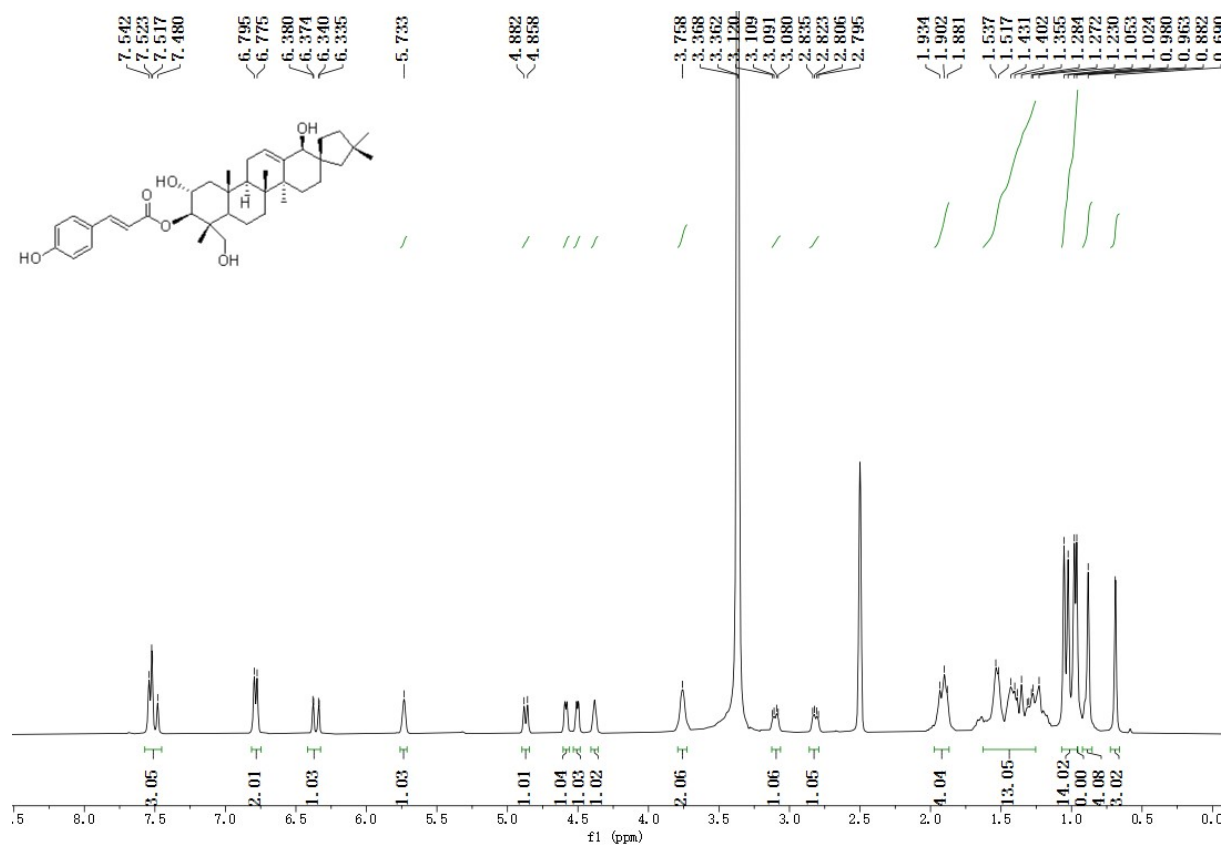


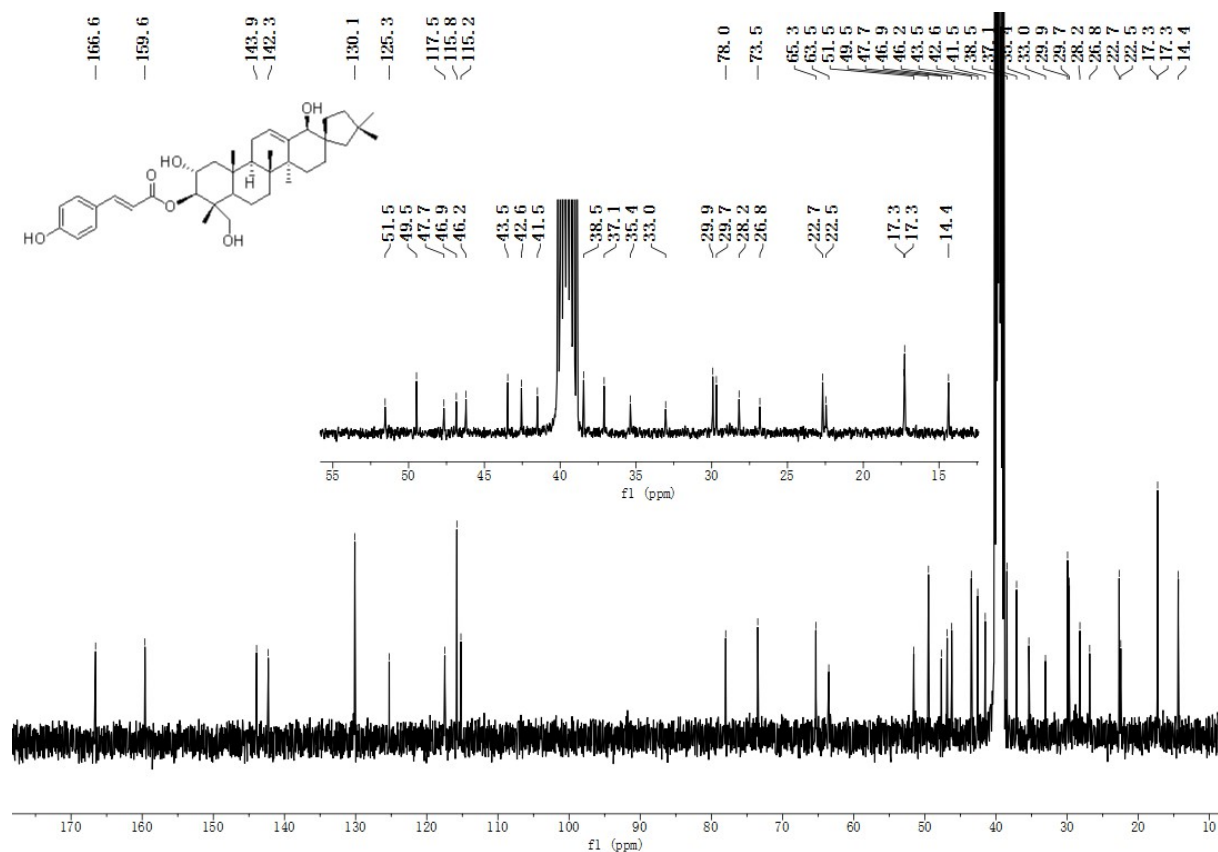
Figure S8:  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **1** in  $\text{CDCl}_3$







**Figure S11:**  $^1\text{H}$  NMR spectrum (400 MHz) of **2** in DMSO- $d_6$



**Figure S12:**  $^{13}\text{C}$  NMR spectrum (100 MHz) of **2** in DMSO- $d_6$

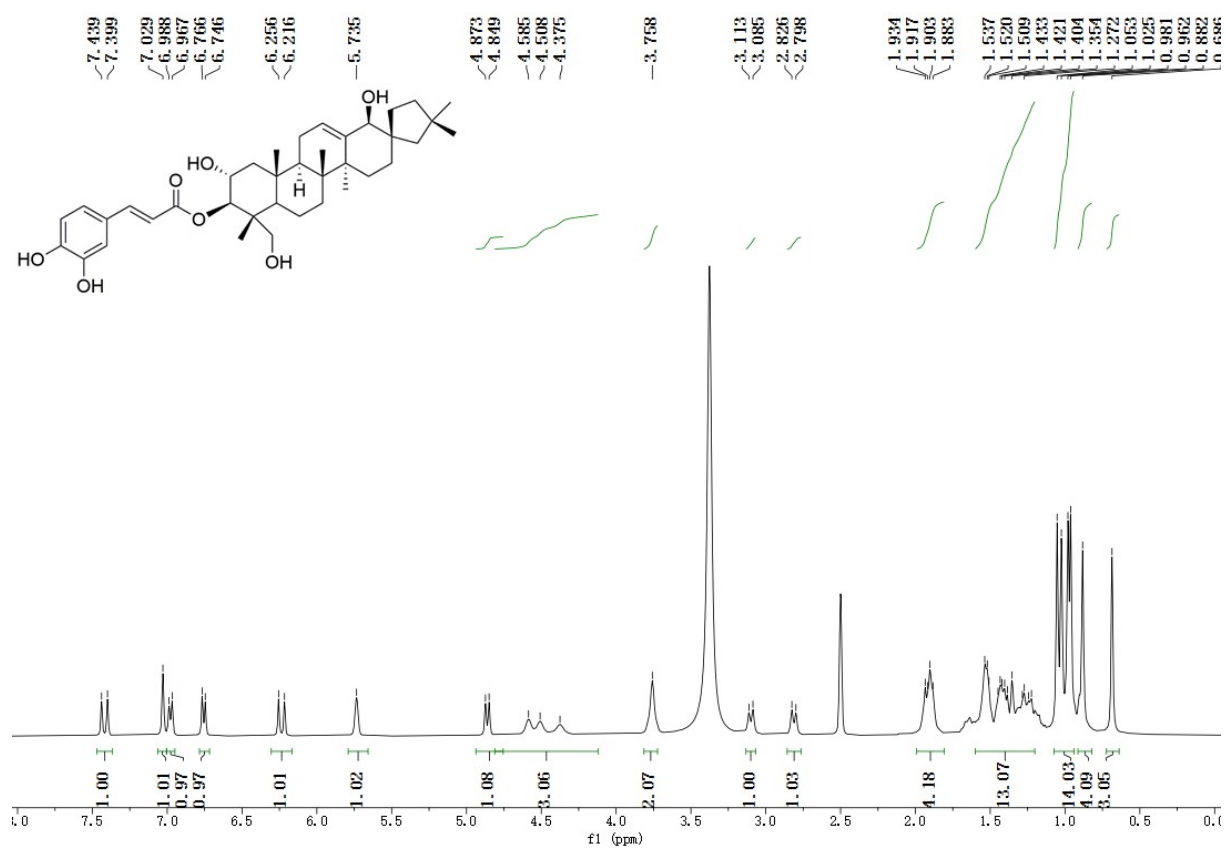
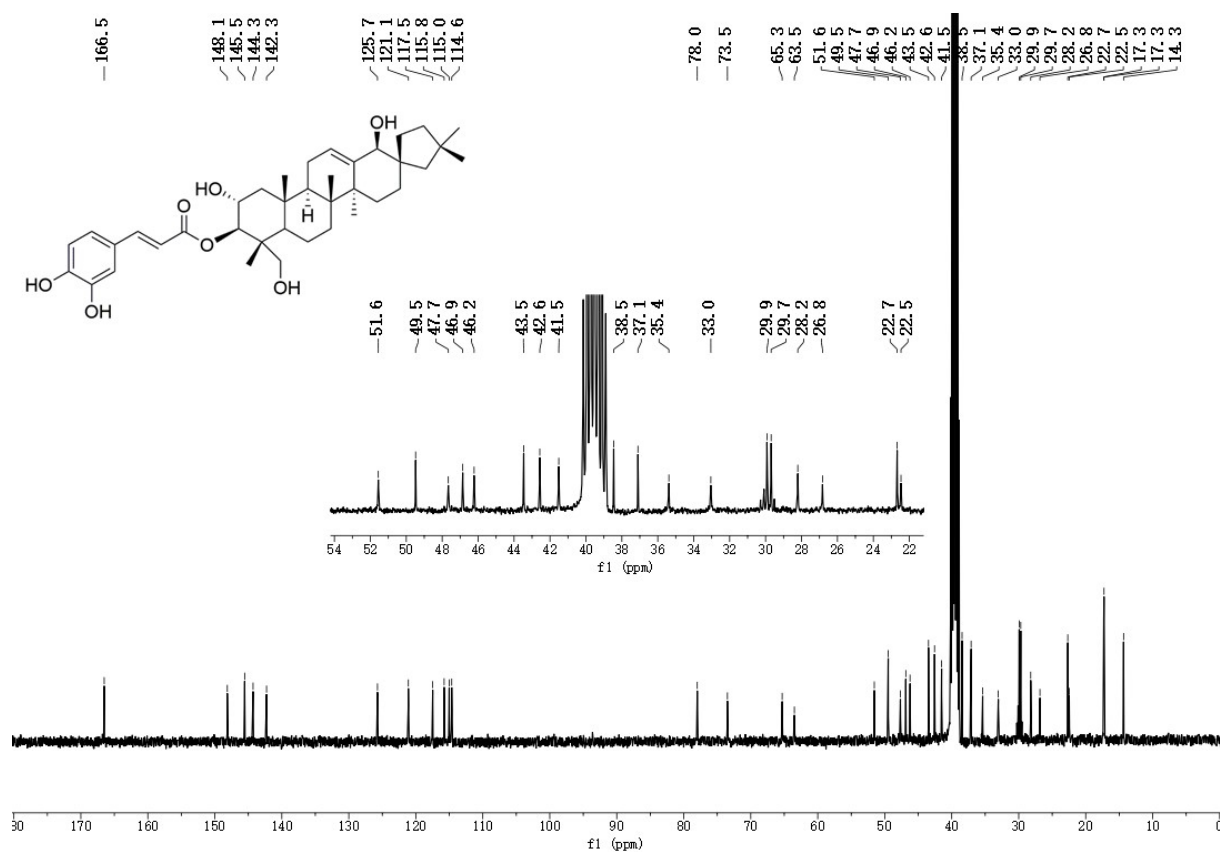


Figure S13:  $^1\text{H}$  NMR spectrum (400 MHz) of 3 in DMSO- $d_6$



**Figure S14:**  $^{13}\text{C}$  NMR spectrum (100 MHz) of **3** in DMSO- $d_6$



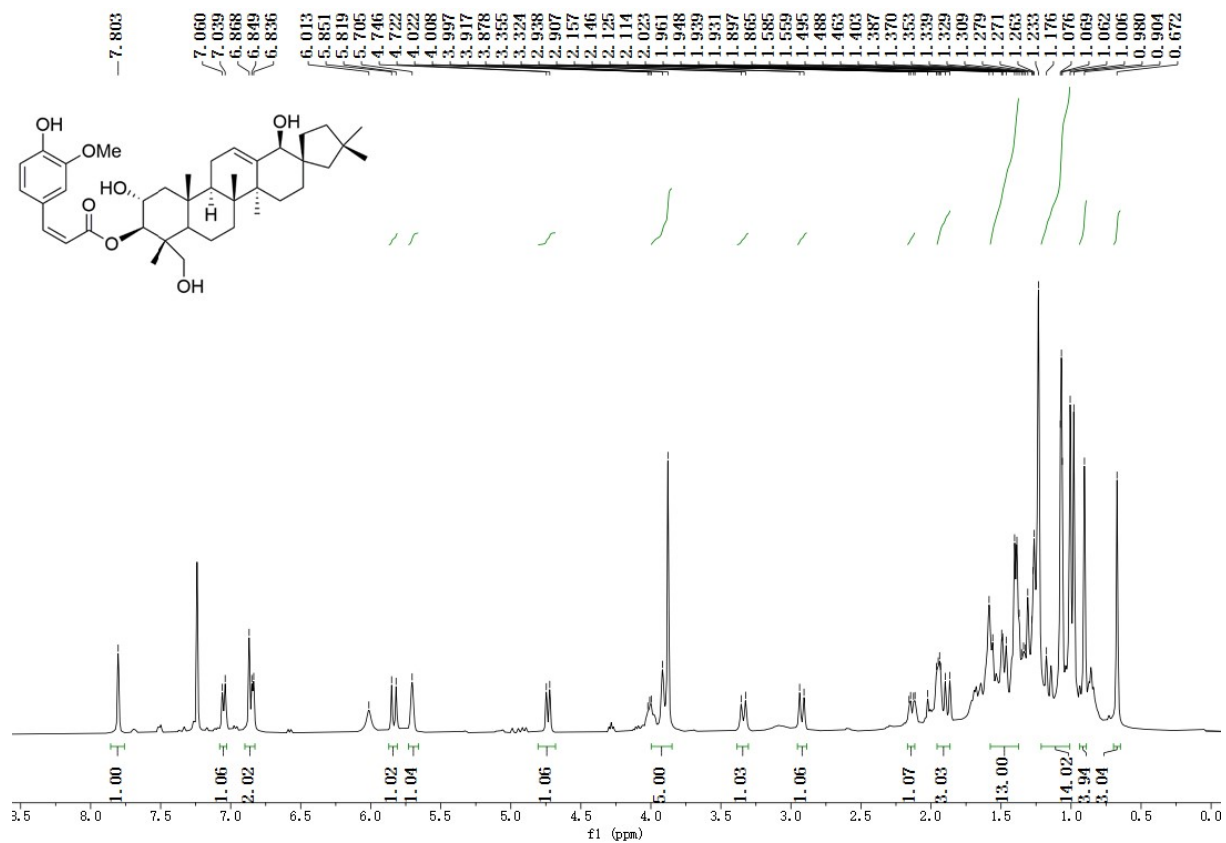


Figure S15: <sup>1</sup>H NMR spectrum (400 MHz) of **4** in CDCl<sub>3</sub>

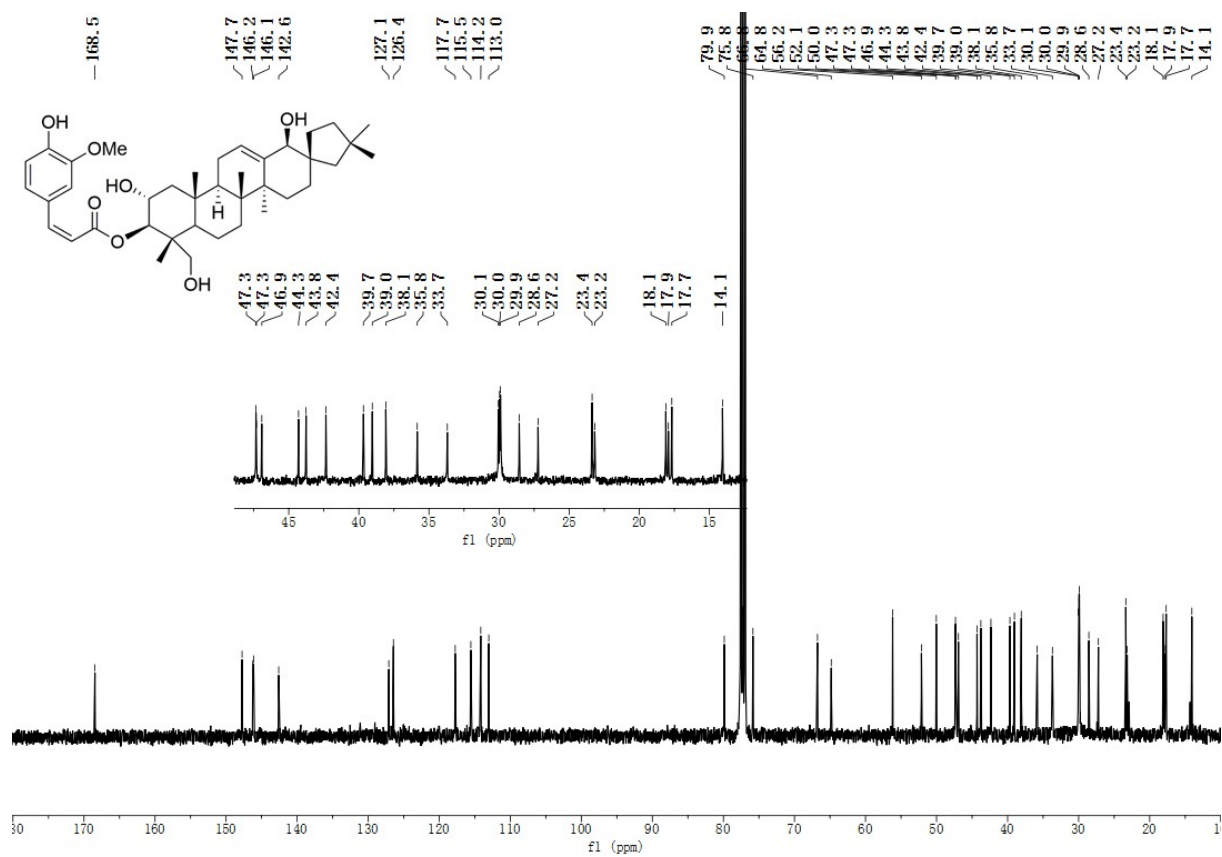


Figure S16:  $^{13}\text{C}$  NMR spectrum (100 MHz) of 4 in  $\text{CDCl}_3$

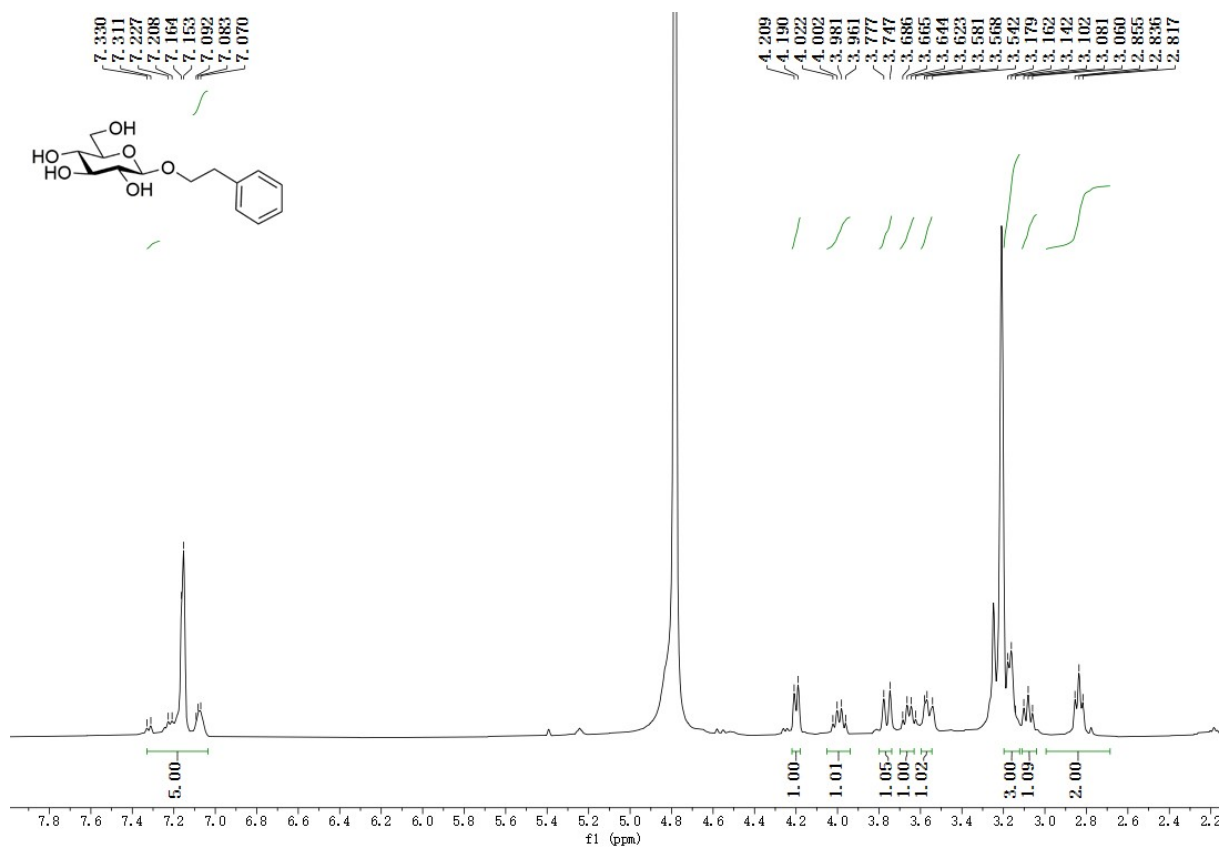


Figure S17: <sup>1</sup>H NMR spectrum (400 MHz) of 5 in CD<sub>3</sub>OD

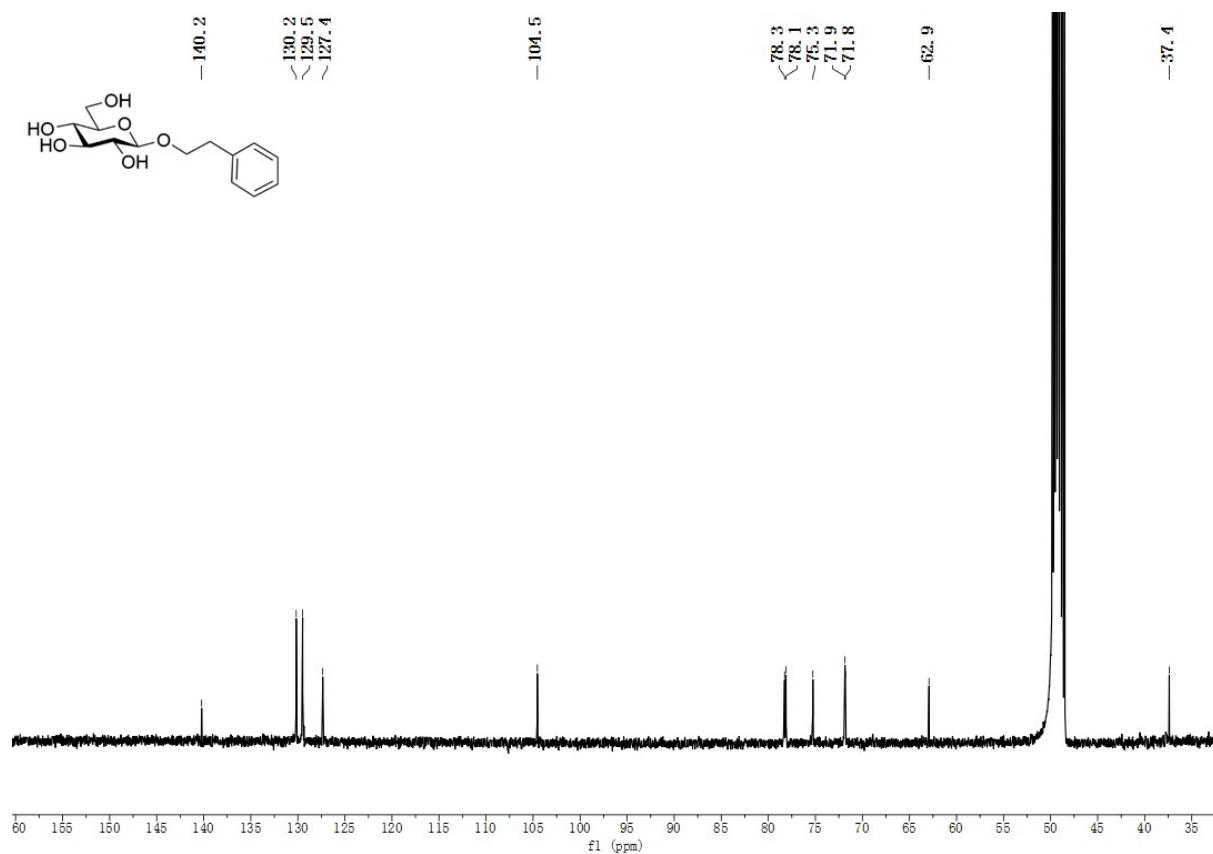
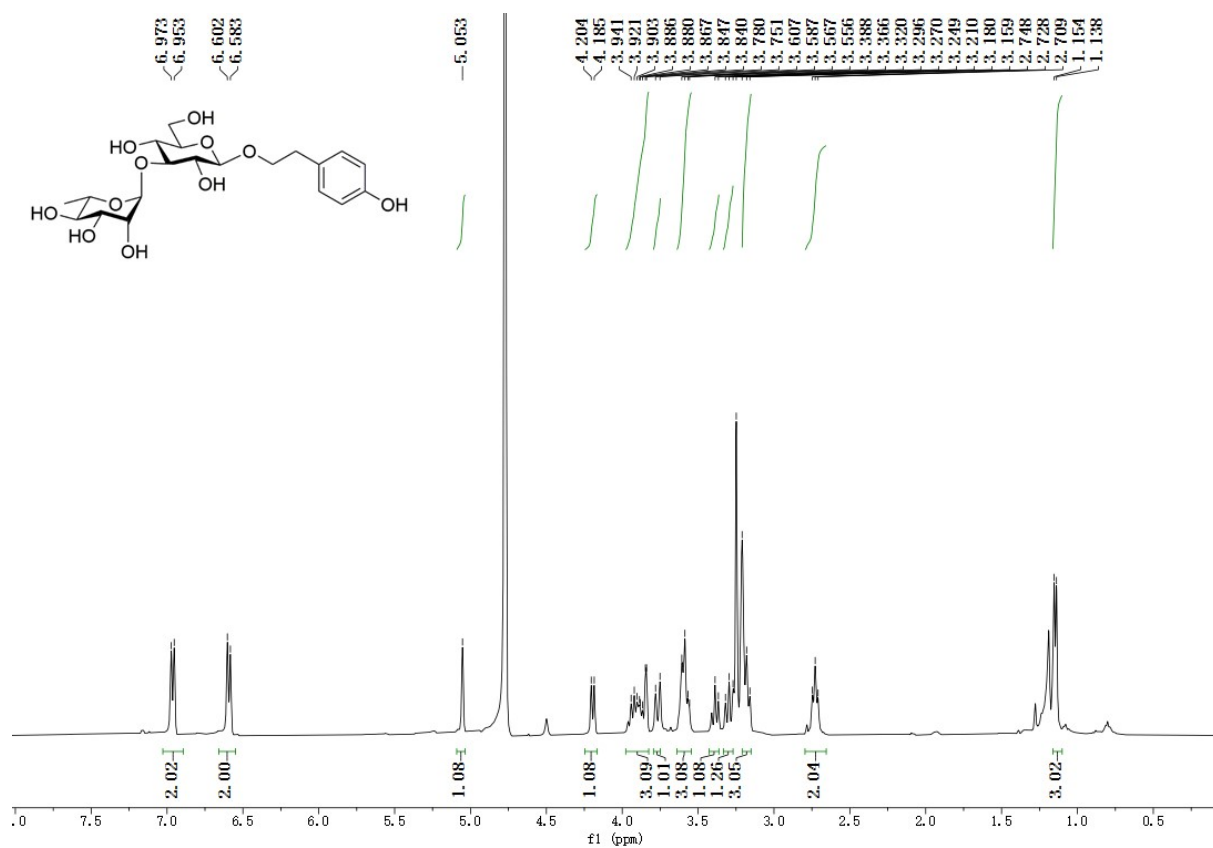
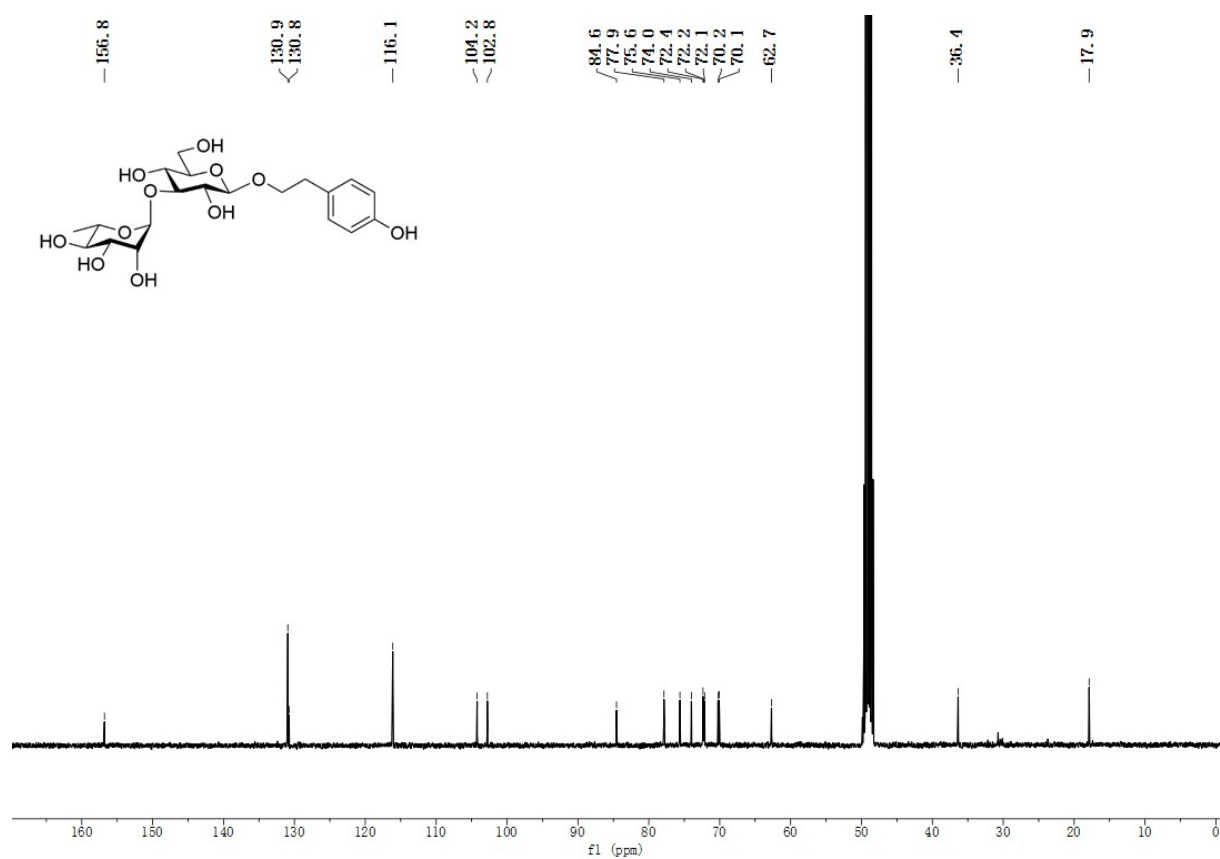


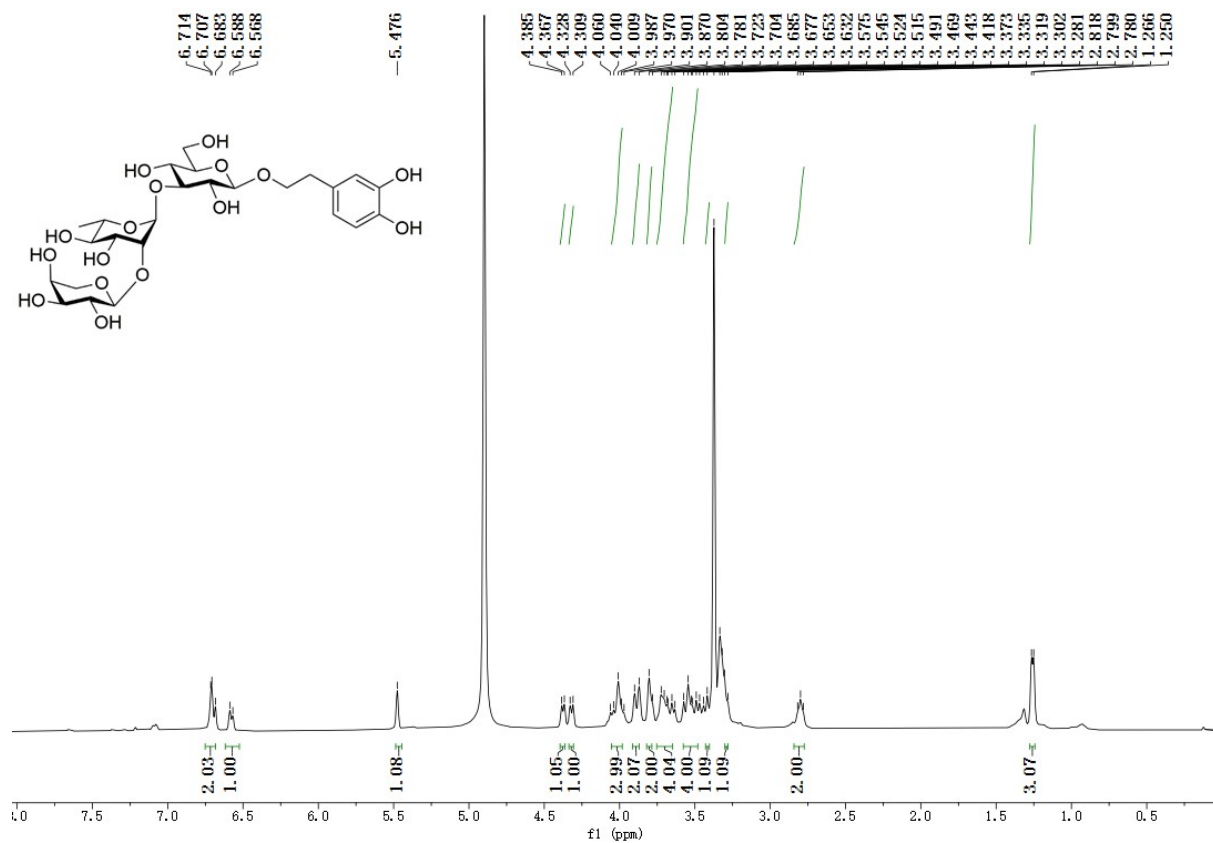
Figure S18:  $^{13}\text{C}$  NMR spectrum (100 MHz) of 5 in  $\text{CD}_3\text{OD}$



**Figure S19:** <sup>1</sup>H NMR spectrum (400 MHz) of 6 in CD<sub>3</sub>OD



**Figure S20:**  $^{13}\text{C}$  NMR spectrum (100 MHz) of **6** in  $\text{CD}_3\text{OD}$



**Figure S21:**  $^1\text{H}$  NMR spectrum (400 MHz) of 7 in  $\text{CD}_3\text{OD}$

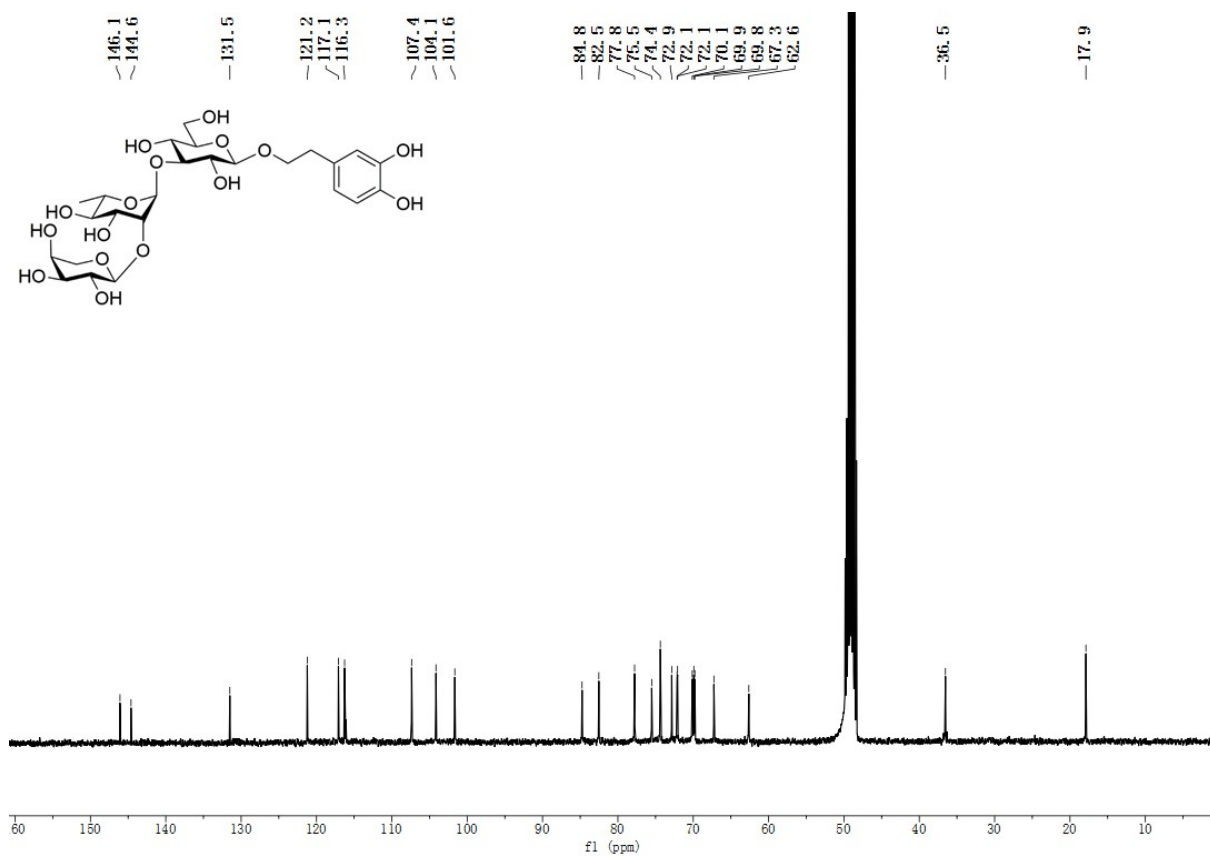
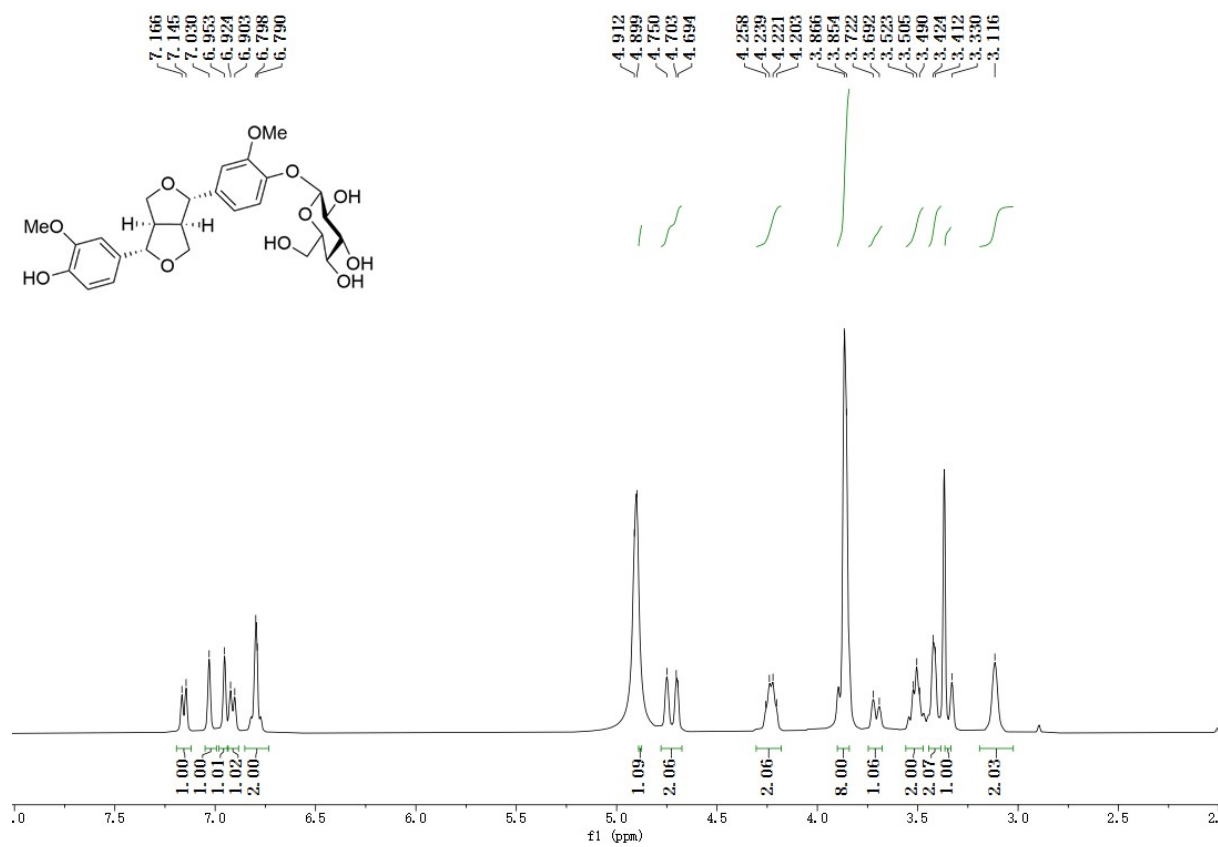


Figure S22:  $^{13}\text{C}$  NMR spectrum (100 MHz) of 7 in  $\text{CD}_3\text{OD}$





**Figure S23:** <sup>1</sup>H NMR spectrum (400 MHz) of **8** in CD<sub>3</sub>OD

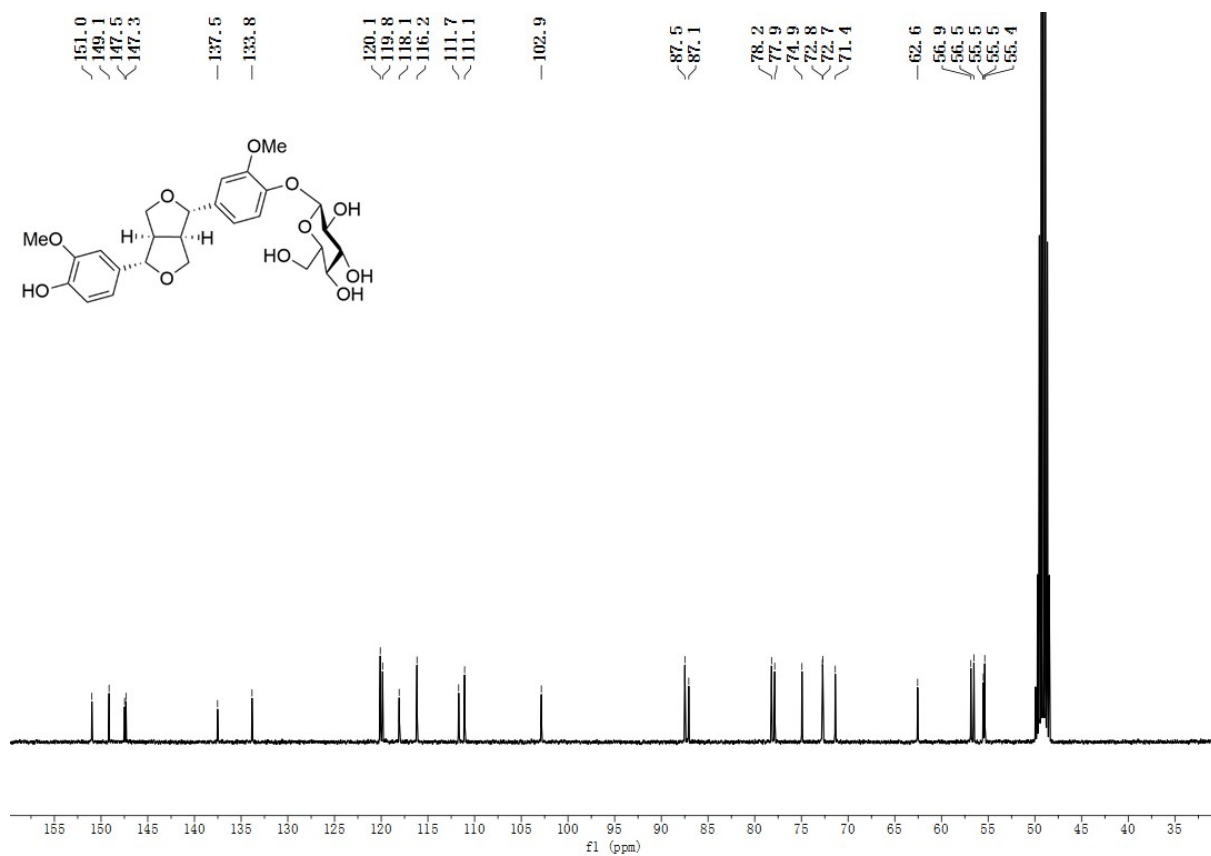
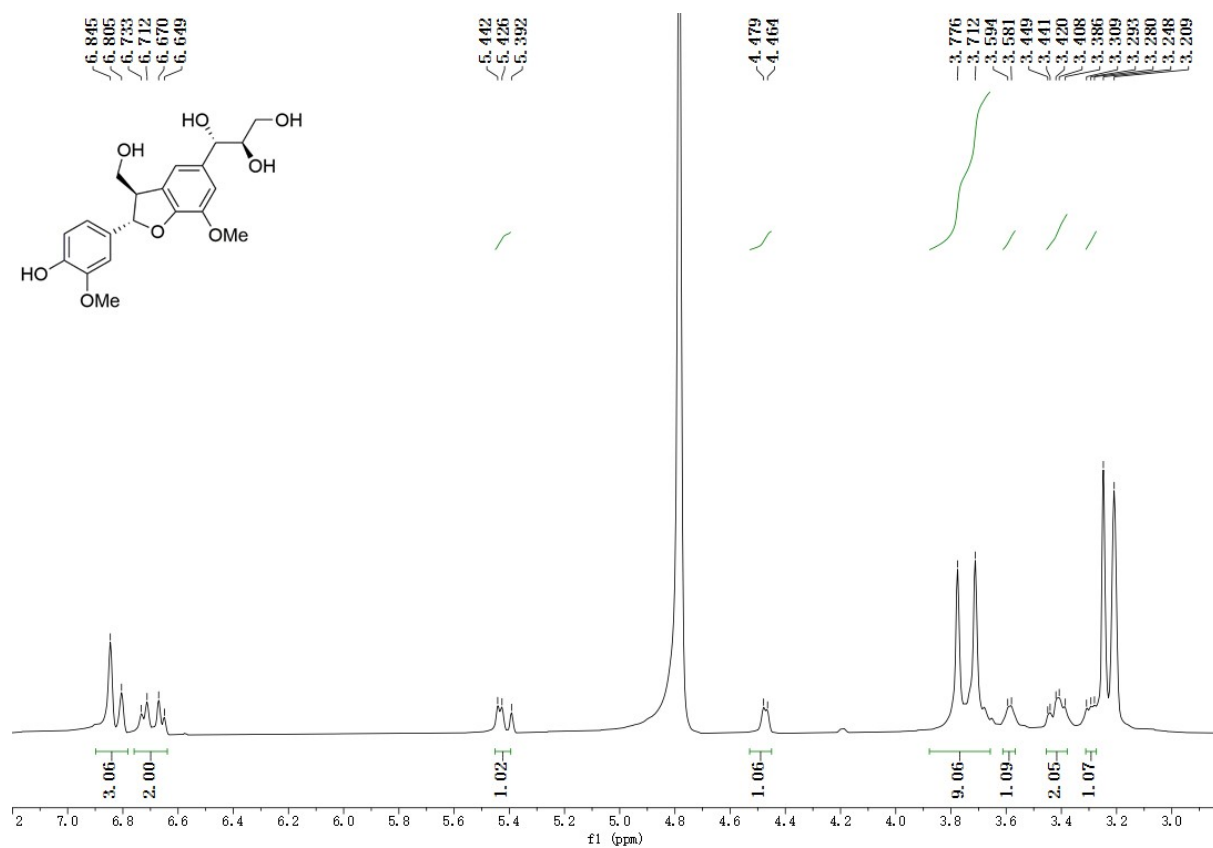


Figure S24: <sup>13</sup>C NMR spectrum (100 MHz) of **8** in CD<sub>3</sub>OD



**Figure S25:** <sup>1</sup>H NMR spectrum (400 MHz) of 9 in CD<sub>3</sub>OD

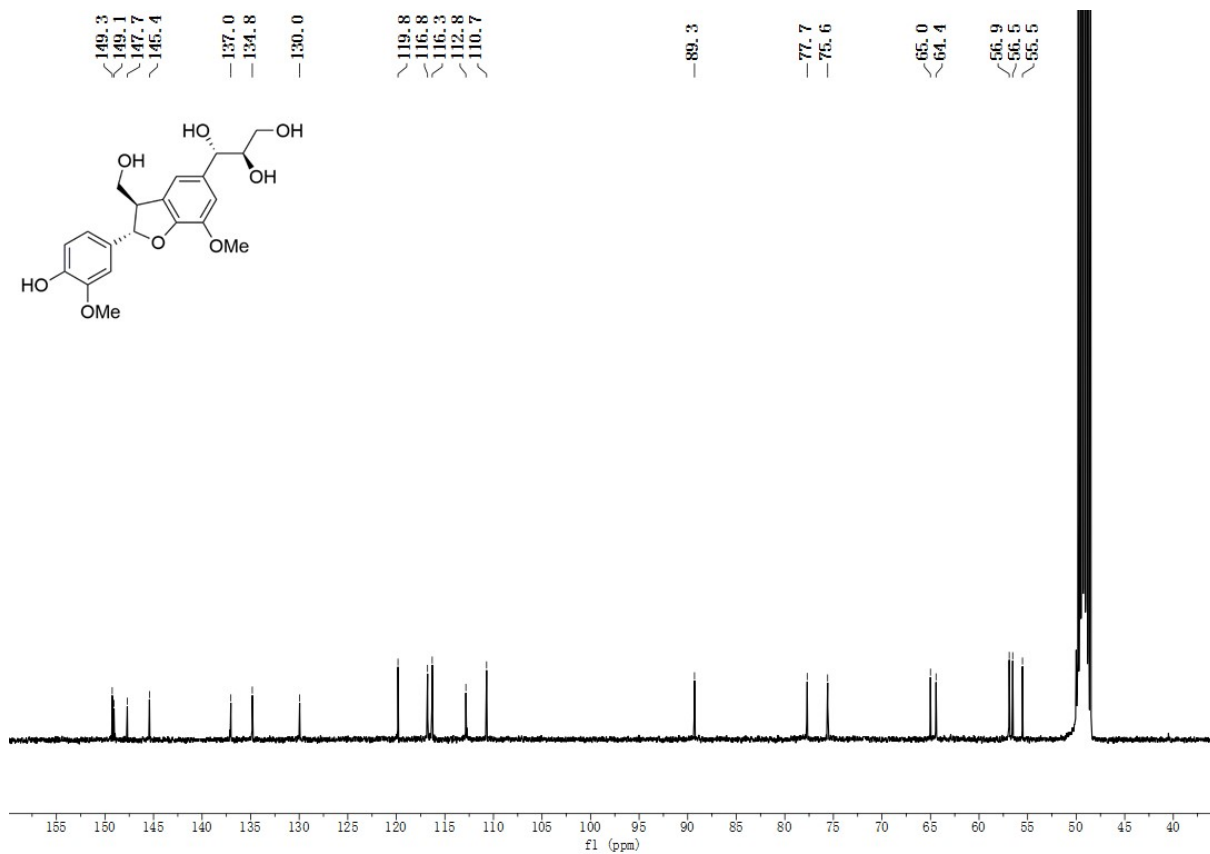


Figure S26: <sup>13</sup>C NMR spectrum (100 MHz) of **9** in CD<sub>3</sub>OD

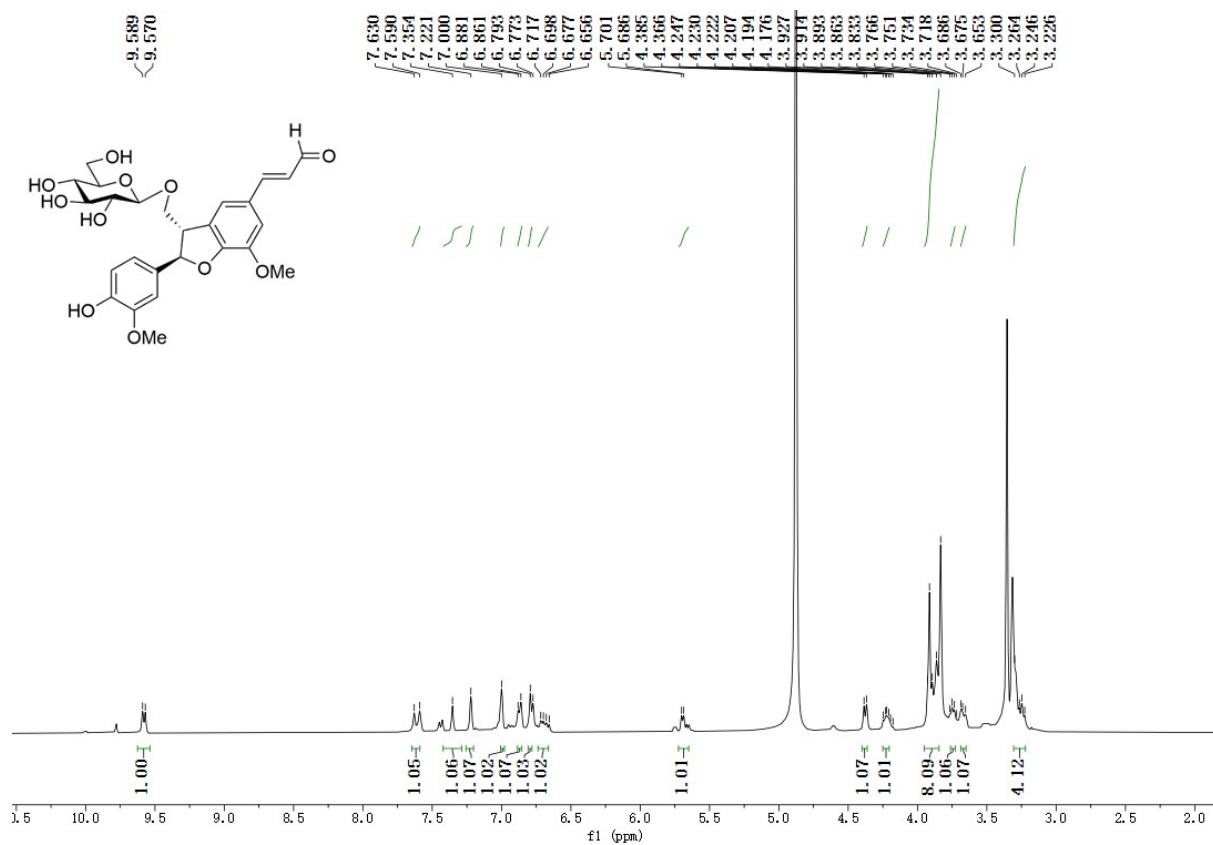
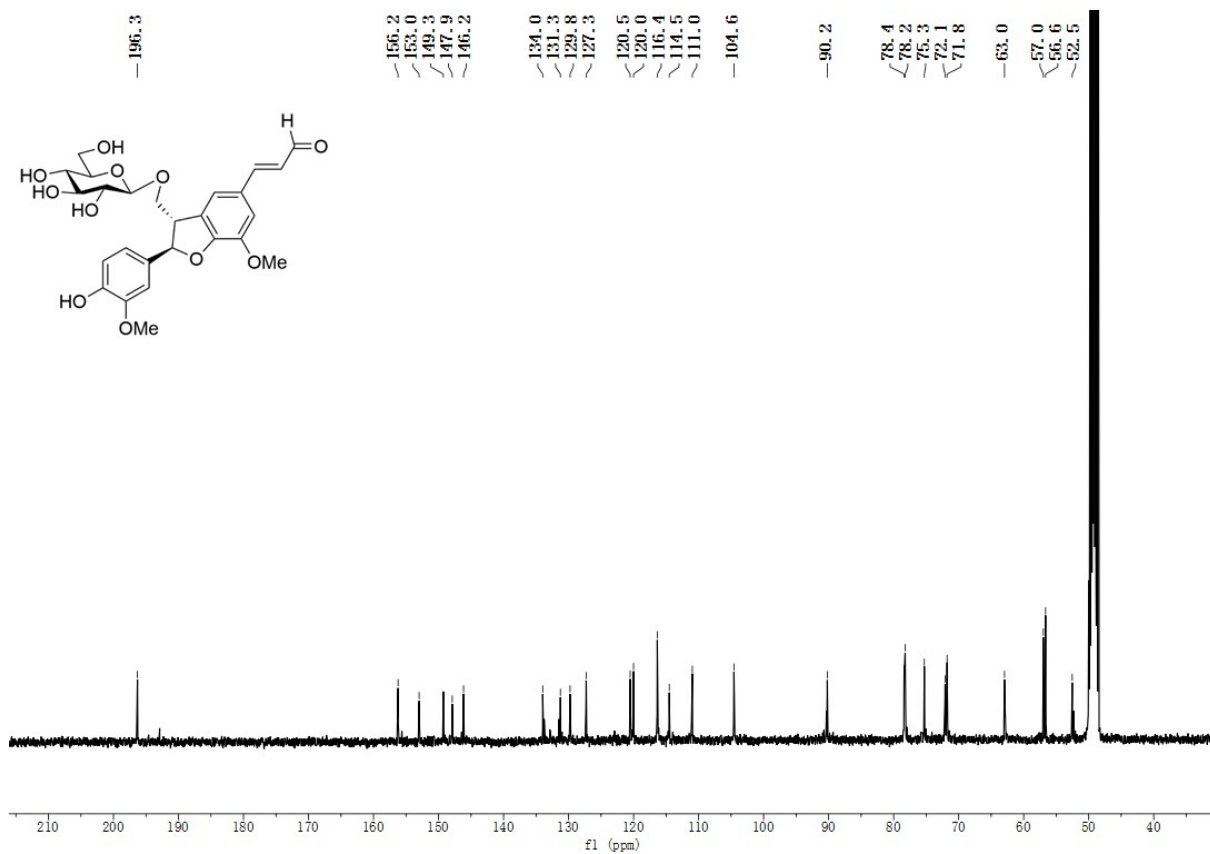


Figure S27: <sup>1</sup>H NMR spectrum (400 MHz) of **10** in CD<sub>3</sub>OD



**Figure S28:**  $^{13}\text{C}$  NMR spectrum (100 MHz) of **10** in  $\text{CD}_3\text{OD}$

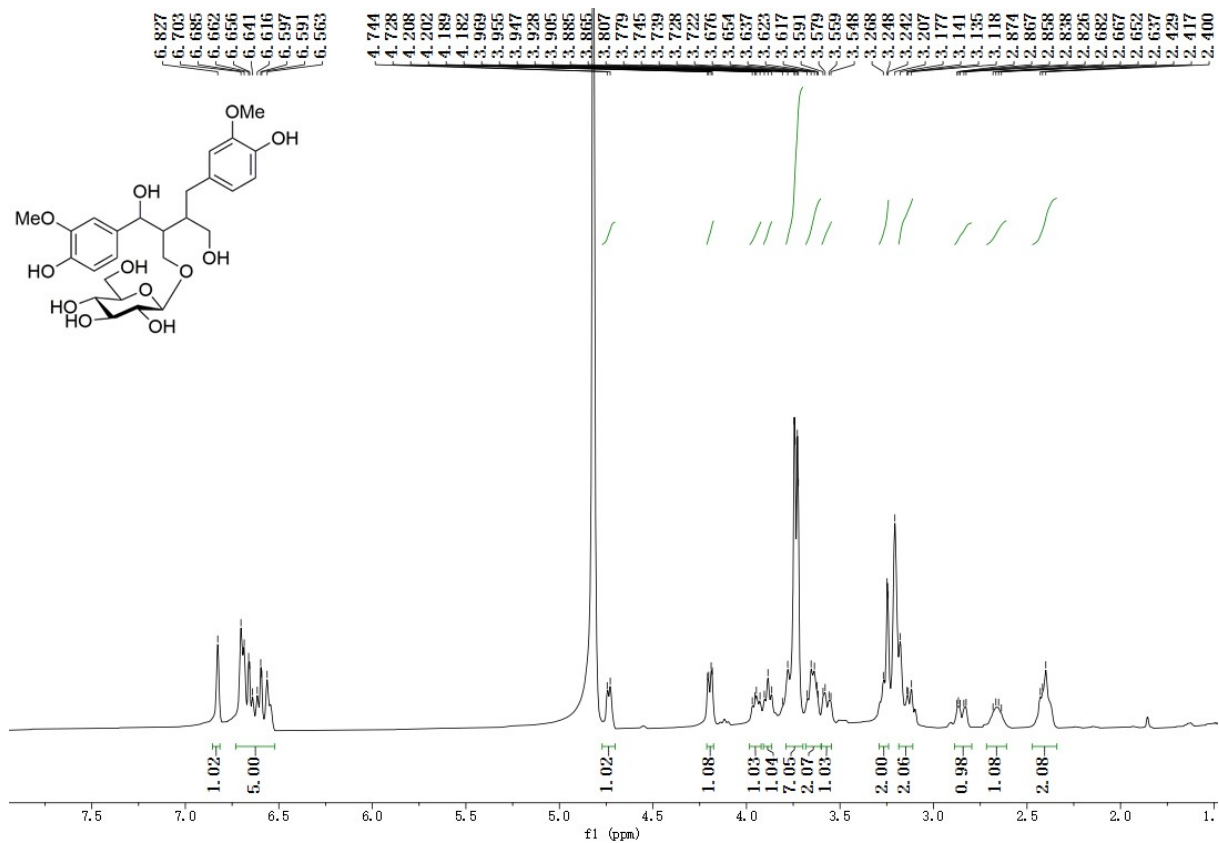
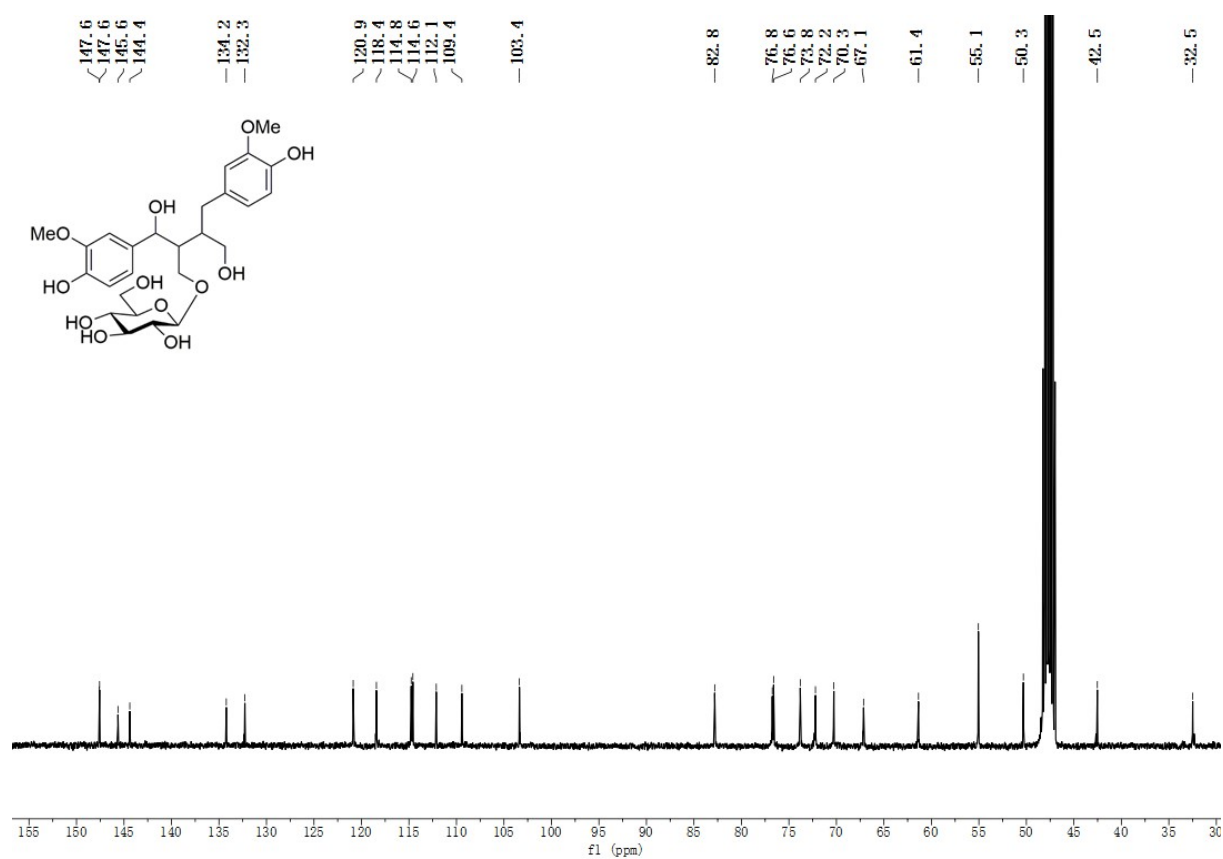
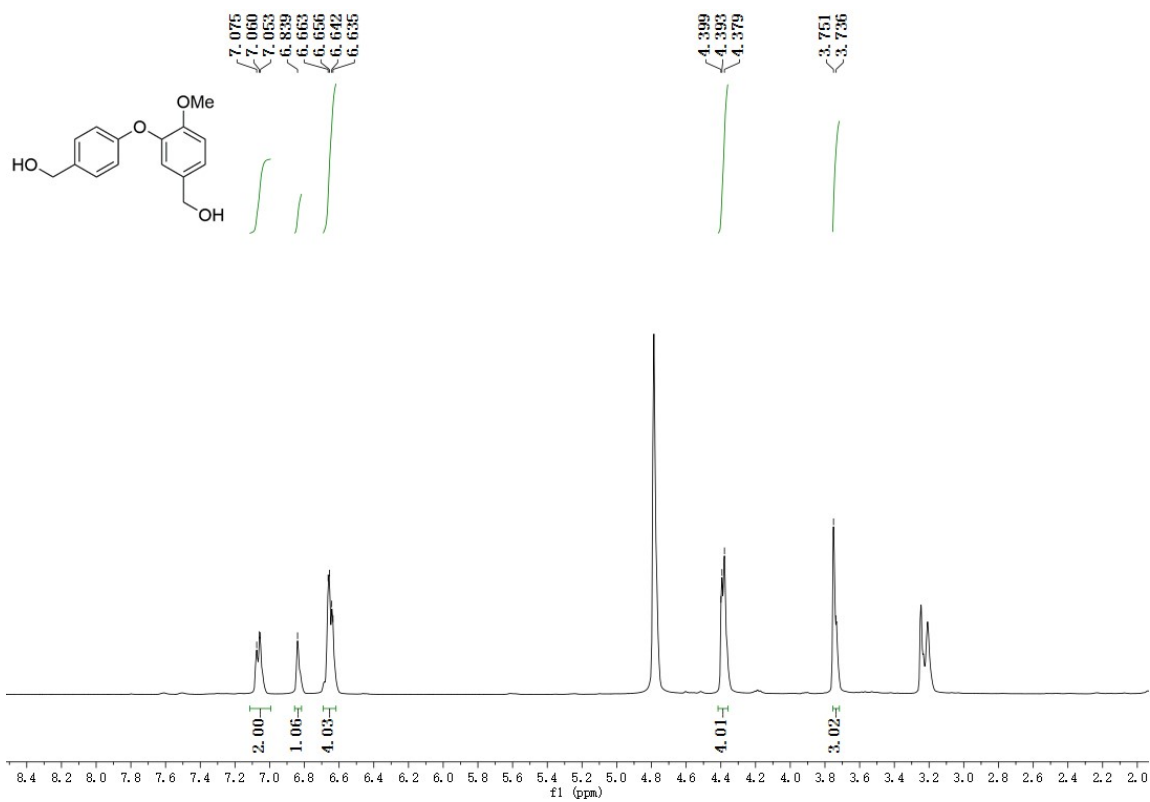


Figure S29:  $^1\text{H}$  NMR spectrum (400 MHz) of **11** in  $\text{CD}_3\text{OD}$



**Figure S30:** <sup>13</sup>C NMR spectrum (100 MHz) of **11** in CD<sub>3</sub>OD





**Figure S31:** <sup>1</sup>H NMR spectrum (400 MHz) of **12** in CD<sub>3</sub>OD

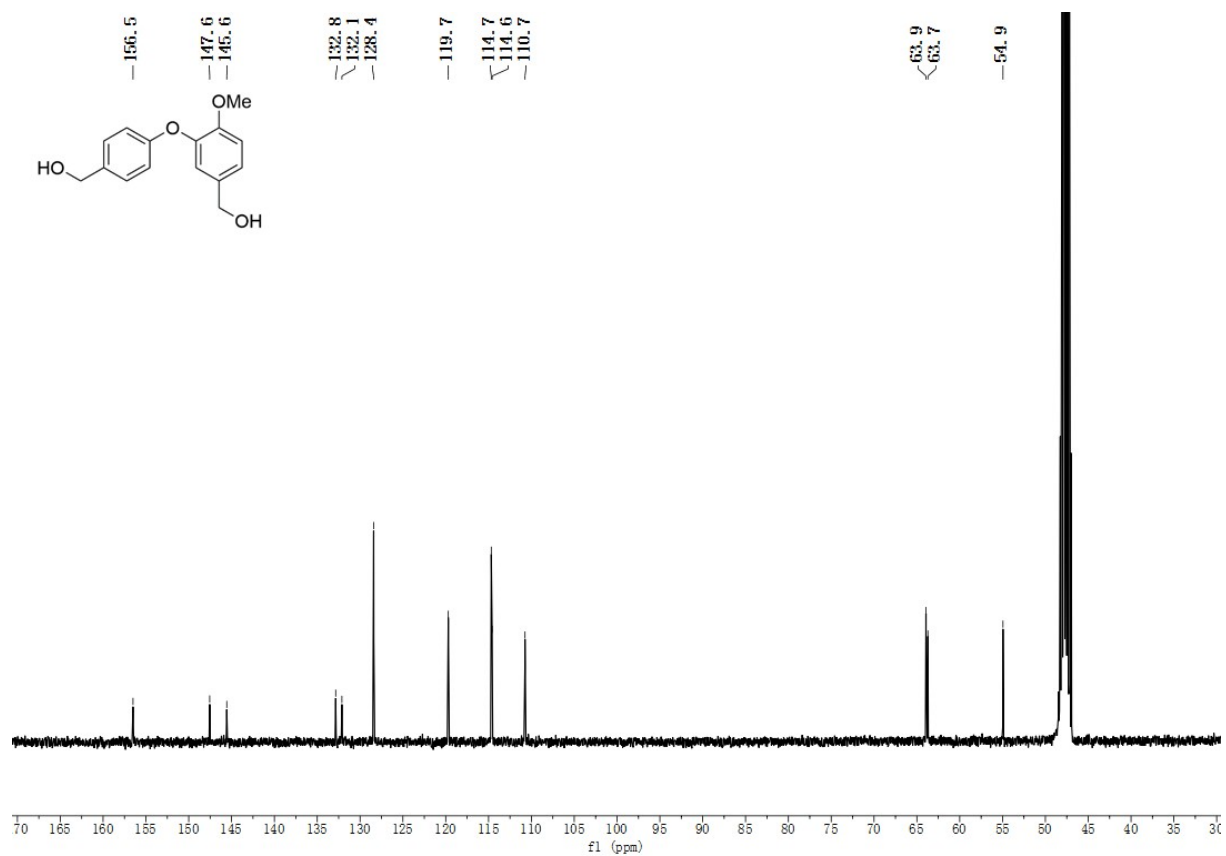


Figure S32: <sup>13</sup>C NMR spectrum (100 MHz) of 12 in CD<sub>3</sub>OD

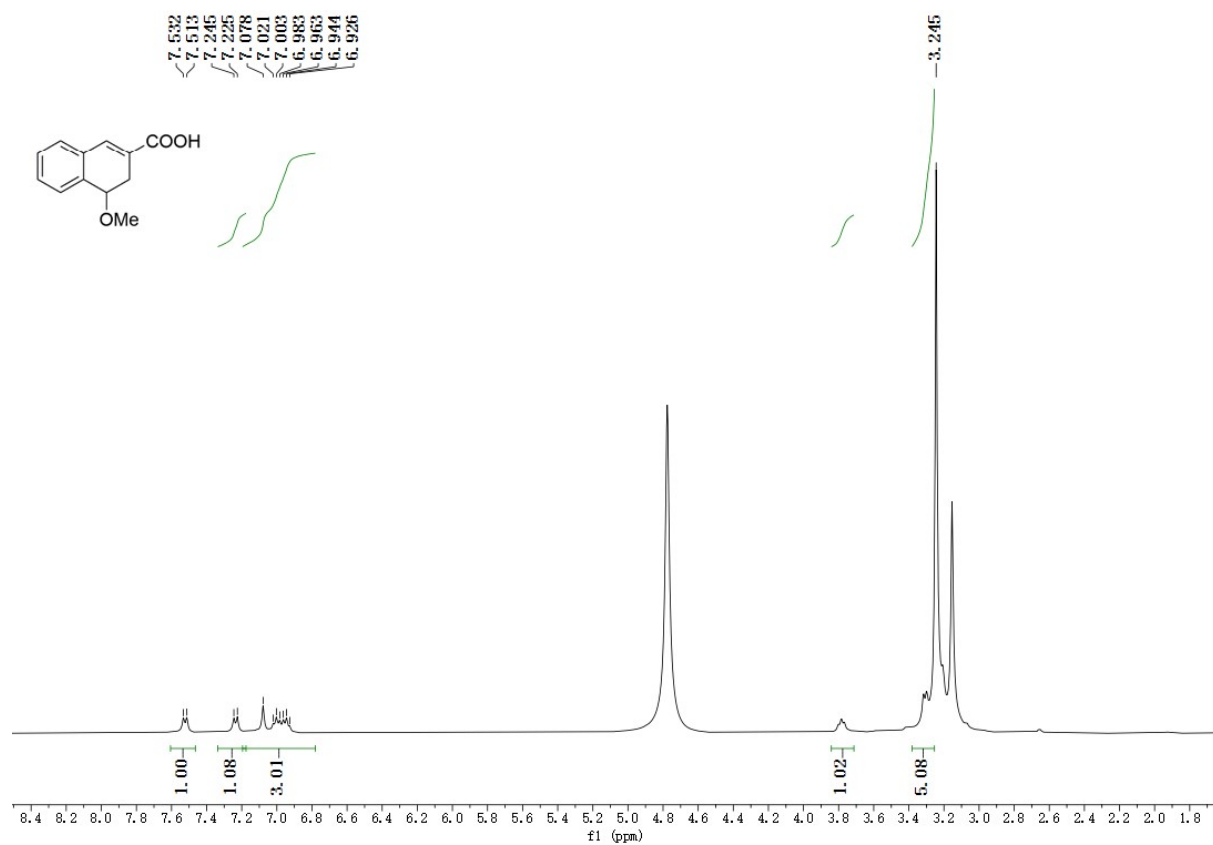


Figure S33: <sup>1</sup>H NMR spectrum (400 MHz) of 13 in CD<sub>3</sub>OD

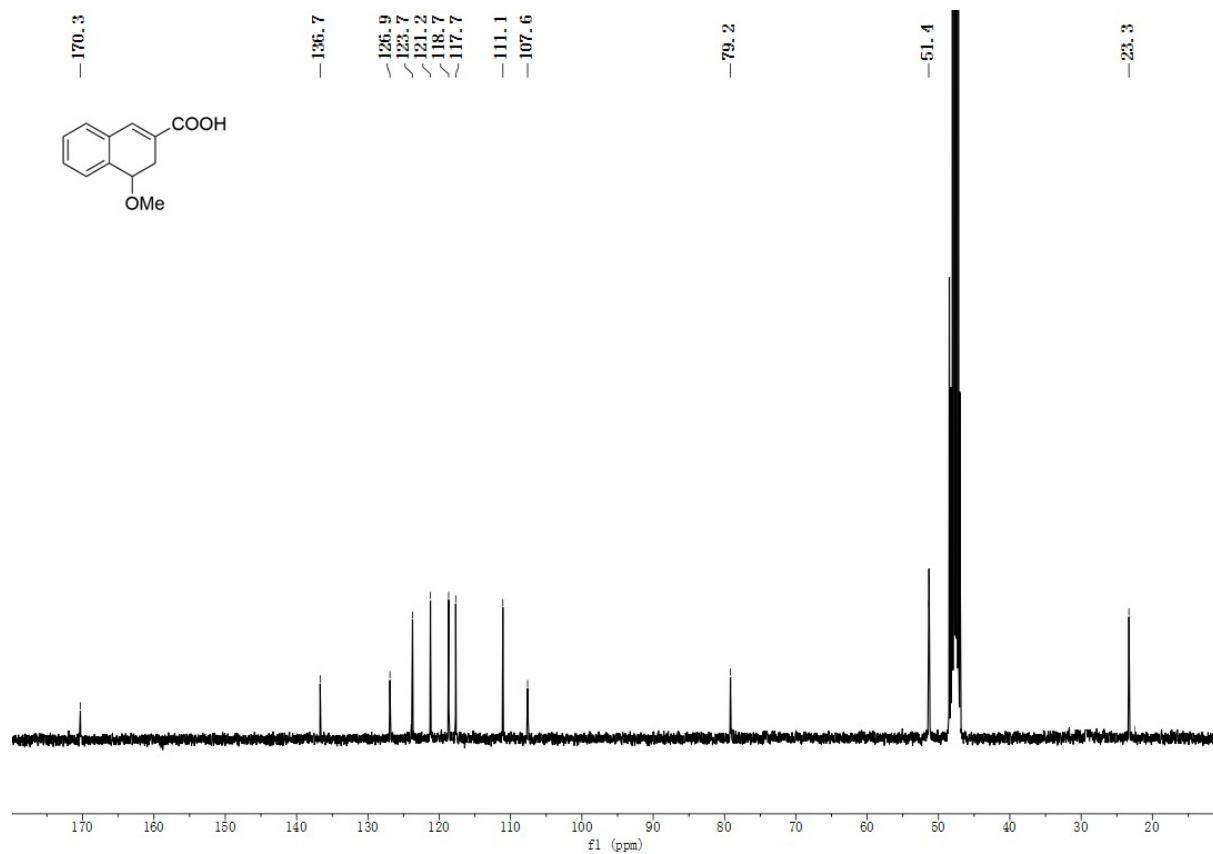
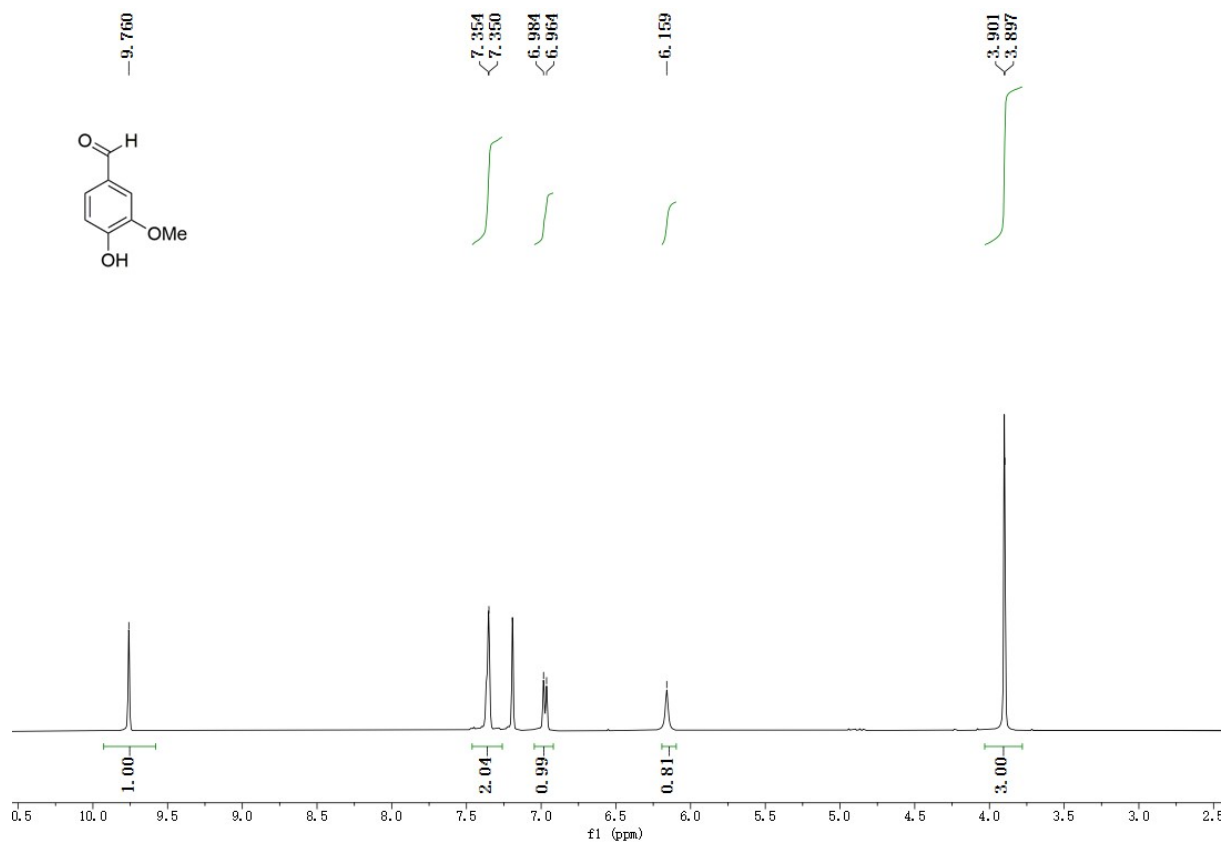


Figure S34: <sup>13</sup>C NMR spectrum (100 MHz) of 13 in CD<sub>3</sub>OD



**Figure S35:** <sup>1</sup>H NMR spectrum (400 MHz) of 14 in CDCl<sub>3</sub>

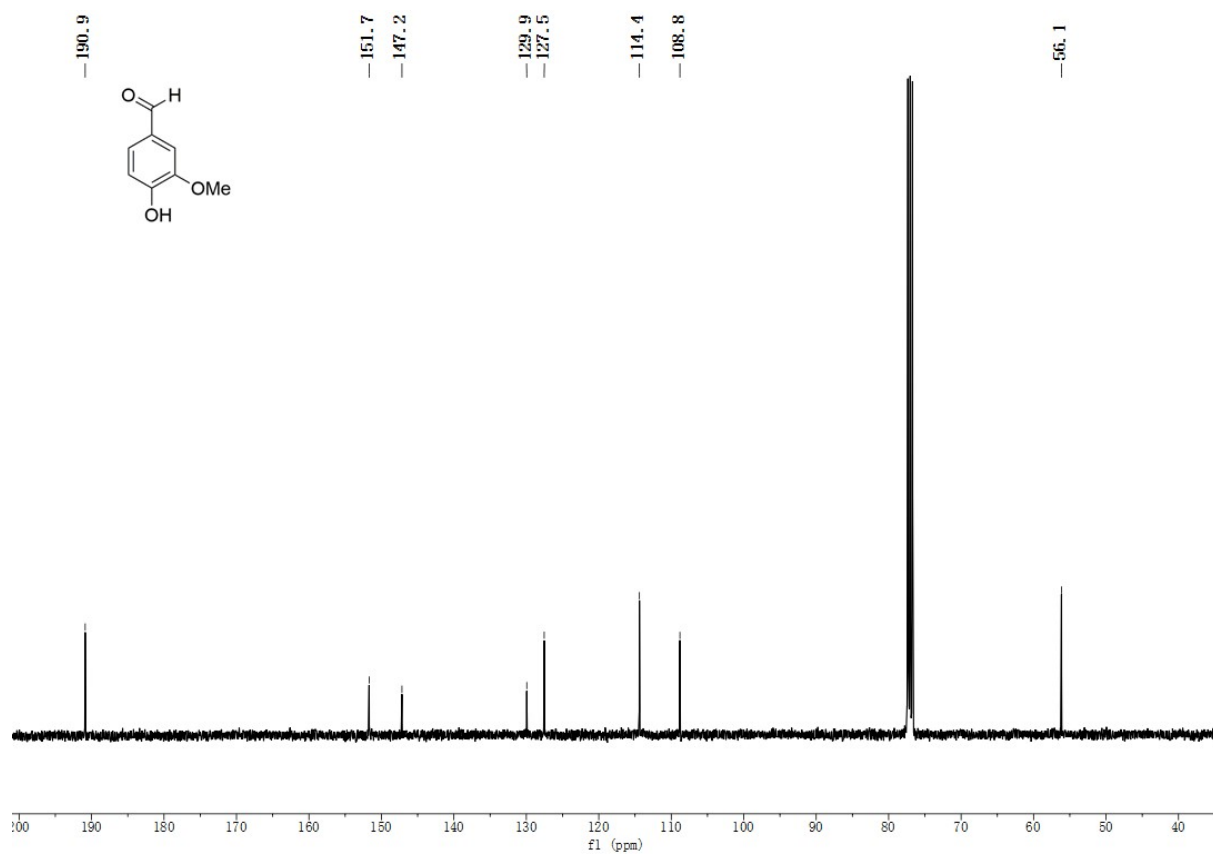


Figure S36:  $^{13}\text{C}$  NMR spectrum (100 MHz) of **14** in  $\text{CDCl}_3$