Supporting Imformation

Isolation and Comparison of Root-associated Endophytic Actinobacteria from Healthy and Diseased Soybean and Identification of the Antifungal Compounds against *Sclerotinia sclerotiorum* (Lib.) de Bary

Chongxi Liu[1,2], Xiaoxin Zhuang[1], Zhiyin Yu[1,2], Zhiyan Wang[2], Yongjiang Wang[2], Xiaowei Guo[1,2], Wensheng Xiang[1,3*], Shengxiong Huang[2*]

[1]Key Laboratory of Agriculture Biological Functional Gene of Heilongjiang Provincial Education Committee, Northeast Agricultural University, Harbin 150030, China

[2]State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China

[3]State Key Laboratory for Biology of Plant Diseases and Insect Pests, Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing, China

*Correspondence: Wensheng Xiang and Shengxiong Huang

E-mail: xiangwensheng@neau.edu.cn, sxhuang@mail.kib.ac.cn.

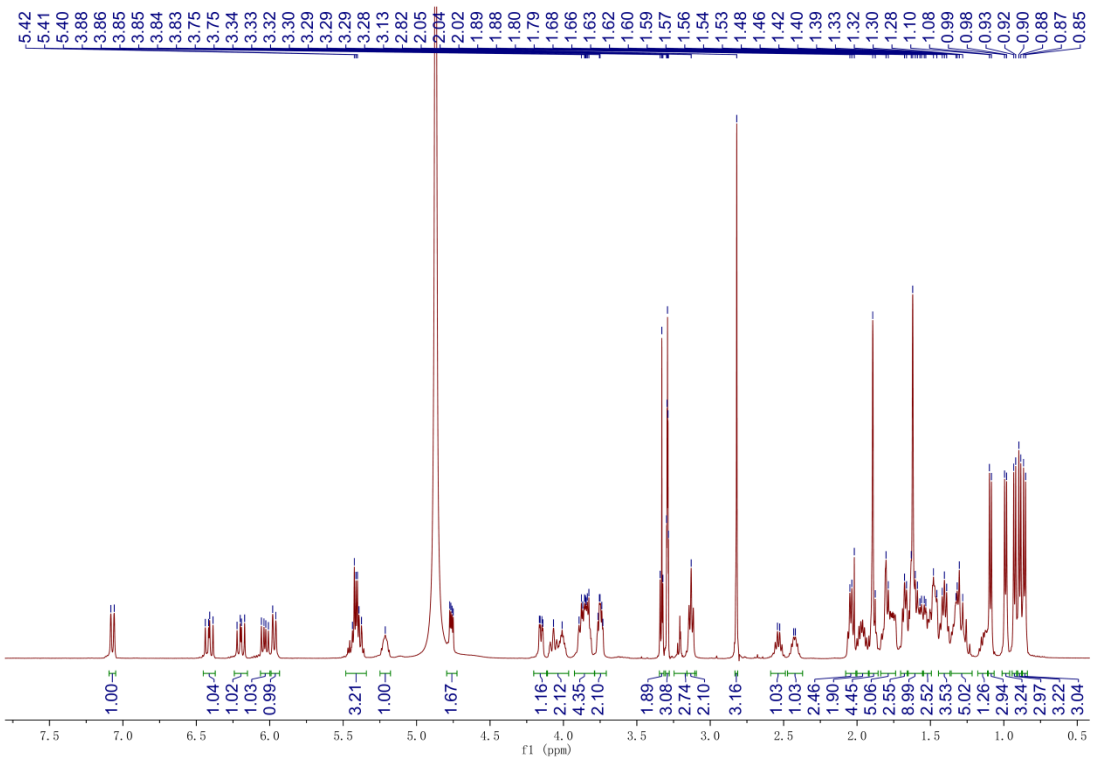


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **1** in MeOH-d_4

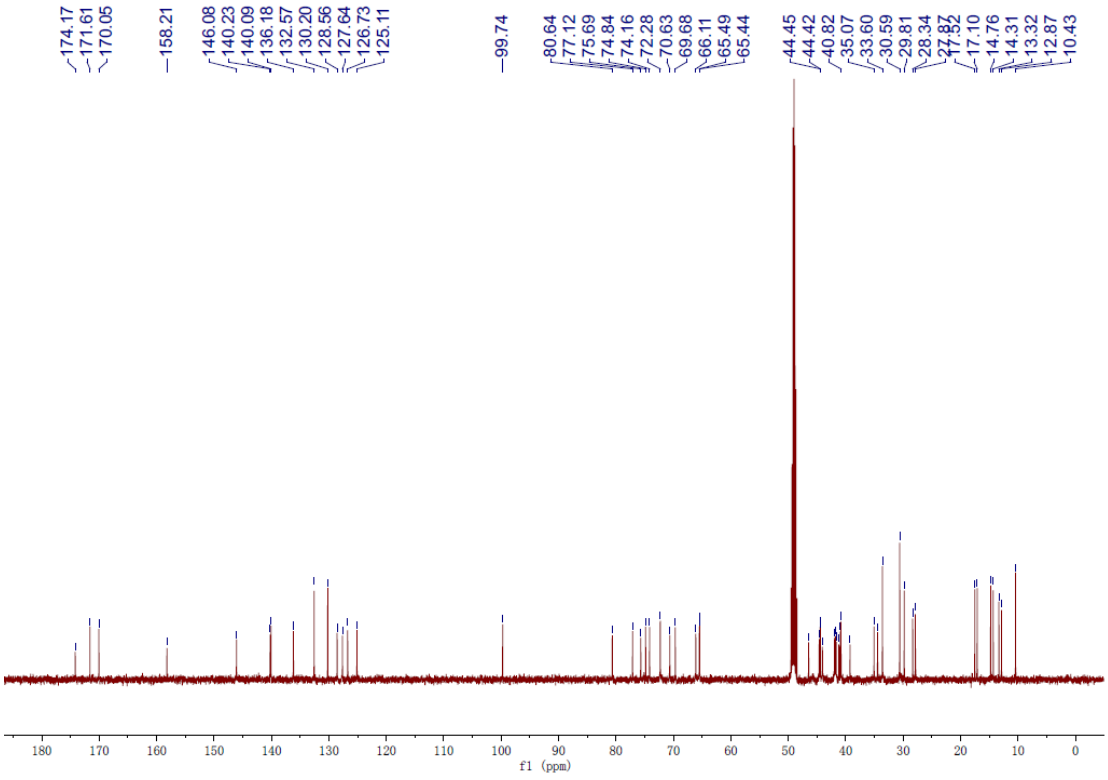


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **1** in MeOH-d_4

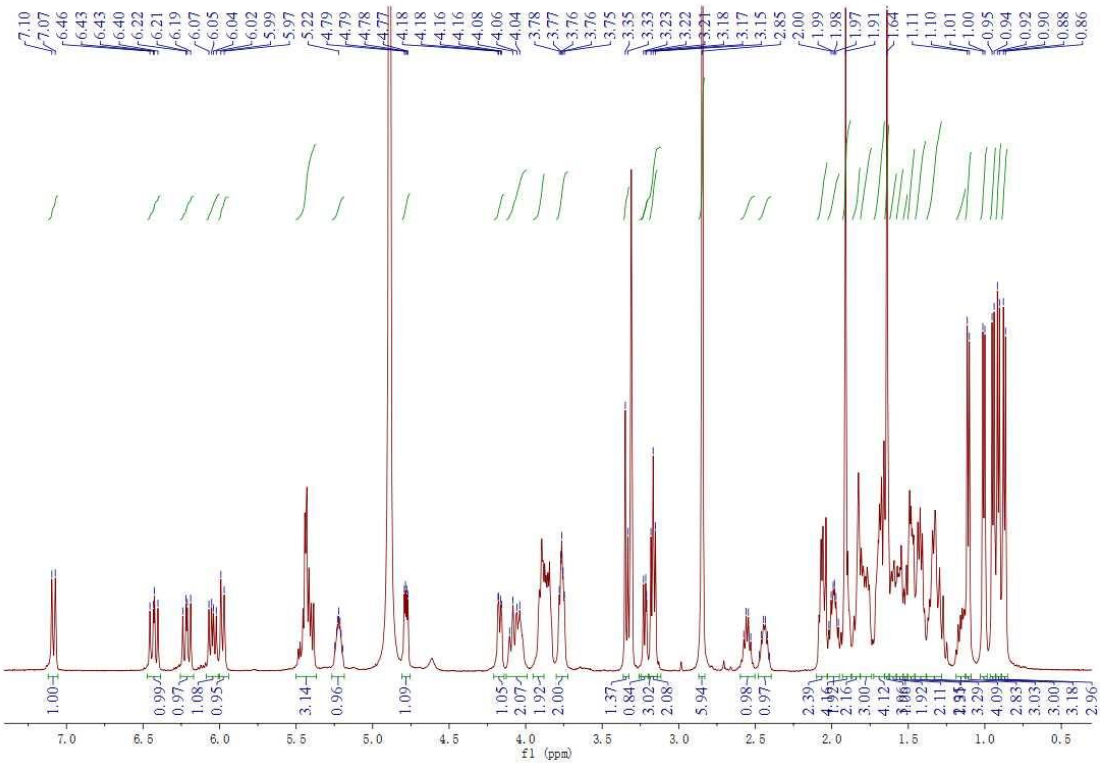


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **2** in MeOH-d_4

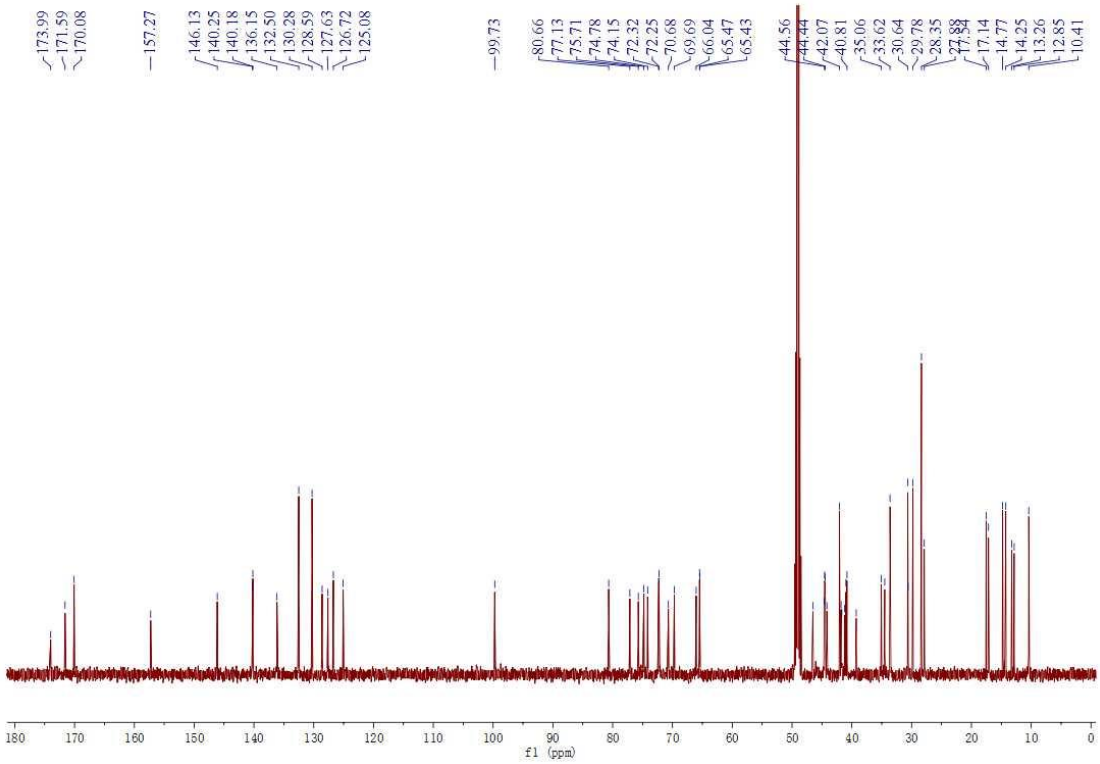


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **2** in MeOH-d_4

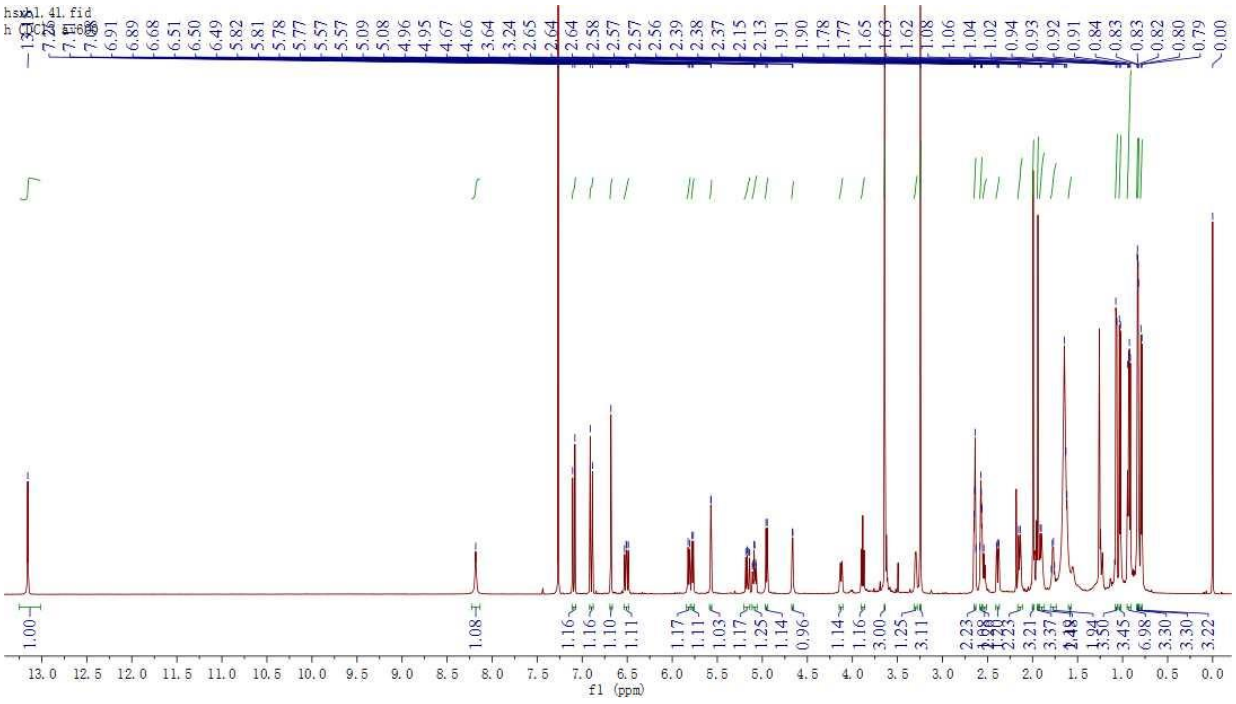


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **3** in $CDCl_3$

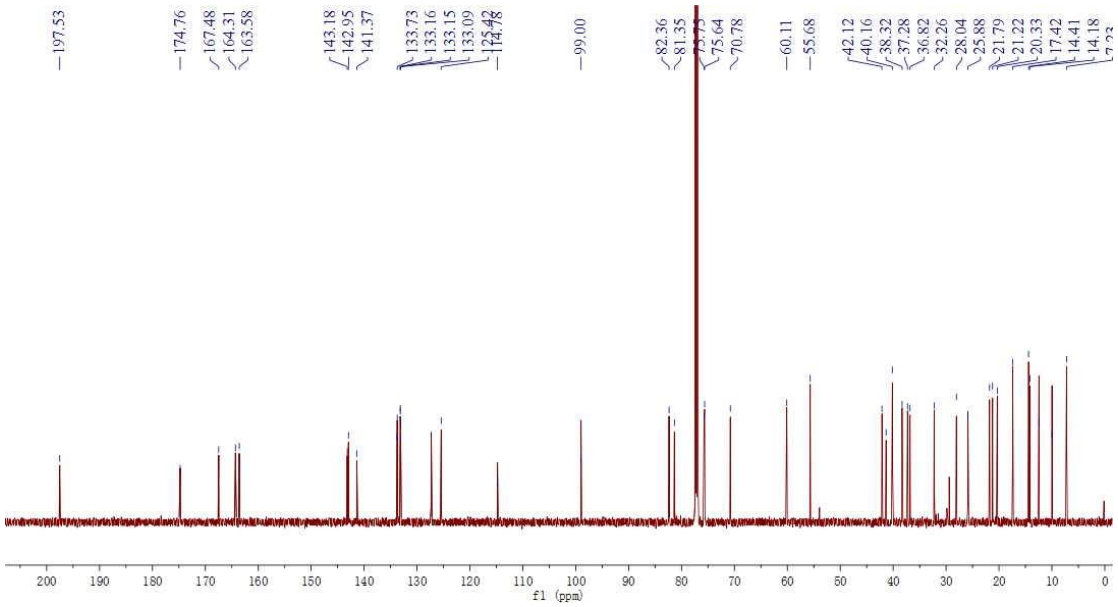


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **3** in $CDCl_3$

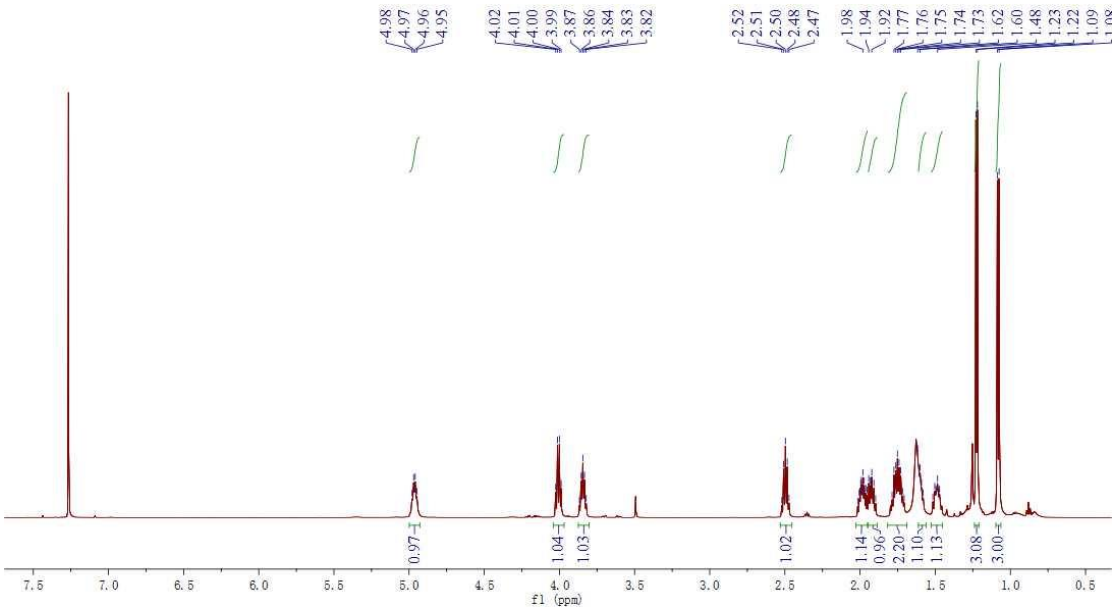


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **4** in $CDCl_3$

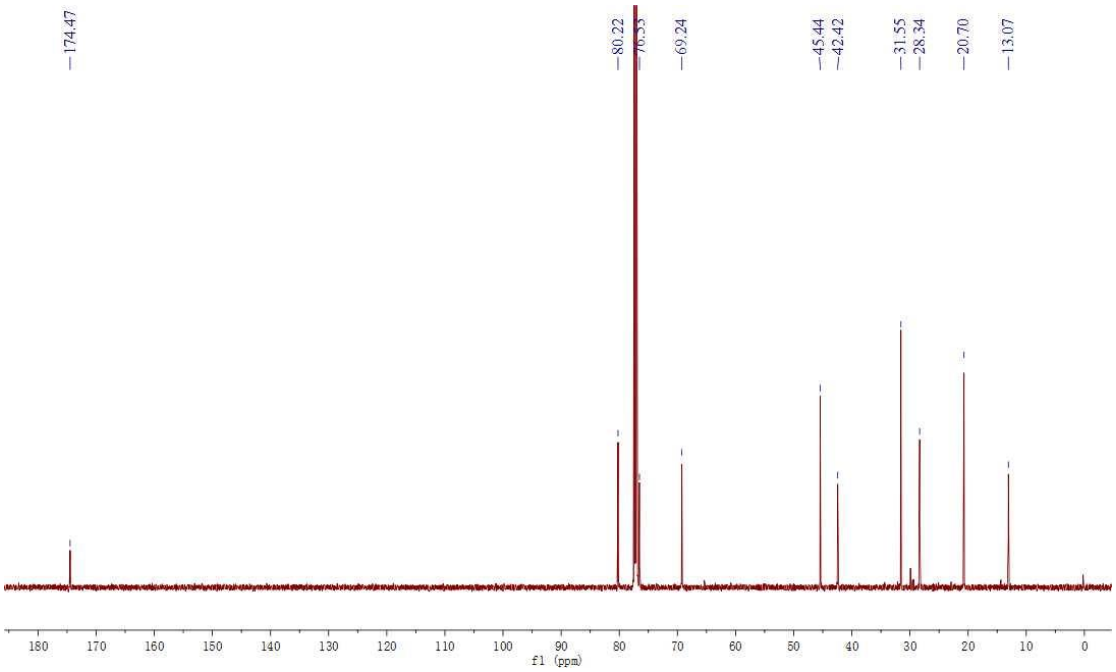


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **4** in $CDCl_3$

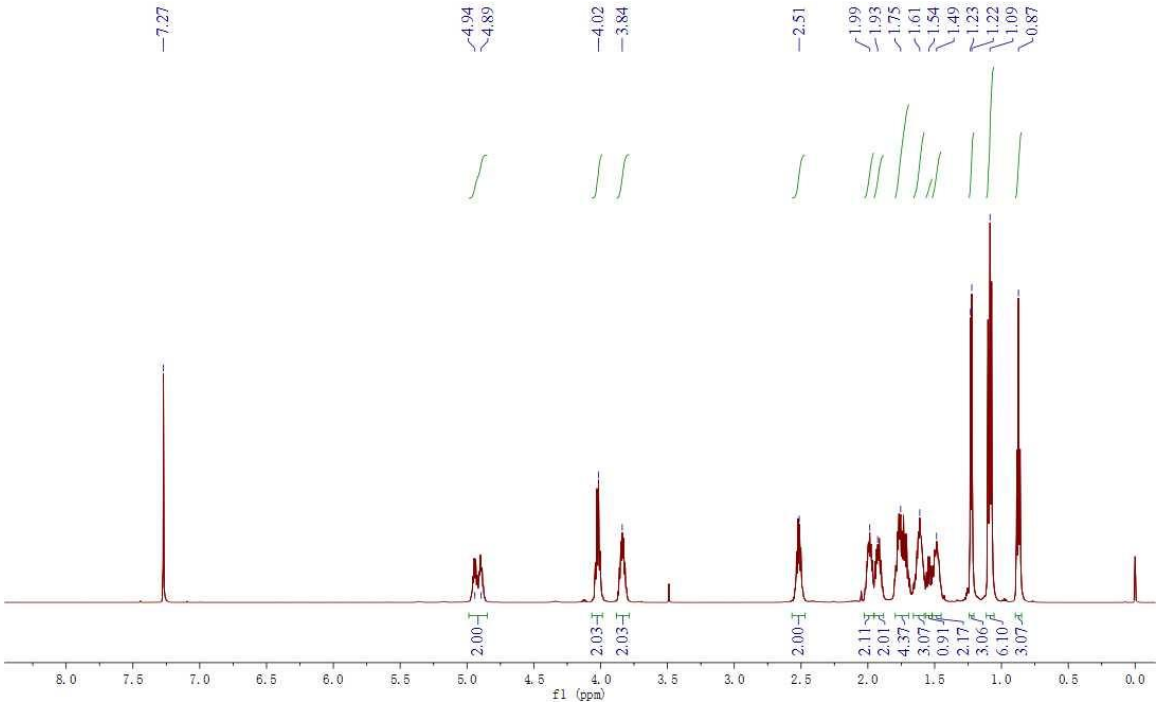


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **5** in $CDCl_3$

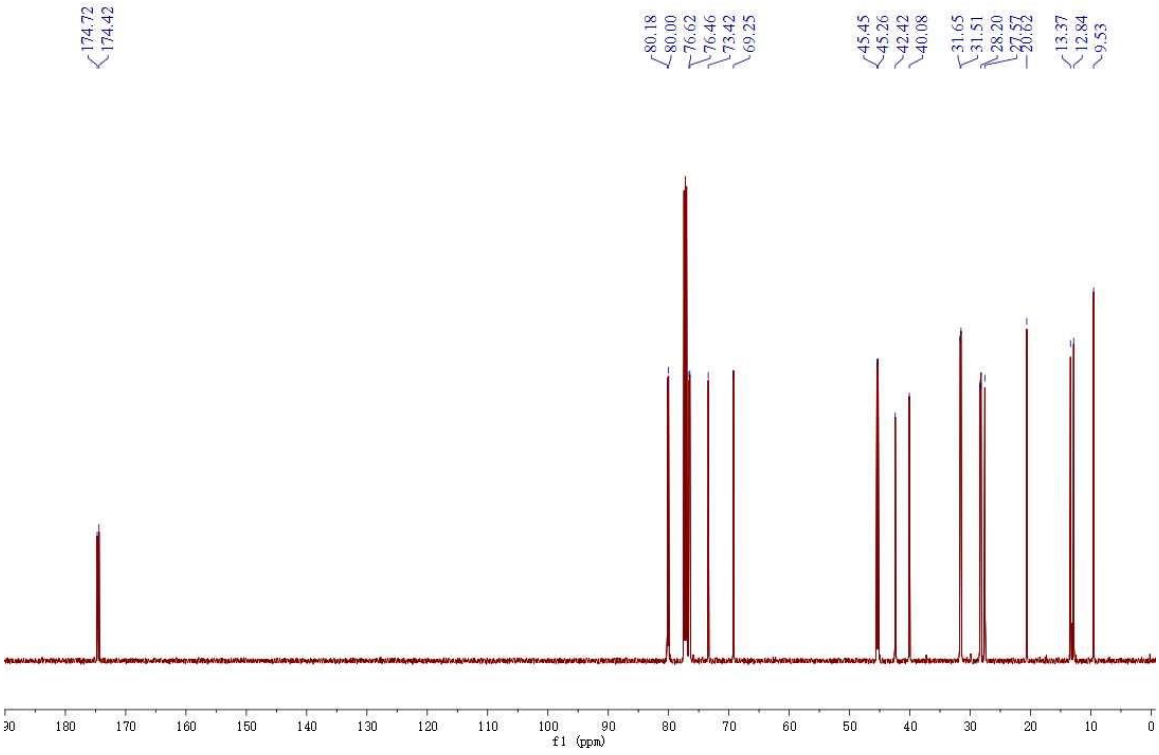


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **5** in $CDCl_3$

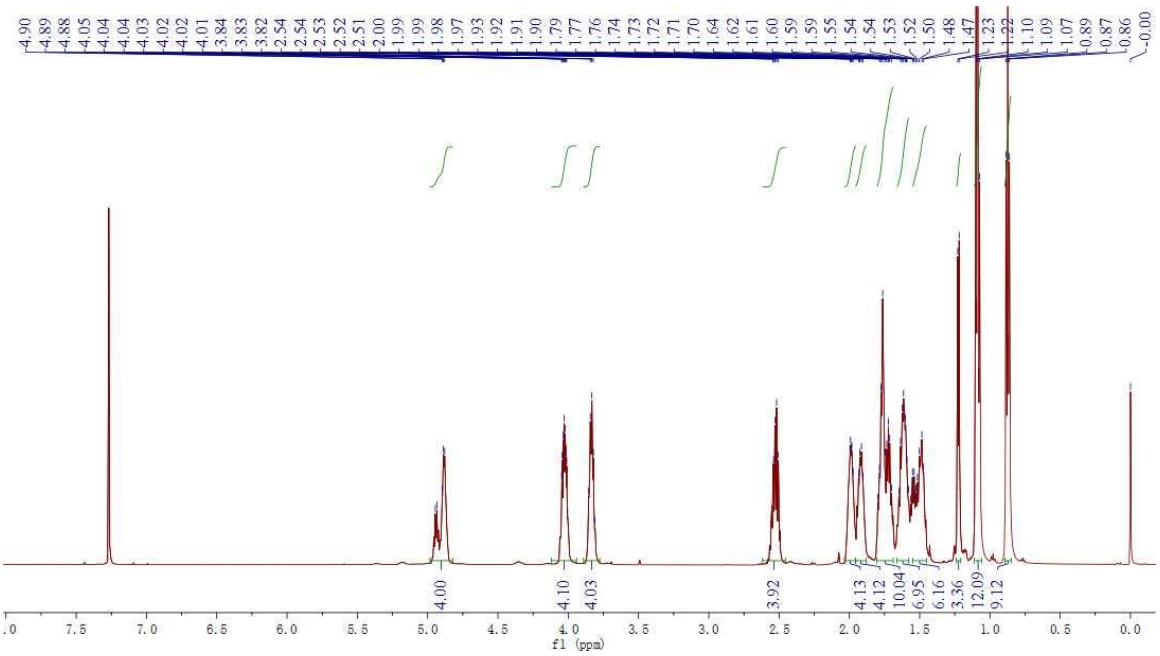


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **6** in $CDCl_3$

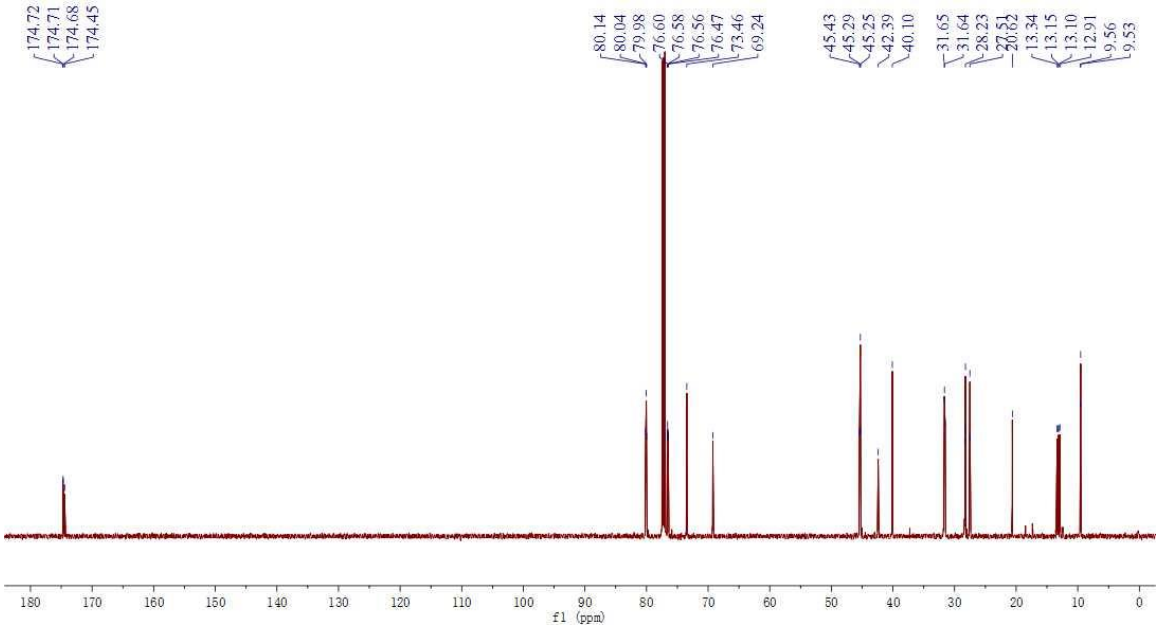


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **6** in CDCl3

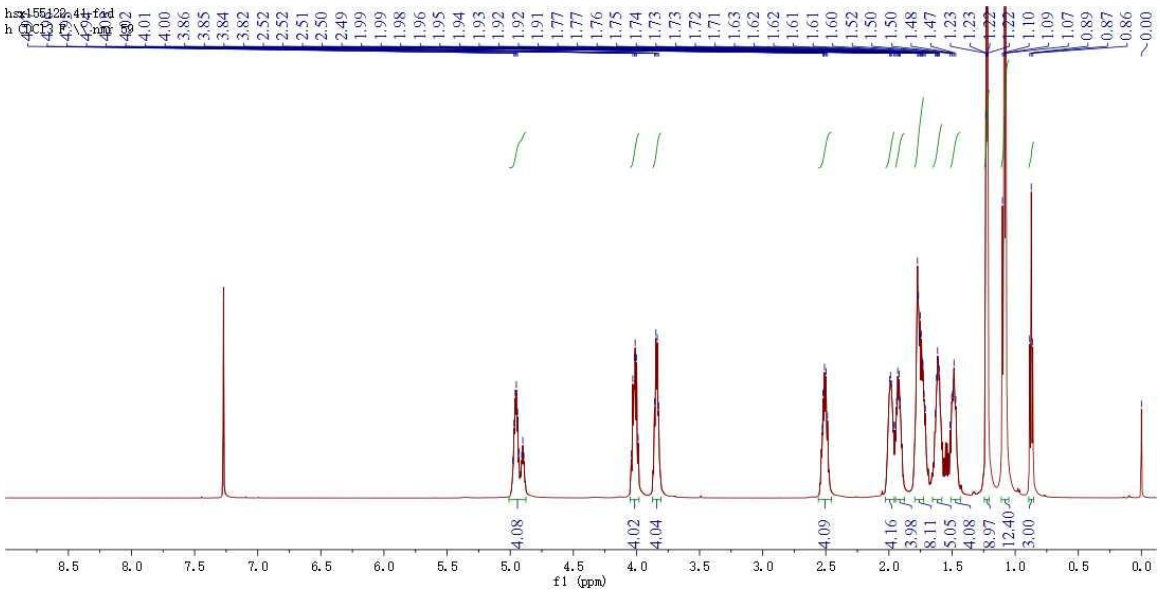


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **7** in $CDCl_3$

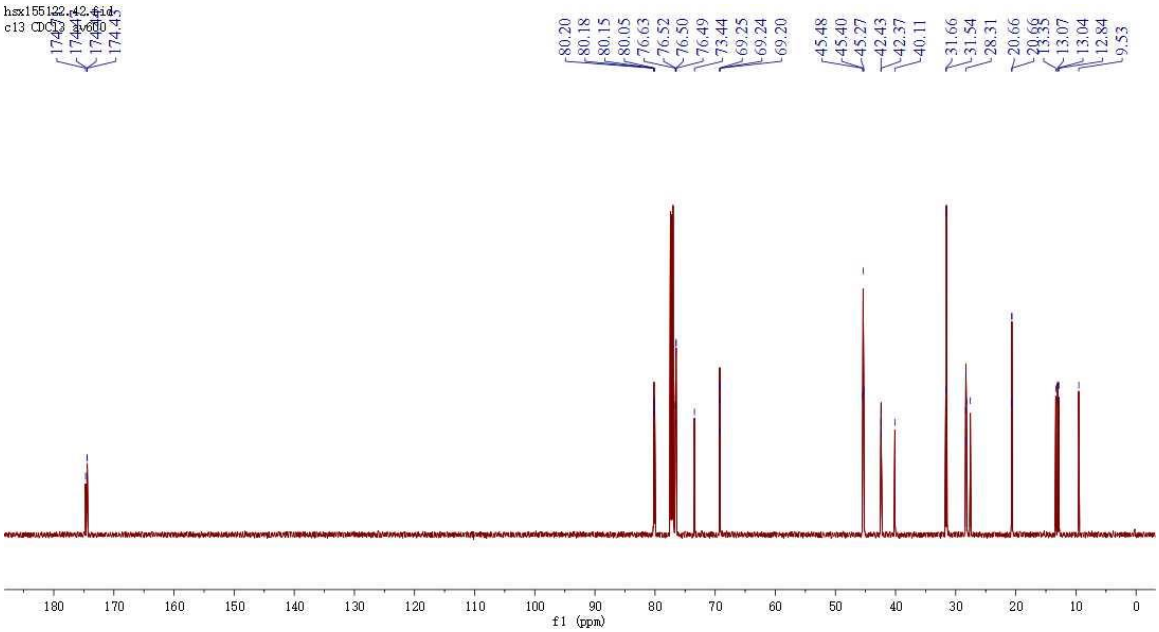


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **7** in $CDCl_3$

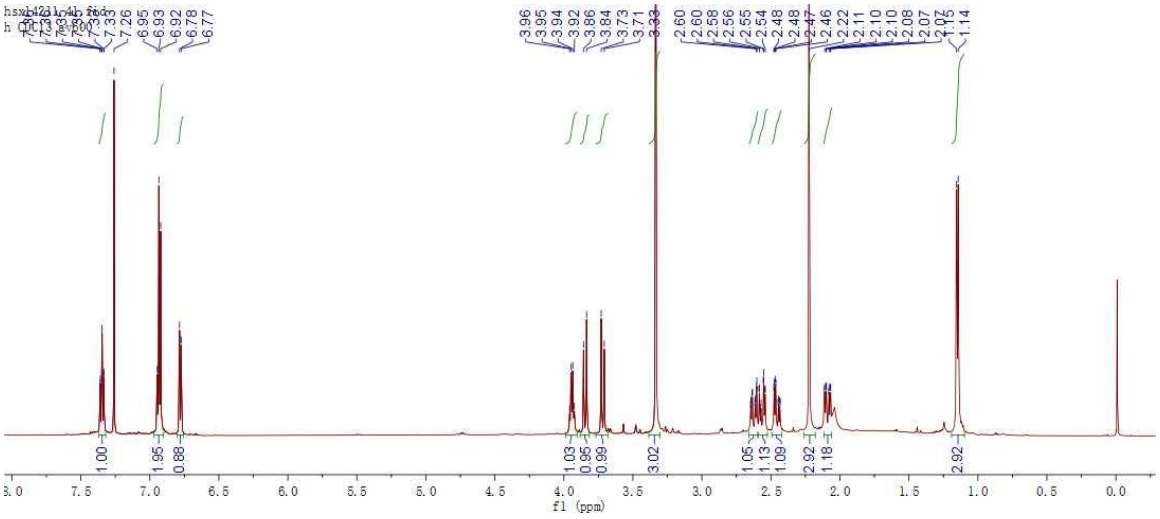


Figure S1. ^{1}H NMR (600 MHz) spectrum of compound **8** in $CDCl_3$

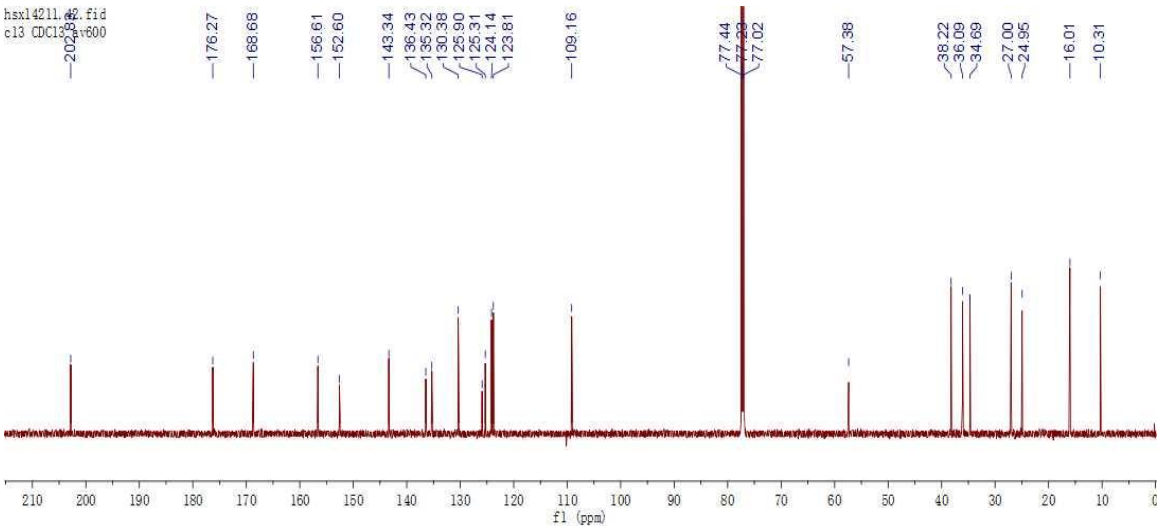


Figure S1. ^{13}C NMR (600 MHz) spectrum of compound **8** in $CDCl_3$

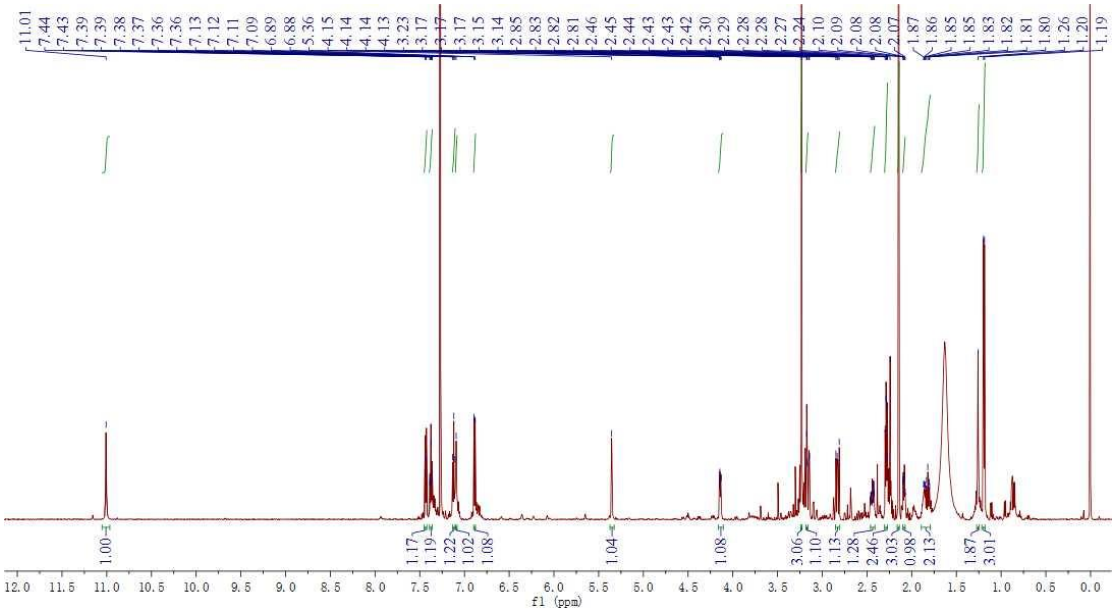


Figure S2. ^{1}H NMR (600 MHz) spectrum of compound **9** in $CDCl_3$

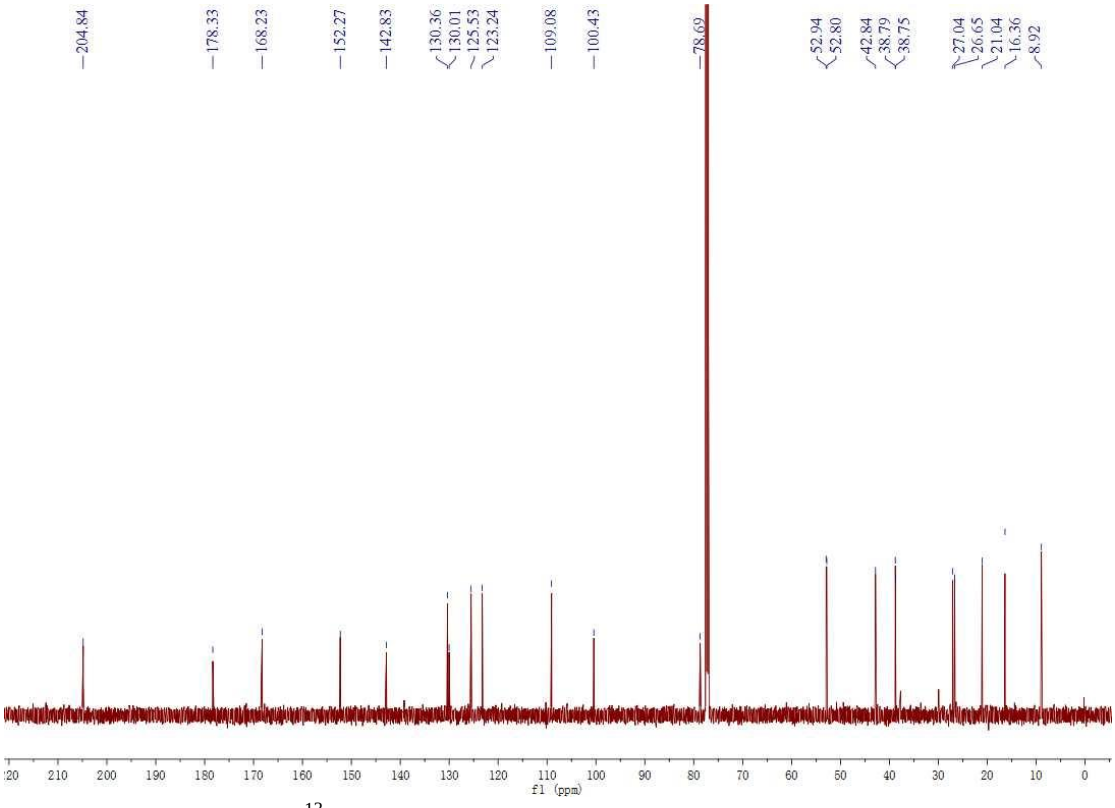


Figure S2. ^{13}C NMR (600 MHz) spectrum of compound **9** in $CDCl_3$

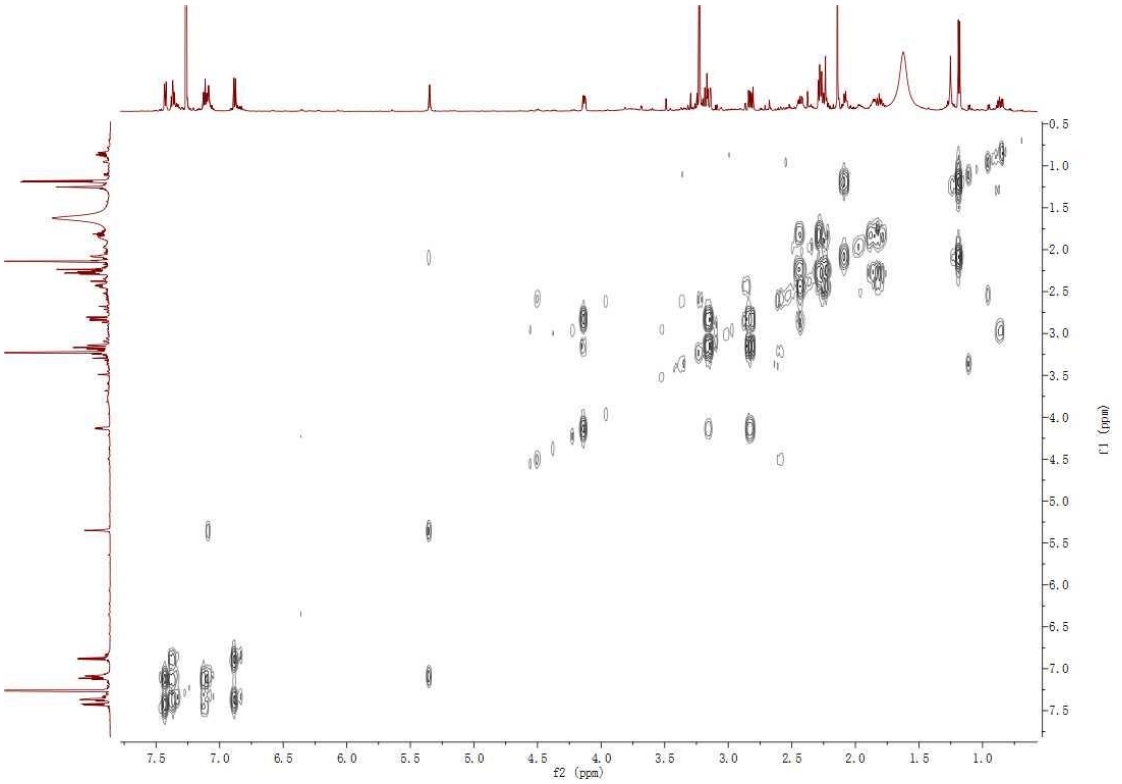


Figure S2. ^{1}H-^{1}H COSY (600 MHz) spectrum of compound **9** in $CDCl_3$

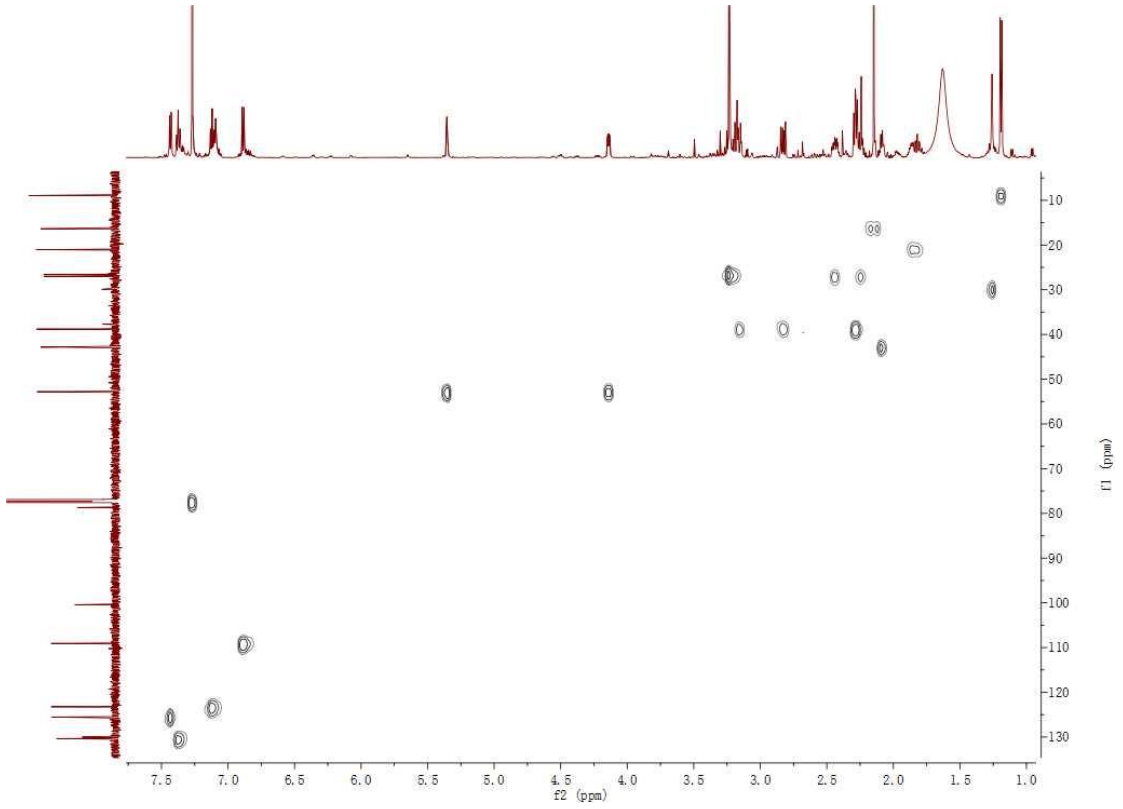


Figure S2. HSQC (600 MHz) spectrum of compound **9** in $CDCl_3$

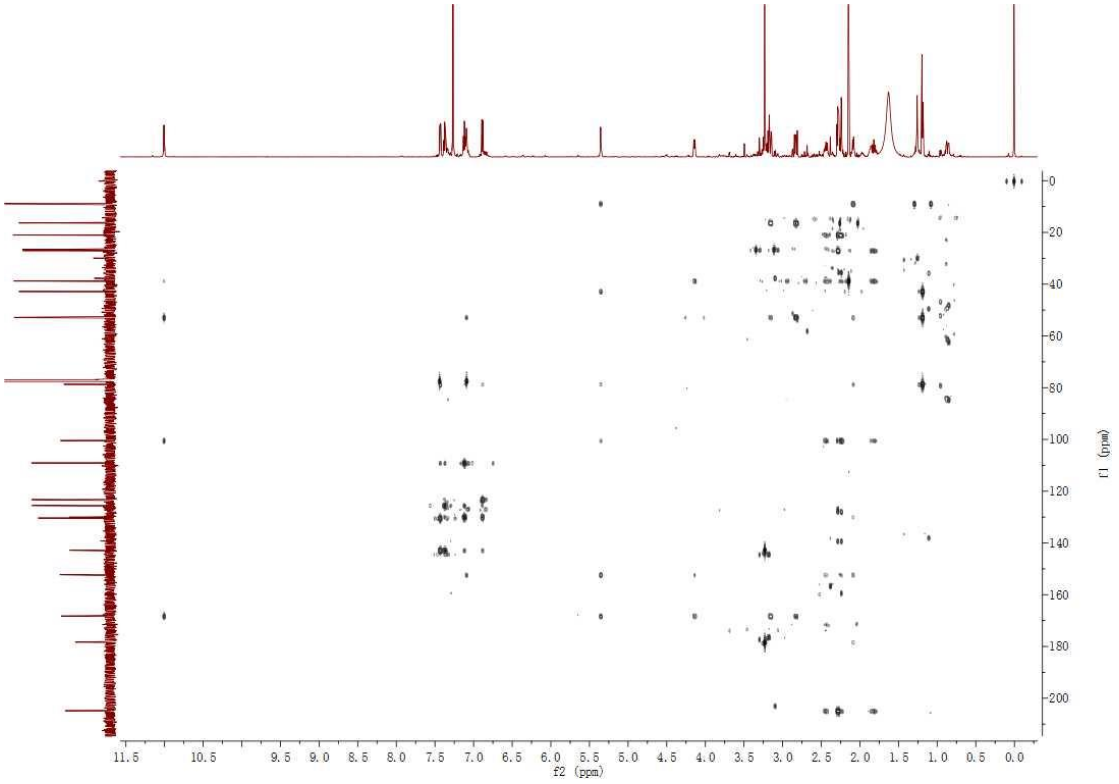


Figure S2. HMBC (600 MHz) spectrum of compound **9** in $CDCl_3$

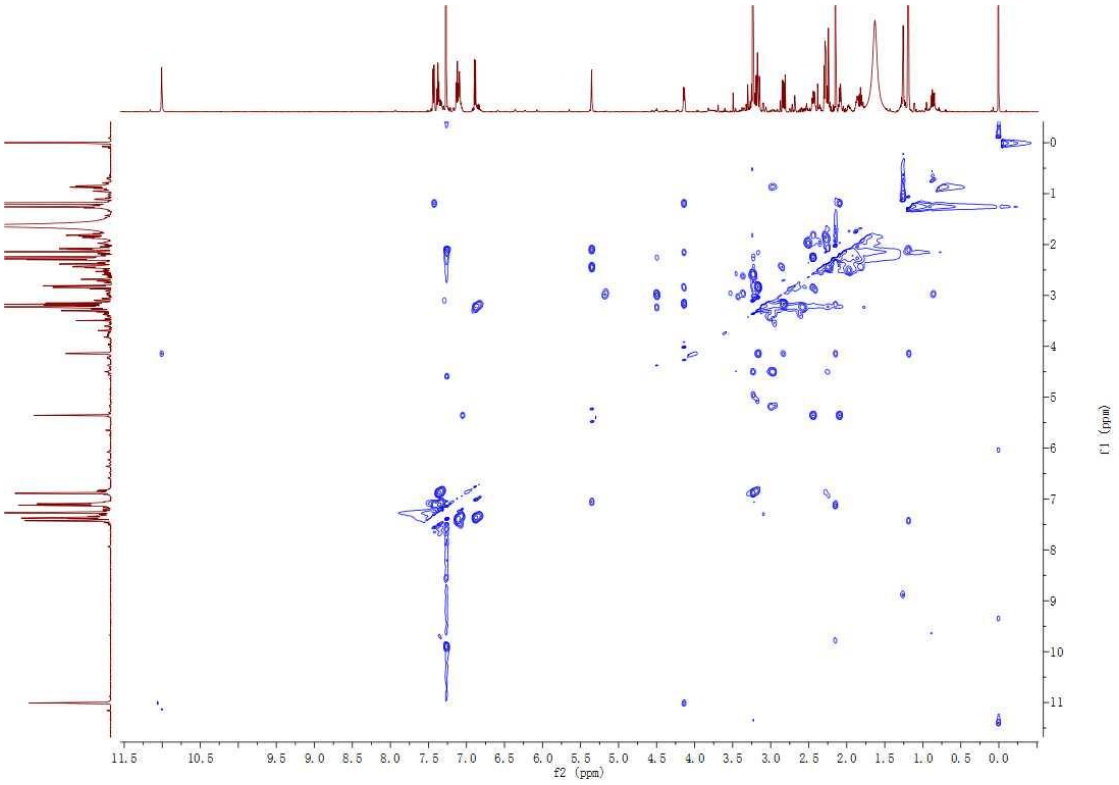


Figure S2. Roesy (600 MHz) spectrum of compound **9** in $CDCl_3$

Optical rotation measurement

Model : P-1020 (A060460638)

No.	Sample	Mode	Data	Monitor Blank	Temp. Cell Temp Point	Date Comment Sample Name	Light Filter Operator	Cycle Time Integ Time
No.1	5 (1/3)	Sp.Rot	-21.5380	-0.0028 0.0000	22.5 10.00 Cell	Wed Sep 12 09:59:35 2018 0.00130g/mL MeOH HSA14213	Na 589nm	2 sec 2 sec
No.2	5 (2/3)	Sp.Rot	-18.4620	-0.0024 0.0000	22.5 10.00 Cell	Wed Sep 12 09:59:40 2018 0.00130g/mL MeOH HSA14213	Na 589nm	2 sec 2 sec
No.3	5 (3/3)	Sp.Rot	-17.6920	-0.0023 0.0000	22.5 10.00 Cell	Wed Sep 12 09:59:46 2018 0.00130g/mL MeOH HSA14213	Na 589nm	2 sec 2 sec

Figure S2. Optical rotation data of compound **9** in MeOH

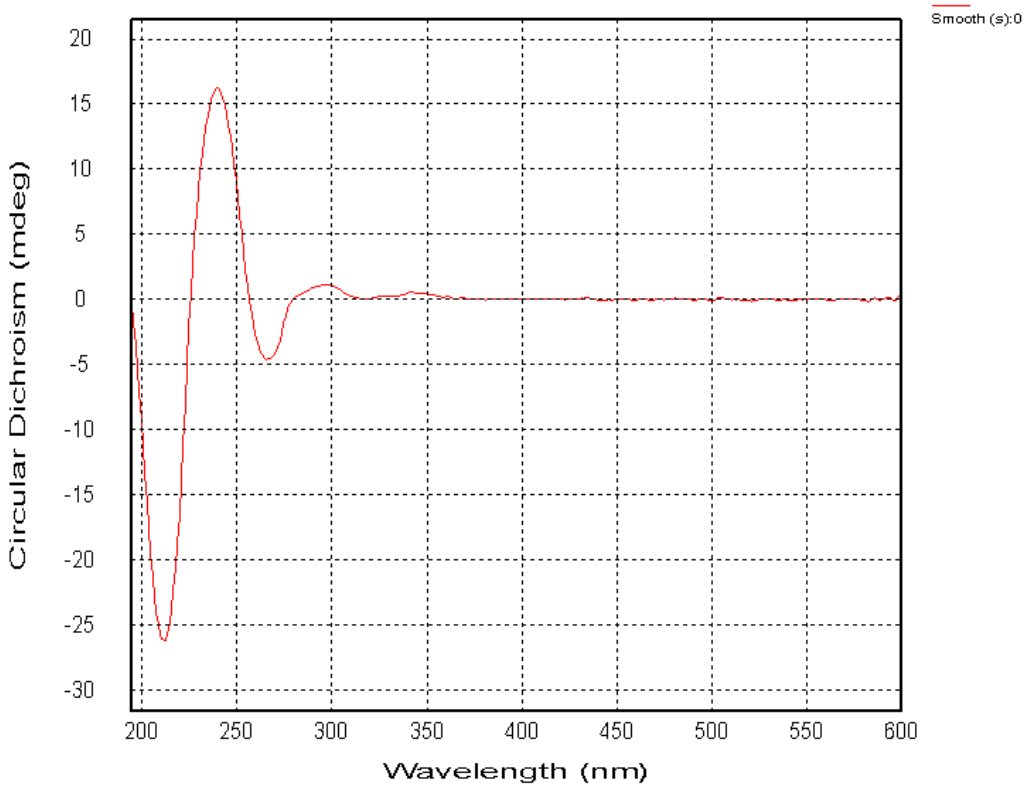


Figure S2. CD spectrum of compound **9** in MeOH

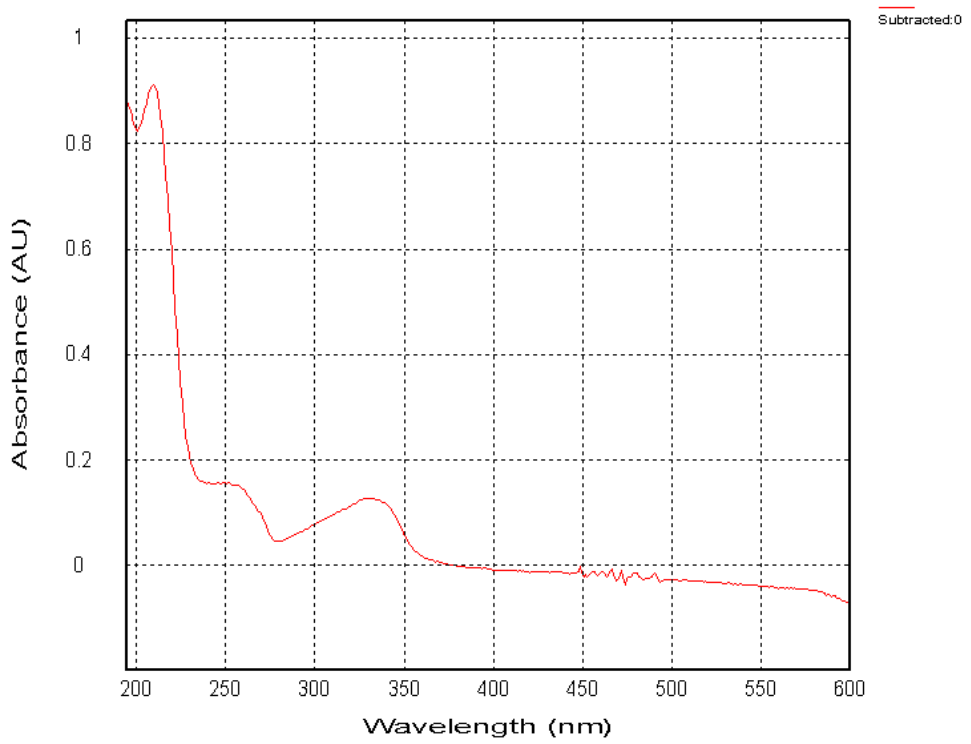


Figure S2. UV spectrum of compound **9** in MeOH

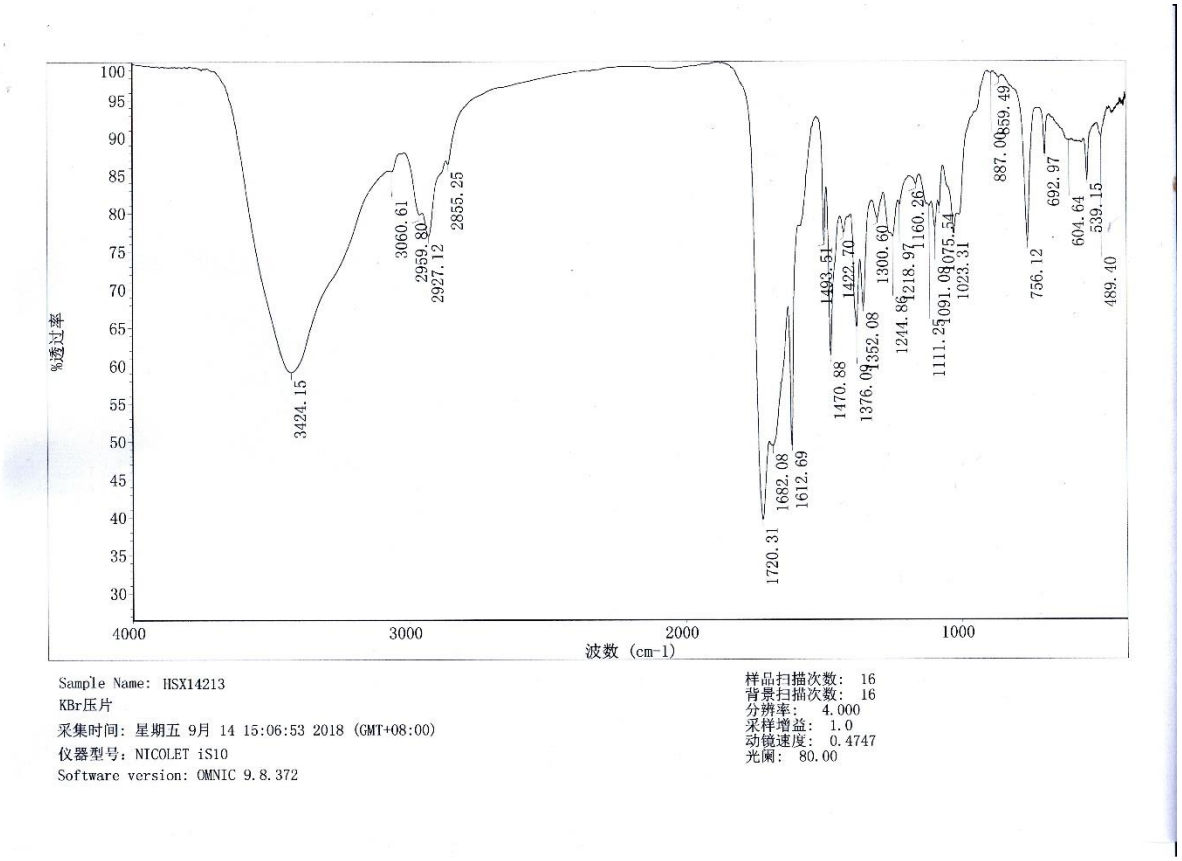


Figure S2. IR spectrum of compound **9**

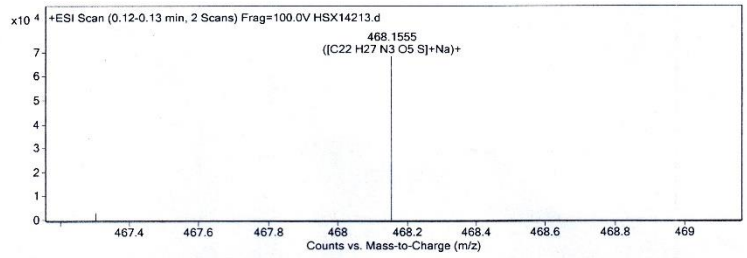
Qualitative Analysis Report

Data Filename	HSX14213.d	**Sample Name**	HSX14213
Sample Type	Sample	**Position**	P1-A2
Instrument Name	Instrument 1	**User Name**	
Acq Method	s.m	**Acquired Time**	7/25/2018 9:41:16 AM
IRM Calibration Status	Success	**DA Method**	Default.m
Comment			

Sample Group	**Info.**
Acquisition SW Version	6200 series TOF/6500 series Q-TOF B.05.01 (B5125.2)

User Spectra

Fragmentor Voltage	Collision Energy	Ionization Mode
100	0	ESI



Peak List

m/z	z	Abund	Formula	Ion
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274.2745	1	120462.95		
318.3008	1	135382.3		
362.327	1	63291.14		
453.1672	1	70563.11		
468.1555	1	68312.99	C22 H27 N3 O5 S	(M+Na)+
484.1501	1	117351.11		
500.1256	1	50905.09		
913.3232	1	45645.14		
922.0098	1	46406.51		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	5
S	0	1

Formula Calculator Results

Formula	CalculatedMass	CalculatedMz	Mz	Diff. (mDa)	Diff. (ppm)	DBE
C22 H27 N3 O5 S	445.1671	468.1564	468.1555	0.90	1.92	11.0000

--- End Of Report ---

Figure S2. HRESI spectrum of compound **9**