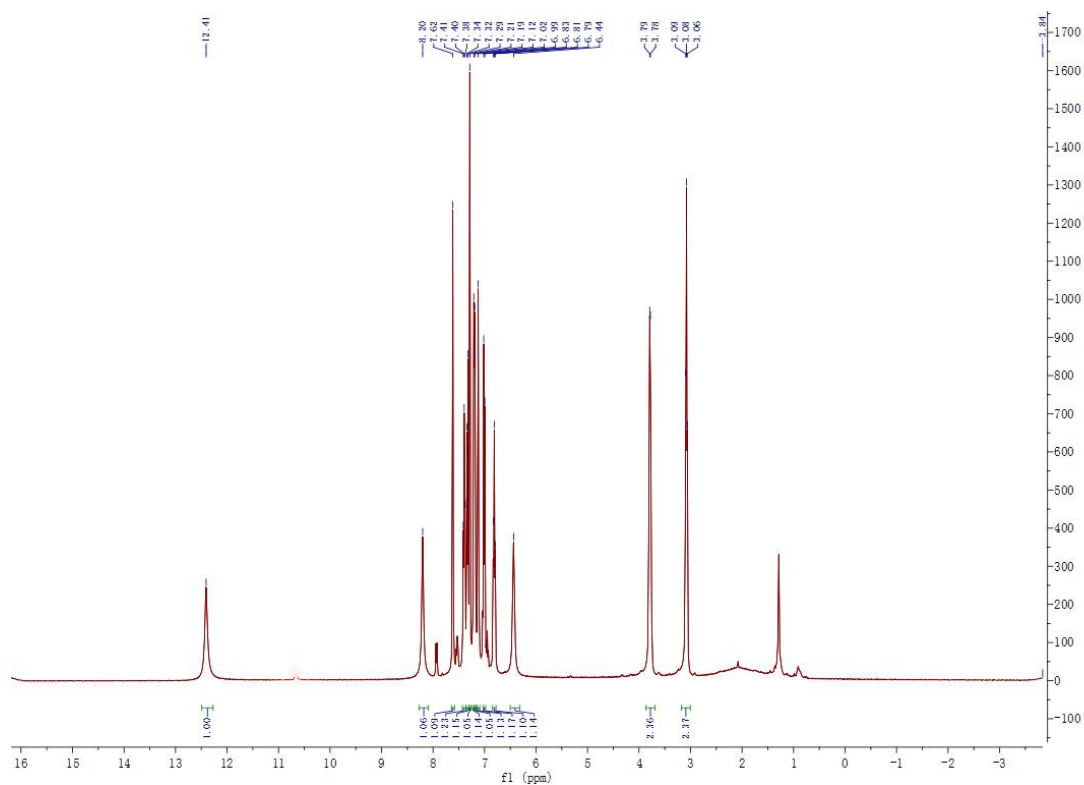
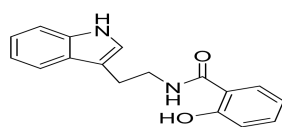
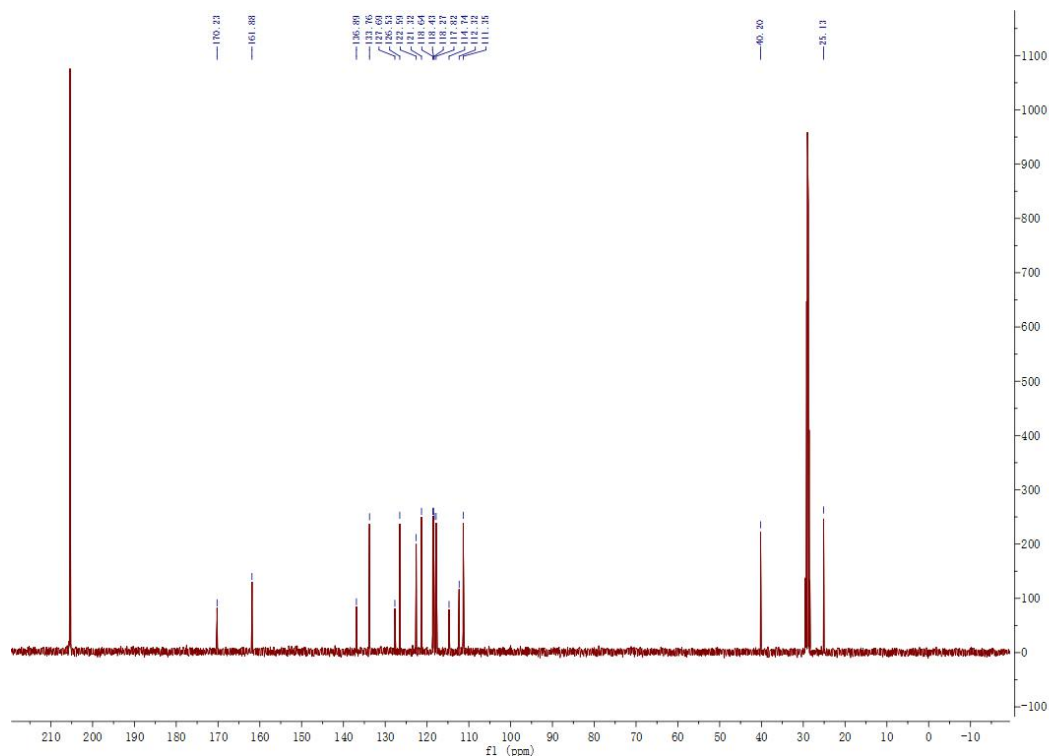
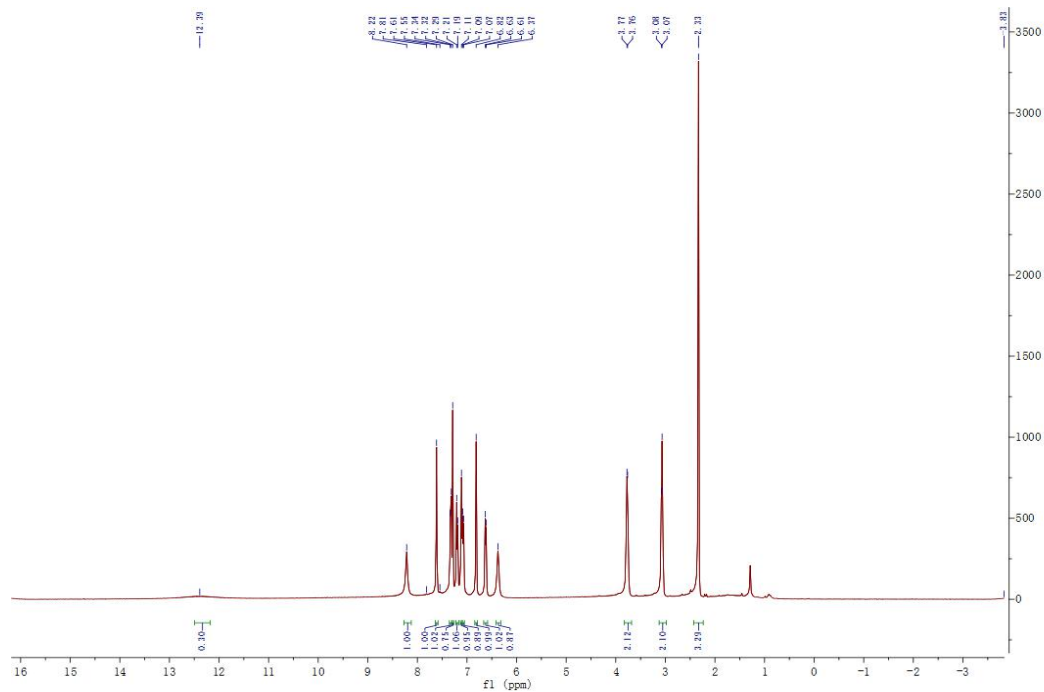
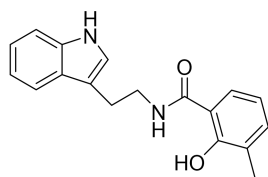




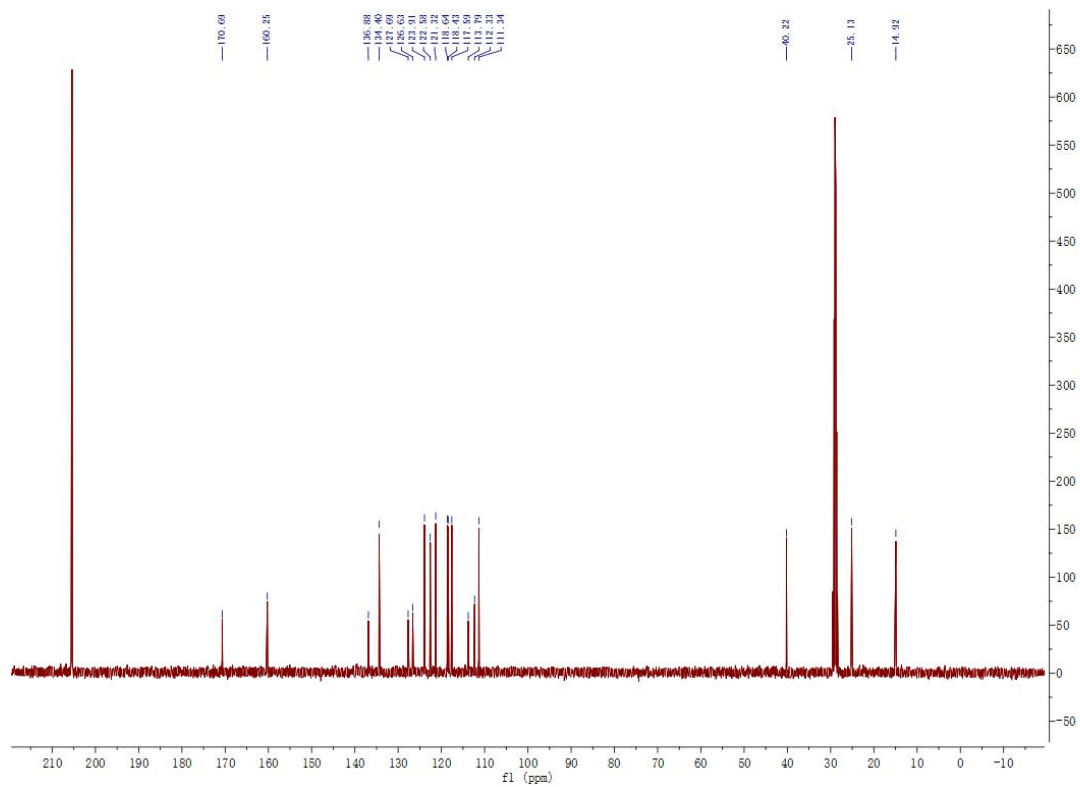
¹H NMR of compound E1



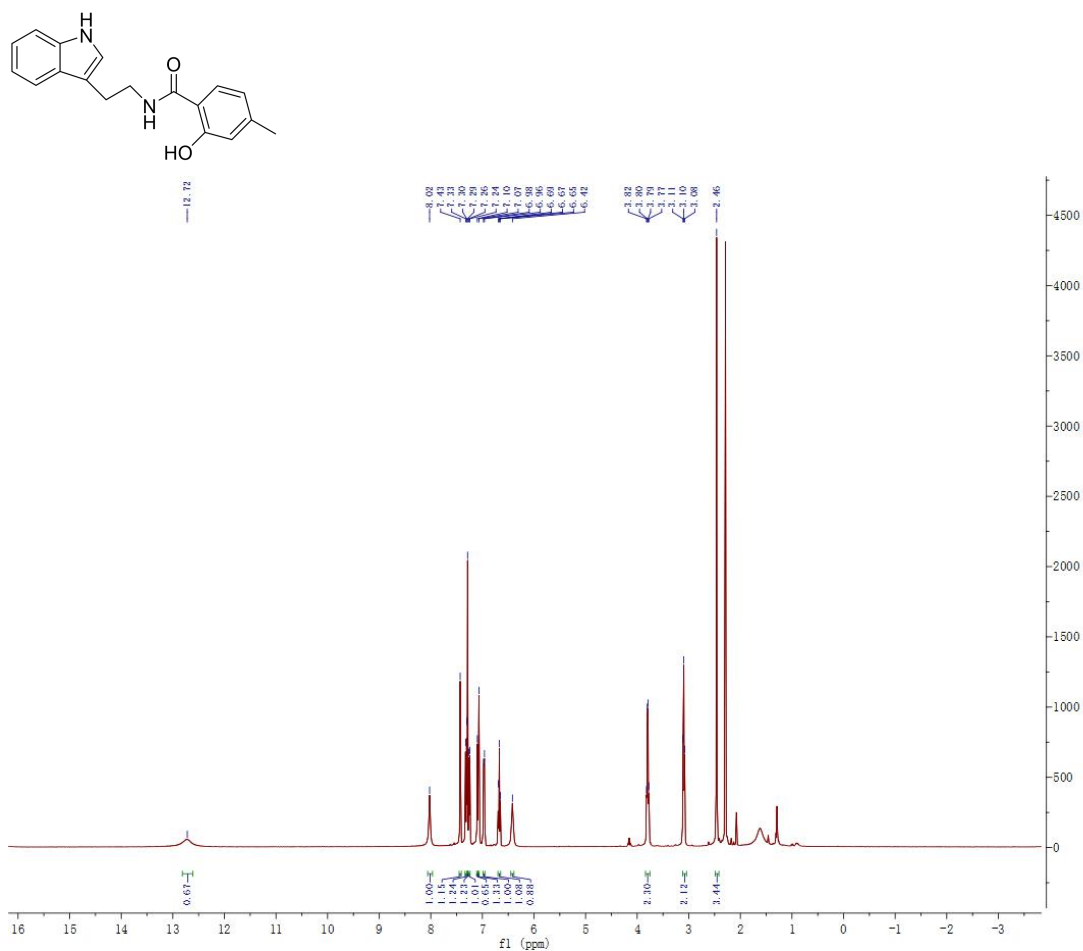
¹³C NMR of compound E1



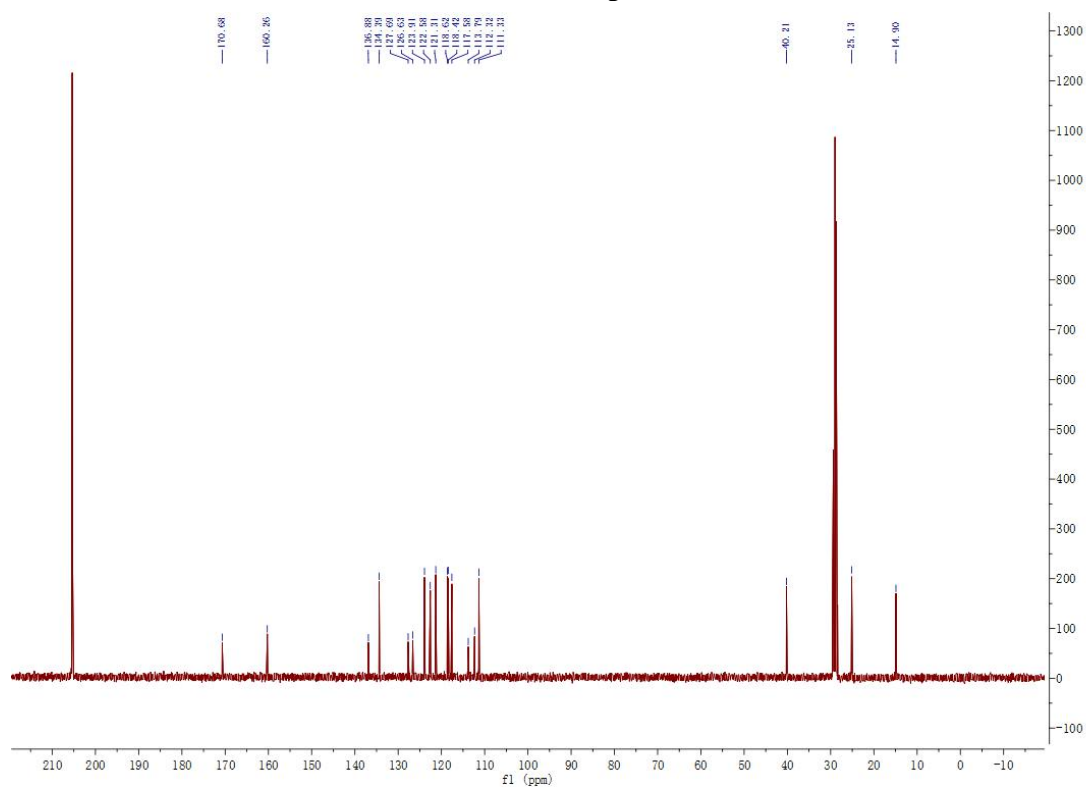
¹H NMR of compound E2



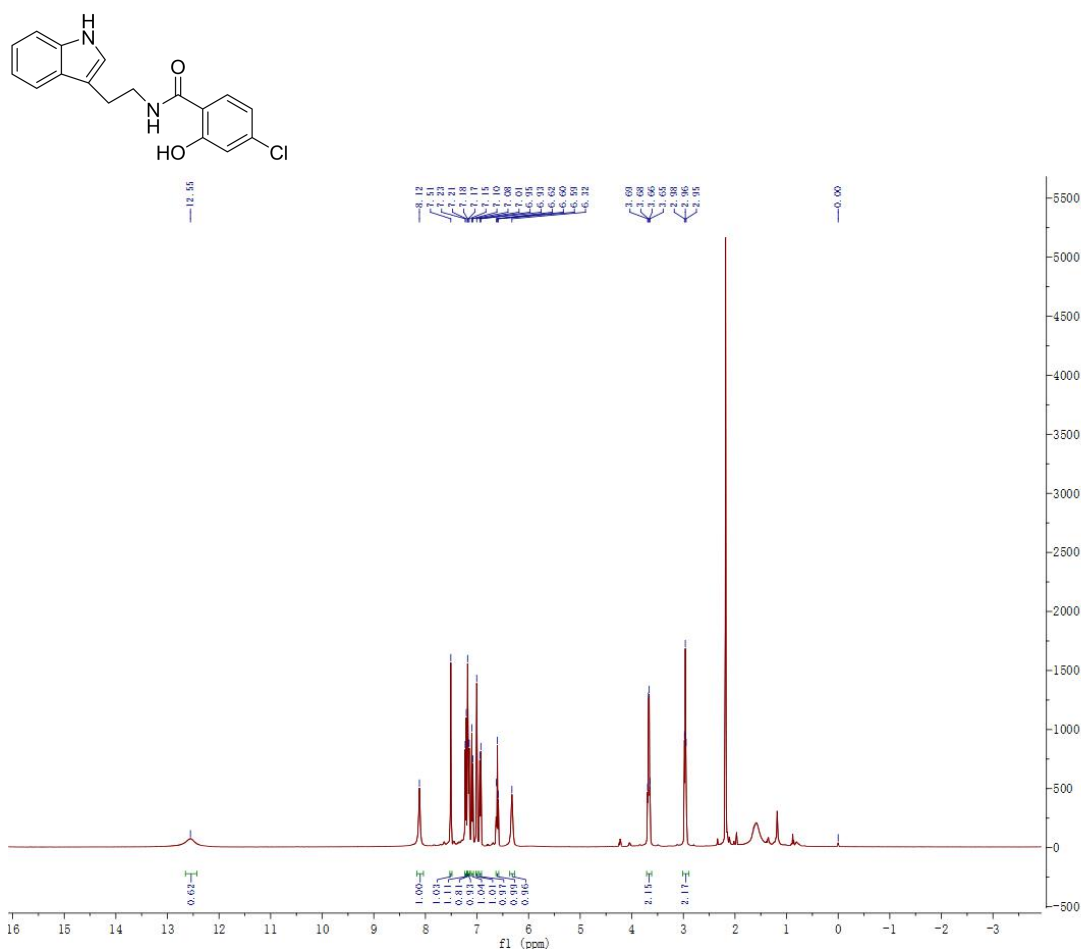
¹³C NMR of compound E2



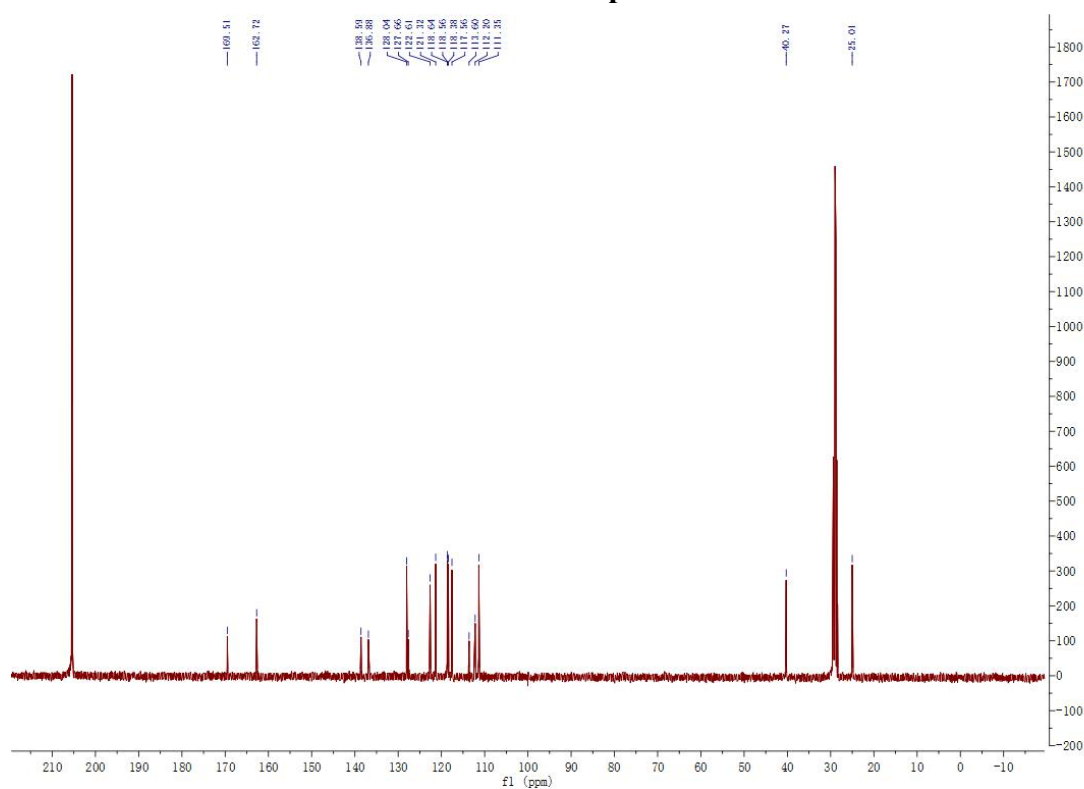
¹H NMR of compound E3



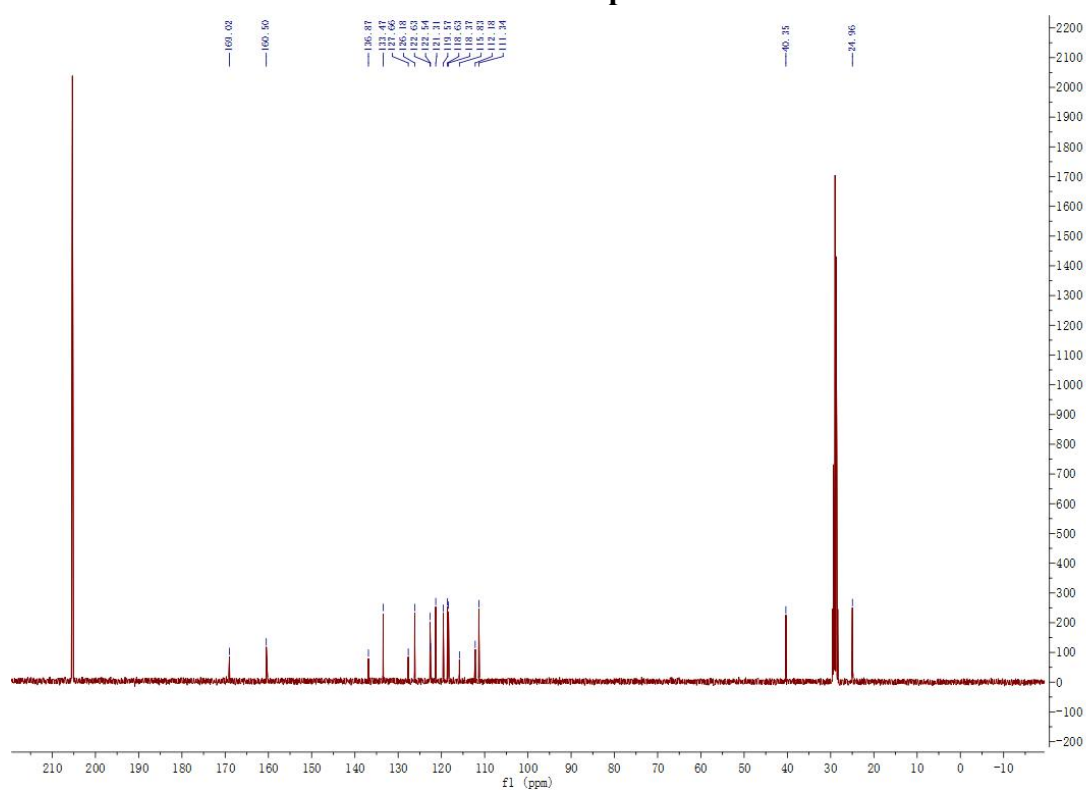
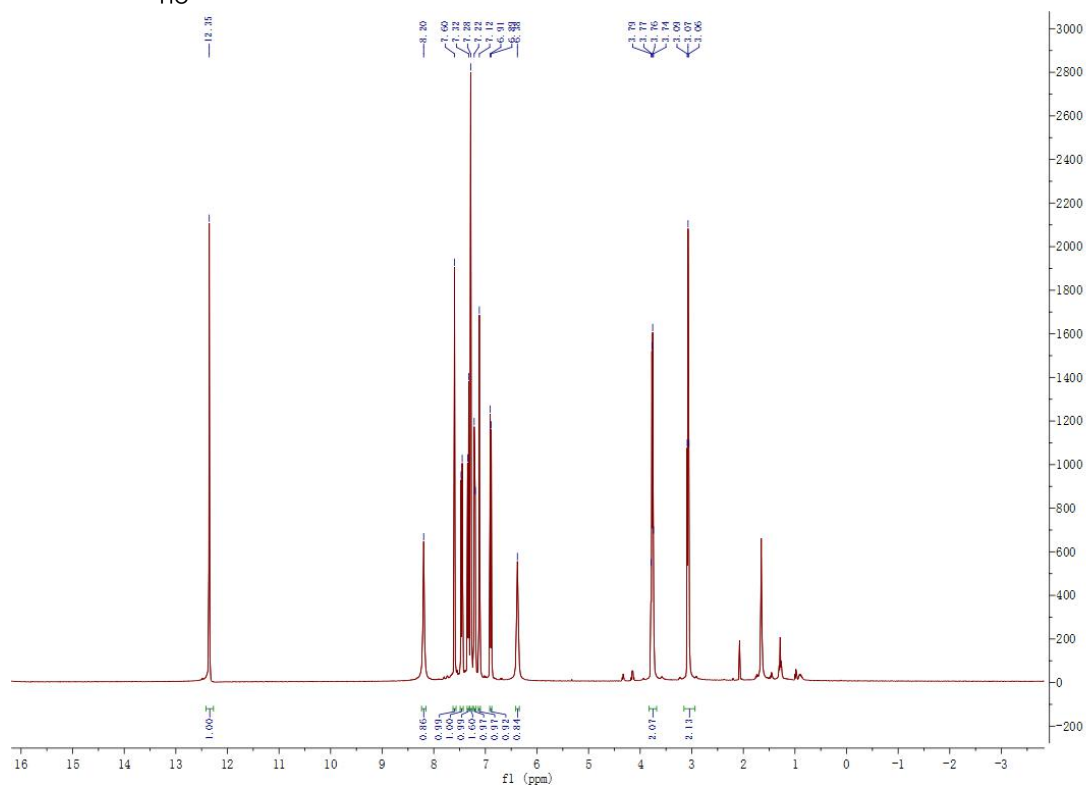
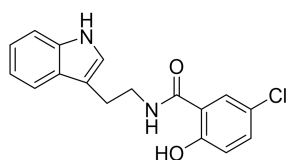
¹³C NMR of compound E3

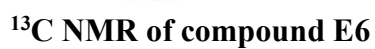


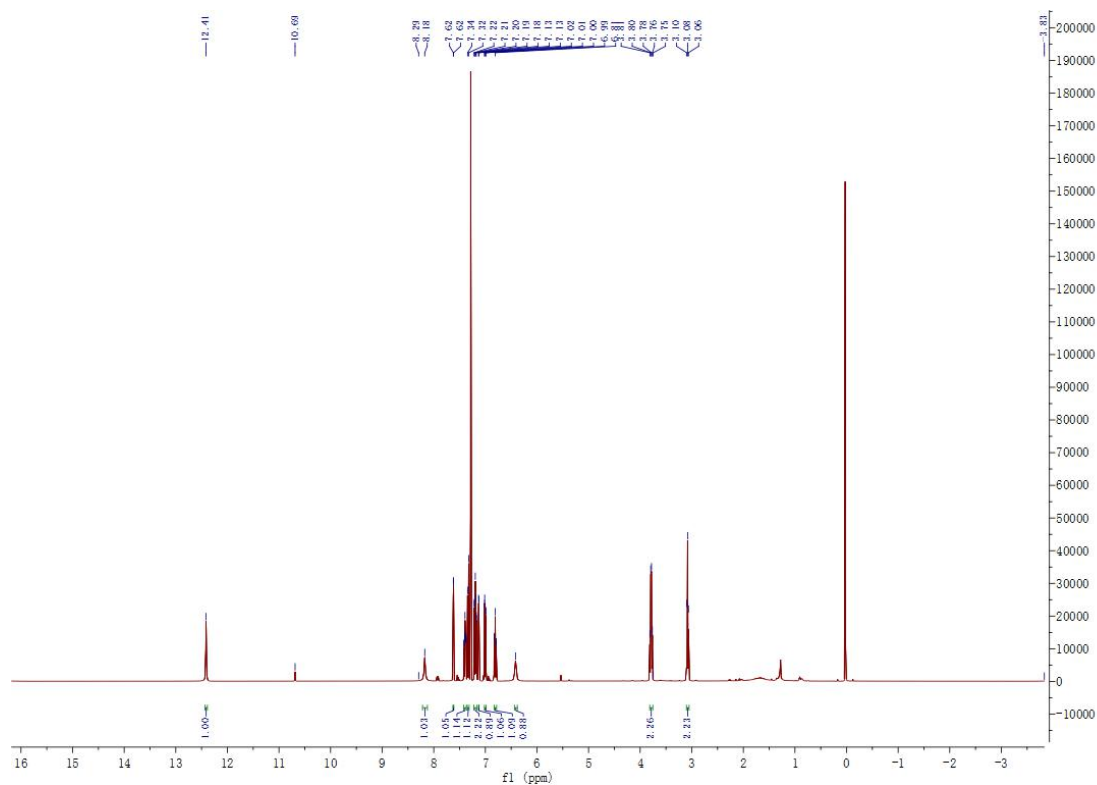
¹H NMR of compound E4



¹³C NMR of compound E4





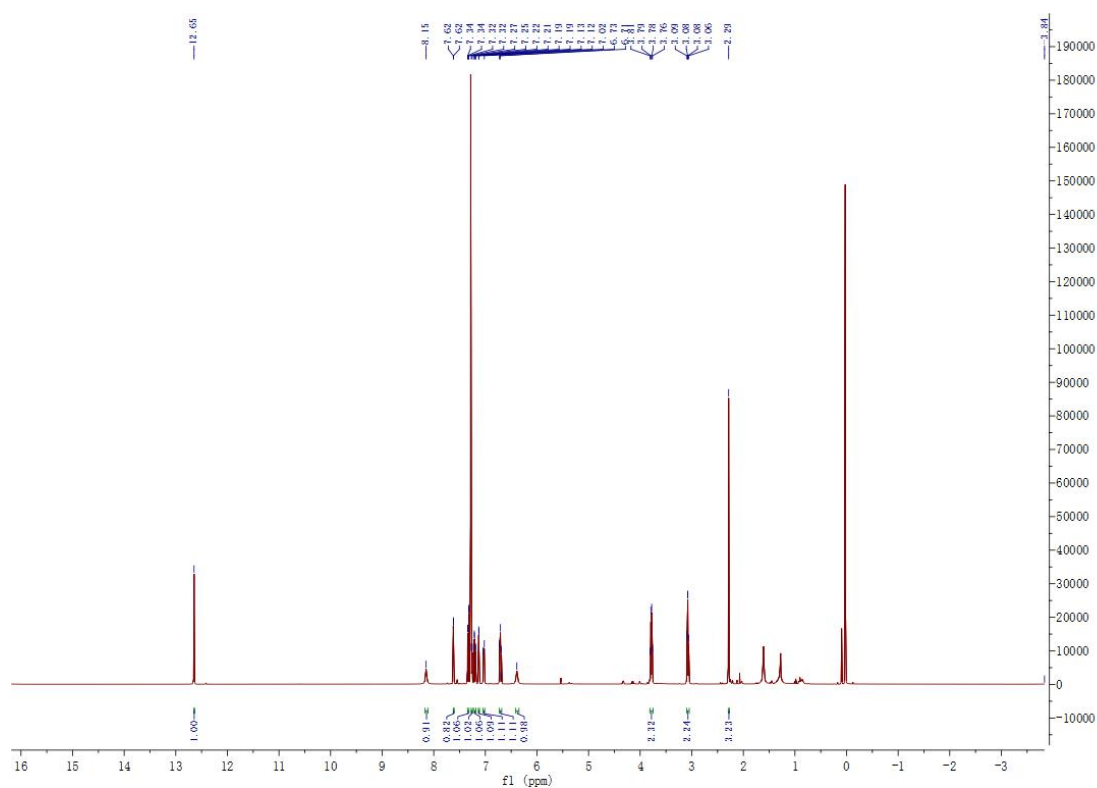
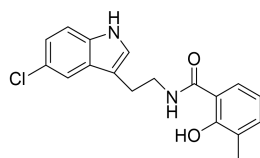


13C NMR spectrum of compound 10. The x-axis represents chemical shift in ppm, ranging from -10 to 210. The y-axis represents intensity, ranging from 0 to 4000. Key peaks are labeled with their chemical shift values:

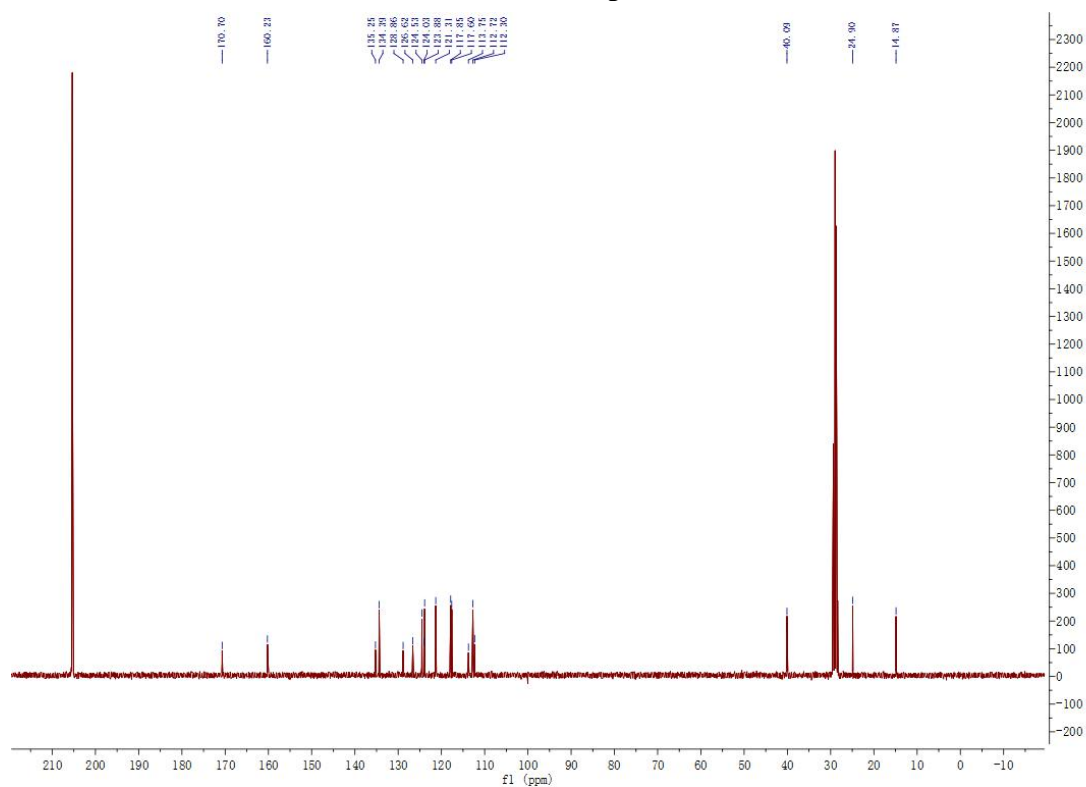
- 170.21 (Carbonyl carbon)
- 161.86 (Aromatic carbon)
- 40.07 (Methoxy carbon)
- 24.88 (Methyl carbon)

A cluster of peaks between 110 and 135 ppm is labeled with the following values: 135.25, 133.85, 132.85, 126.47, 125.21, 124.03, 121.31, 118.27, 117.90, 114.07, 112.21, and 112.29.

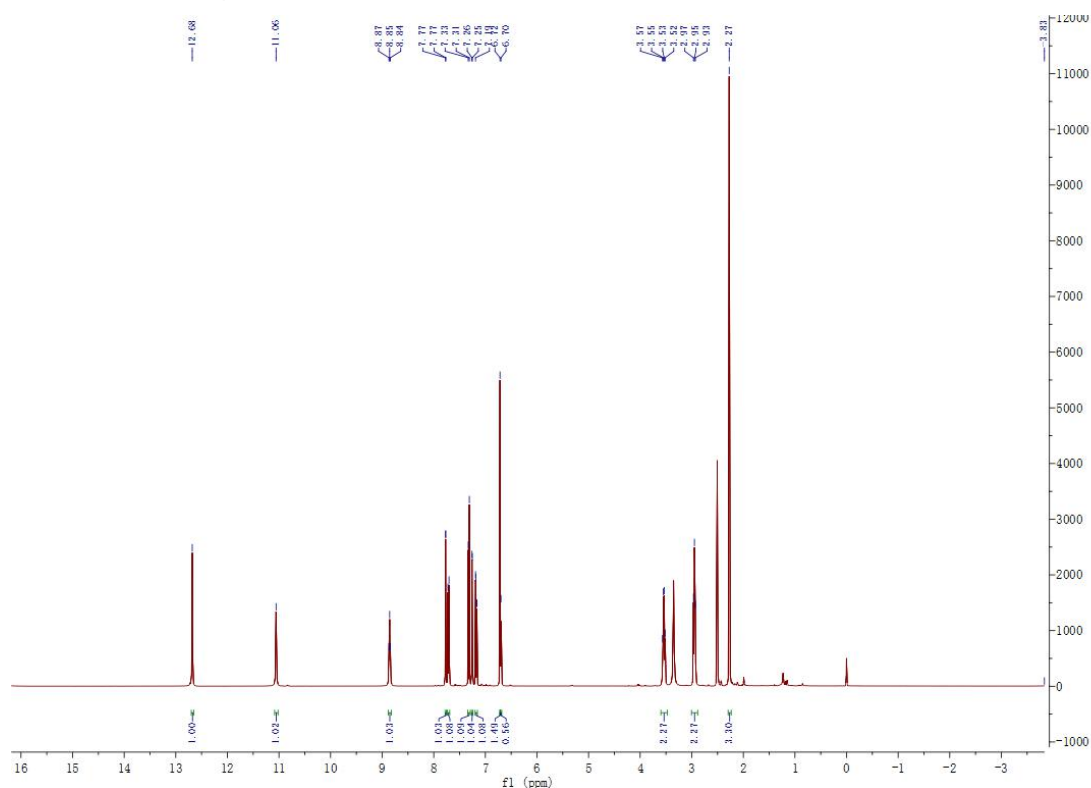
¹³C NMR of compound E7



¹H NMR of compound E8

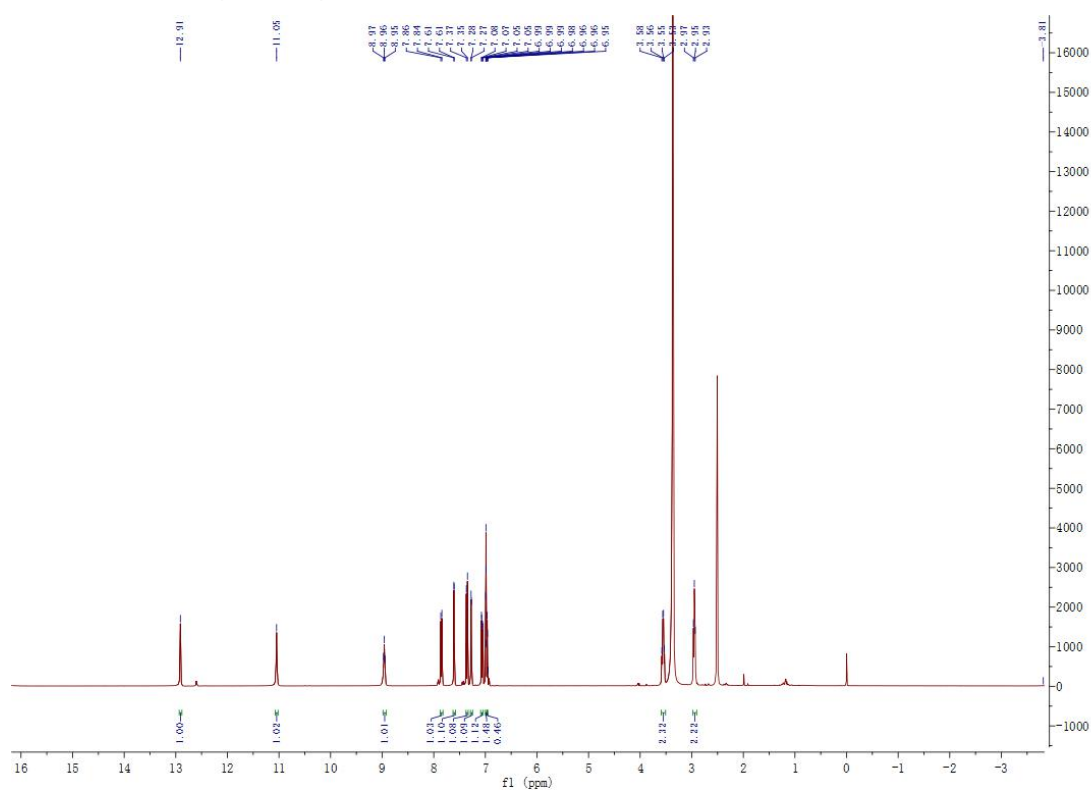


¹³C NMR of compound E8



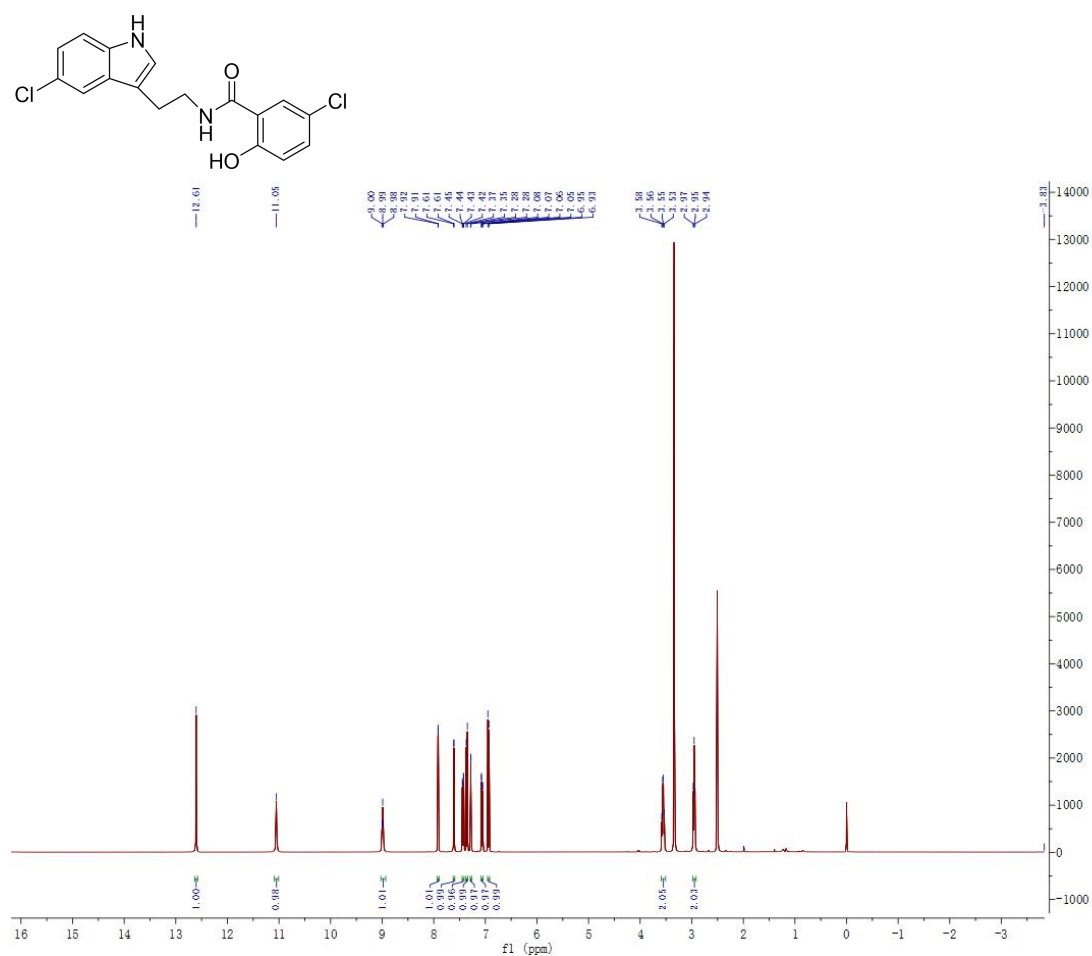
Peak list (ppm): 205.27, 161.93, 144.57, 135.25, 126.30, 124.51, 123.13, 121.31, 119.35, 117.25, 115.82, 112.34, 112.07, 39.99, 28.94, 20.61.

¹³C NMR of compound E9

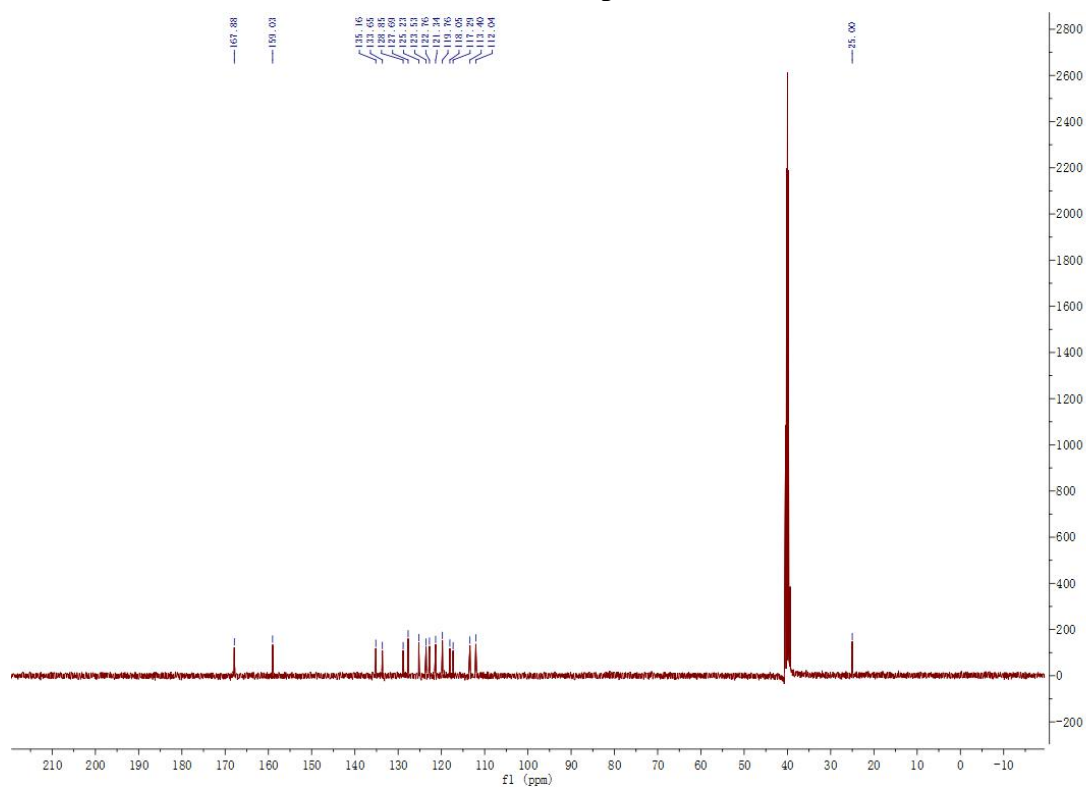


137.98
135.16
134.21
129.84
125.20
123.72
123.54
119.29
118.05
117.82
115.04
113.40
112.04
35.05
16.16
16.15

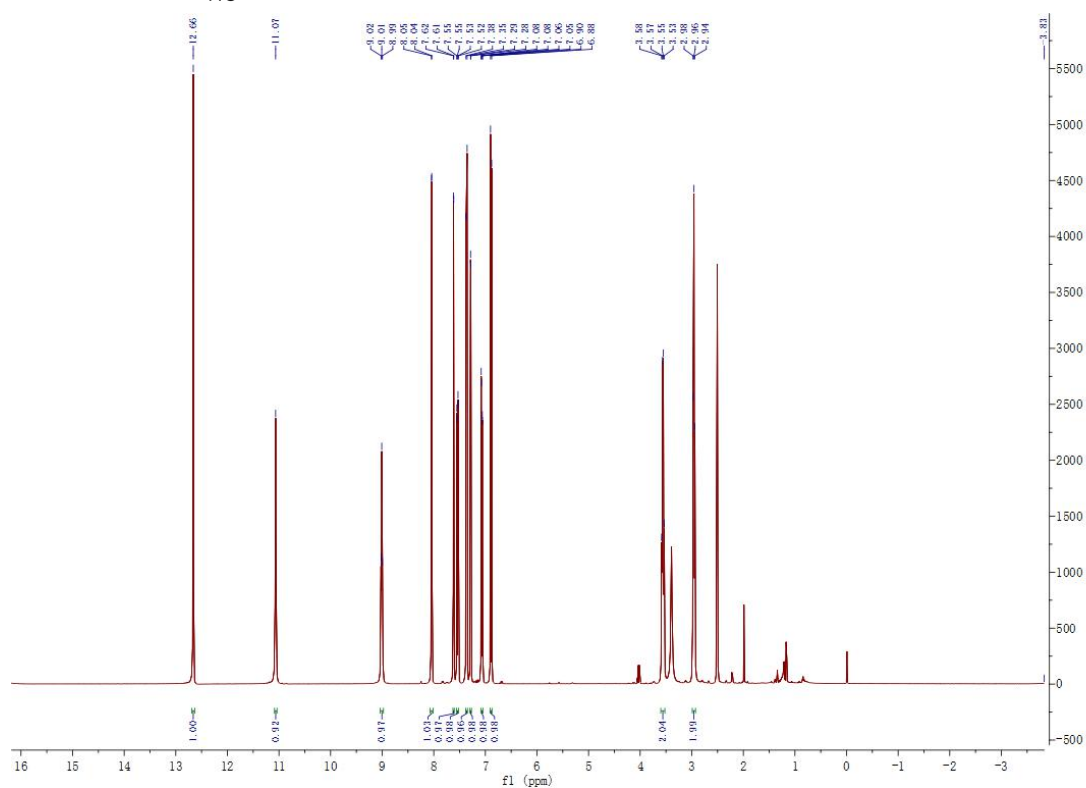
¹³C NMR of compound E10



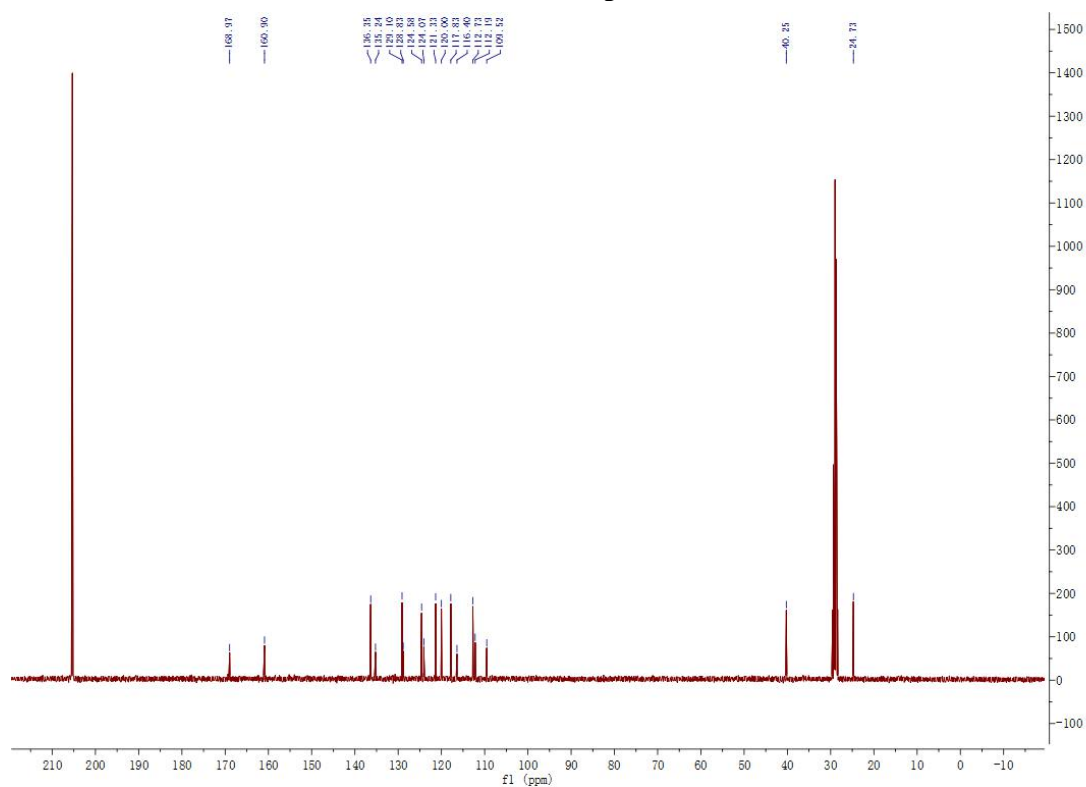
¹H NMR of compound E1



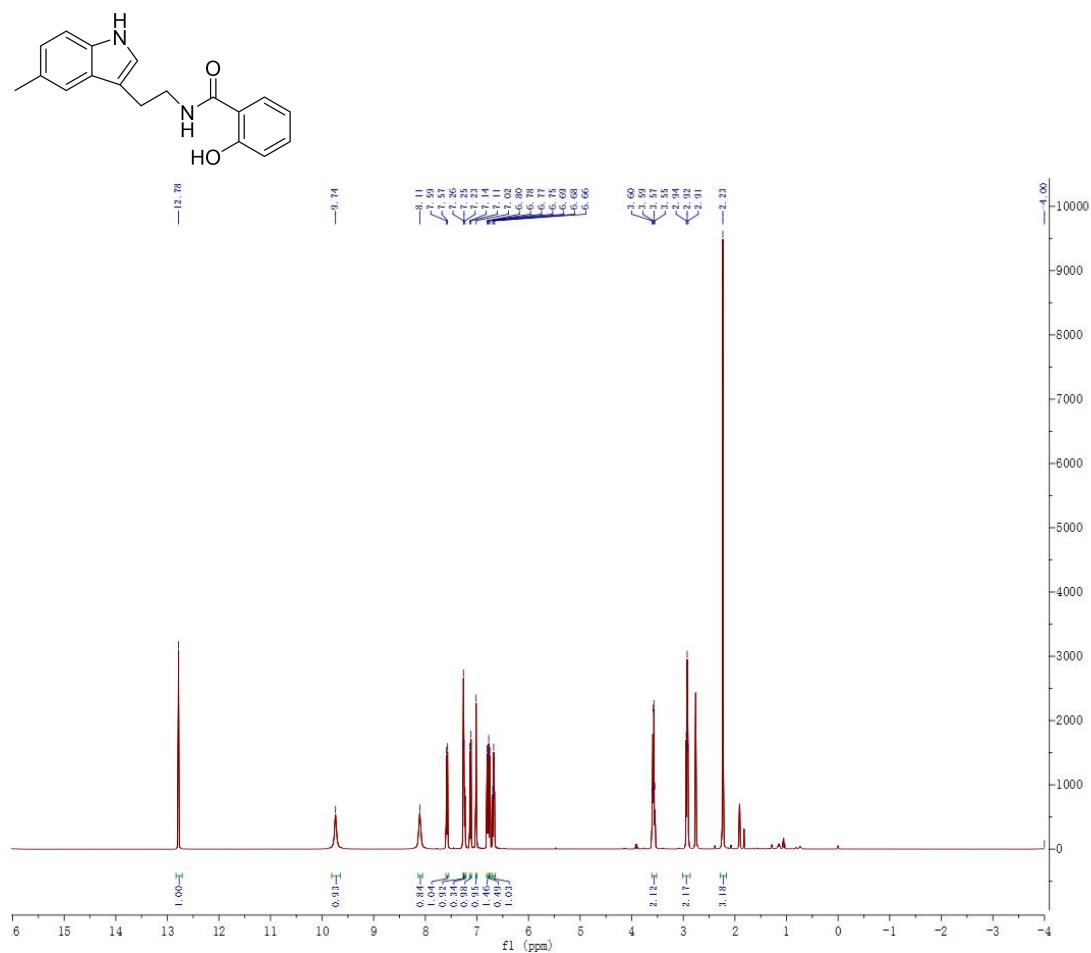
¹³C NMR of compound E1



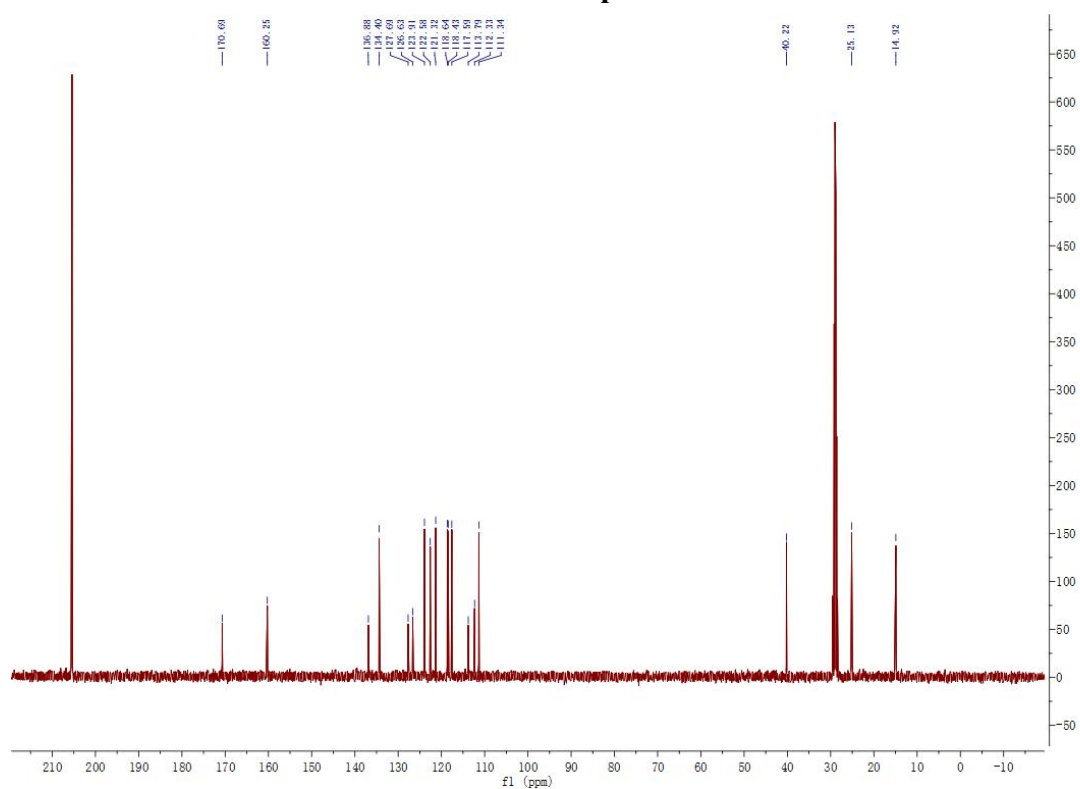
¹³C NMR of compound E12



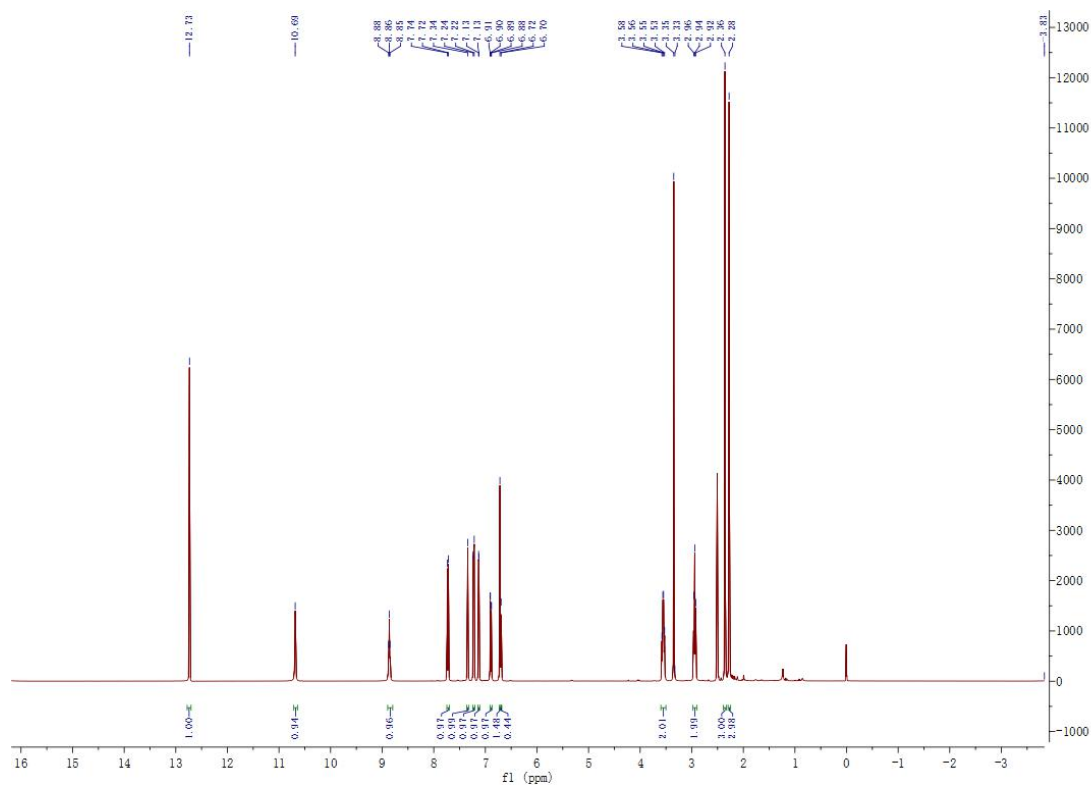
¹³C NMR of compound E12



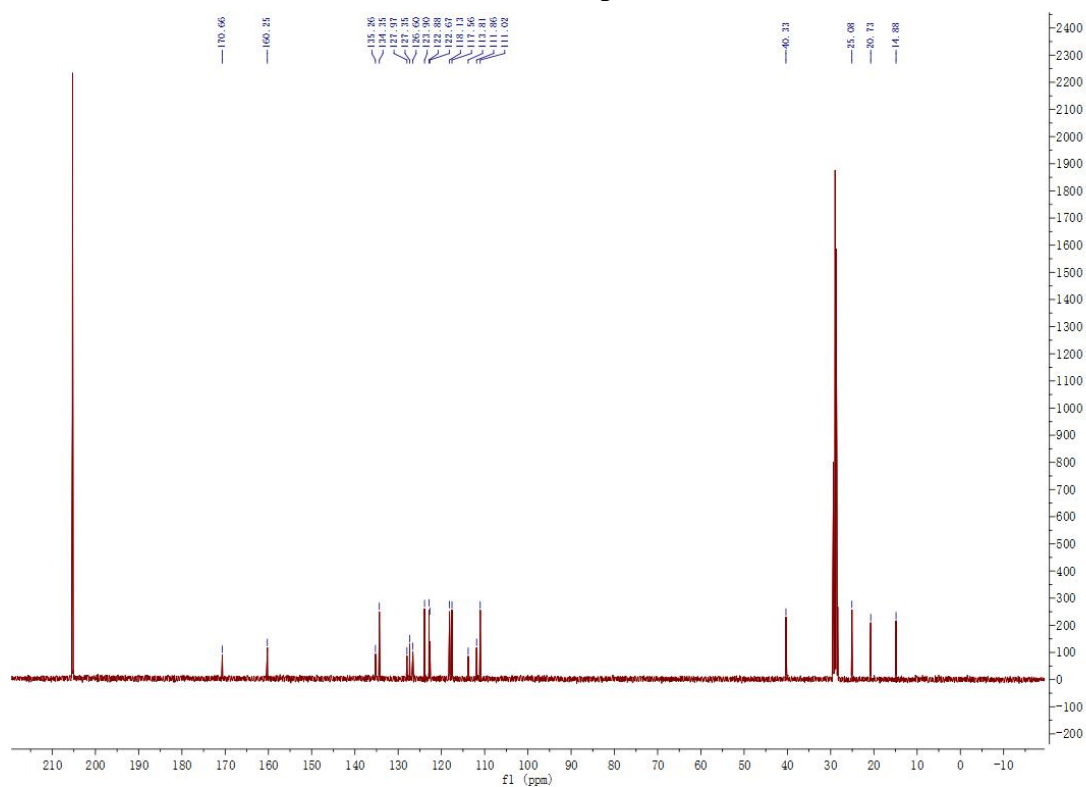
¹H NMR of compound E13



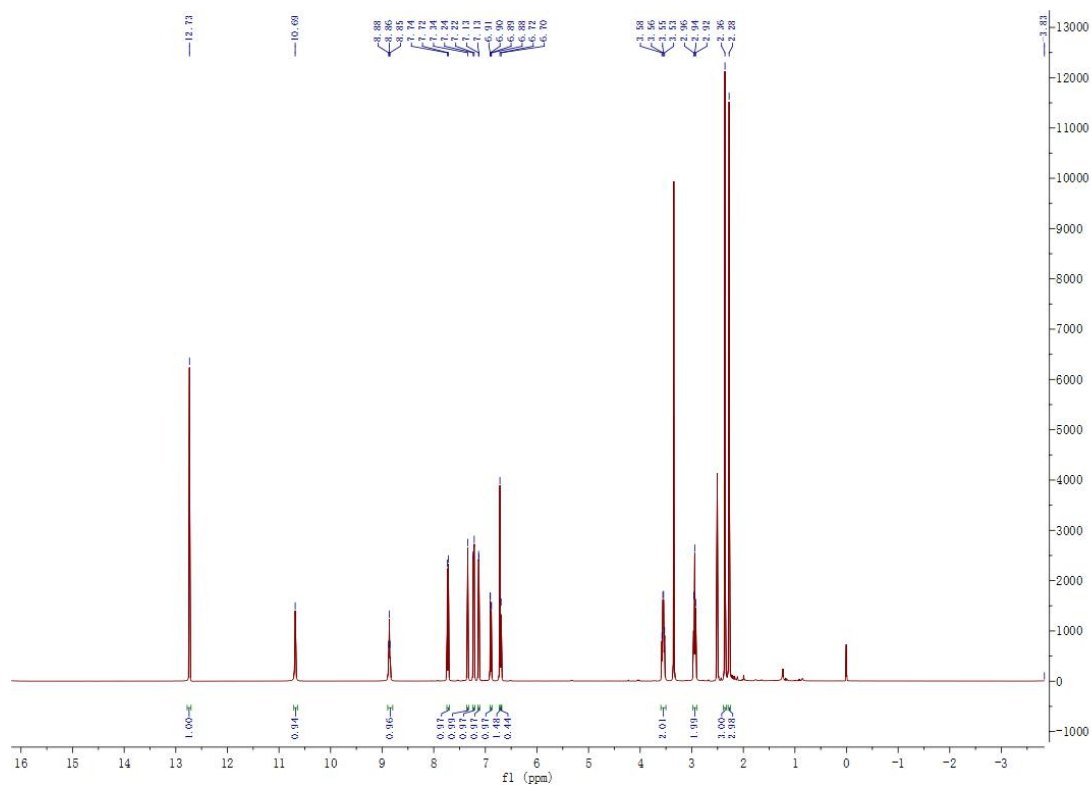
¹³C NMR of compound E13



¹H NMR of compound E14



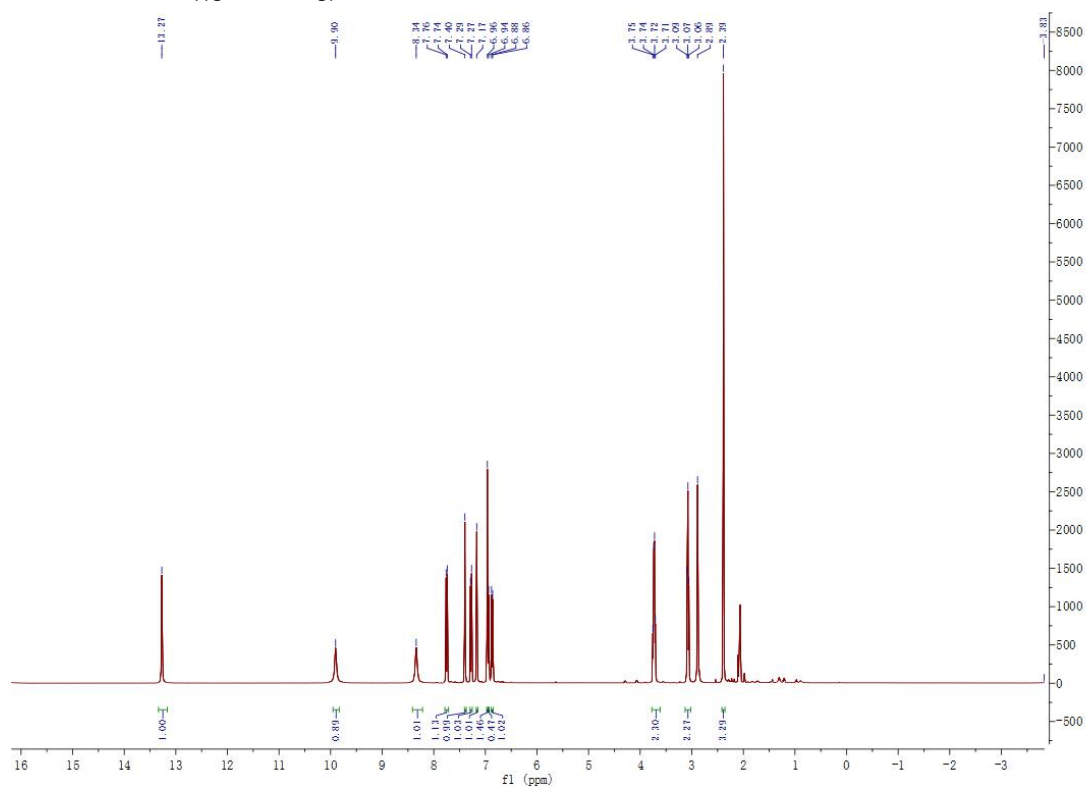
¹³C NMR of compound E14



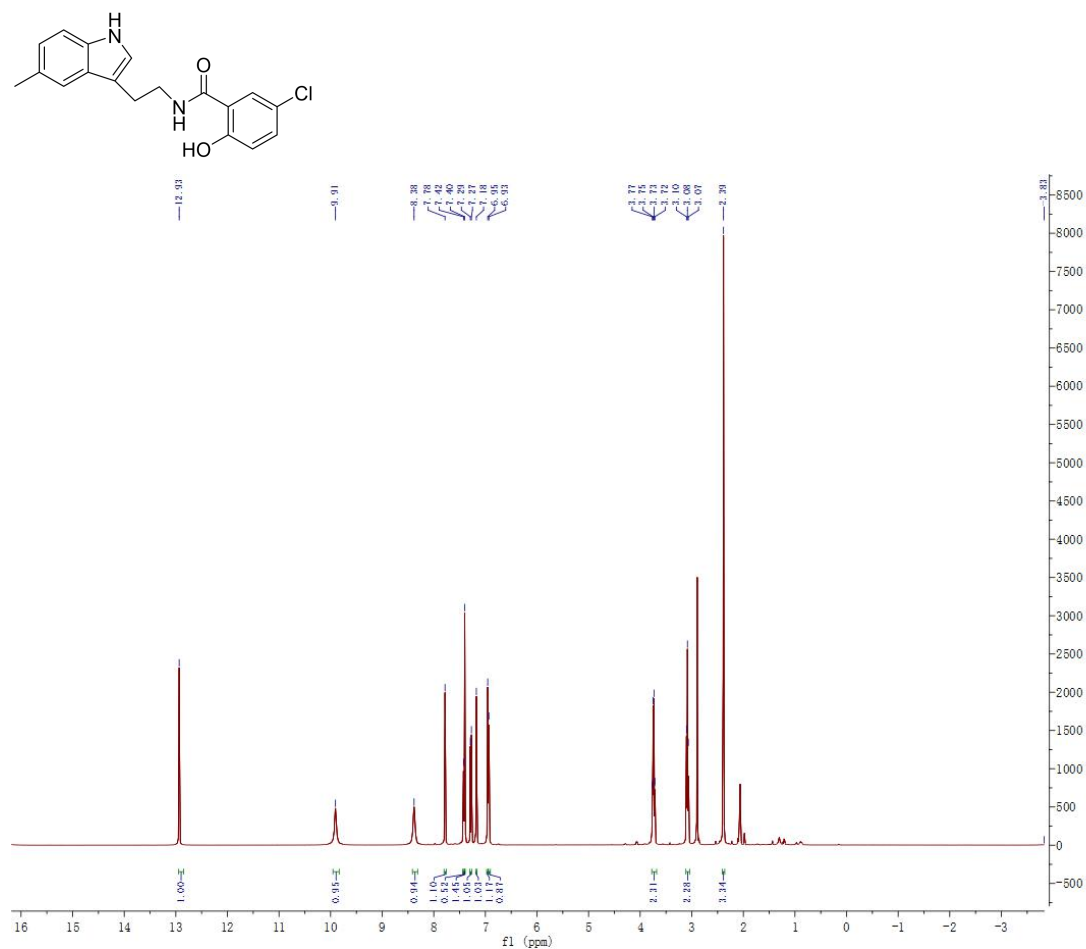
13C NMR spectrum (CDCl₃) of compound 10. The x-axis represents chemical shift in ppm, ranging from -10 to 210. The y-axis represents intensity, ranging from 0 to 2500. The spectrum shows several peaks in the aromatic region (110-135 ppm), a carbonyl peak at 160.82 ppm, and aliphatic peaks at 19.56, 21.72, and 31.55 ppm. A large solvent peak is visible at approximately 40 ppm.

Chemical Shift (ppm)
19.56
160.82
144.48
135.11
132.22
127.82
127.09
123.25
122.09
119.97
118.38
117.25
112.93
111.60
111.56
35.43
31.72
31.55

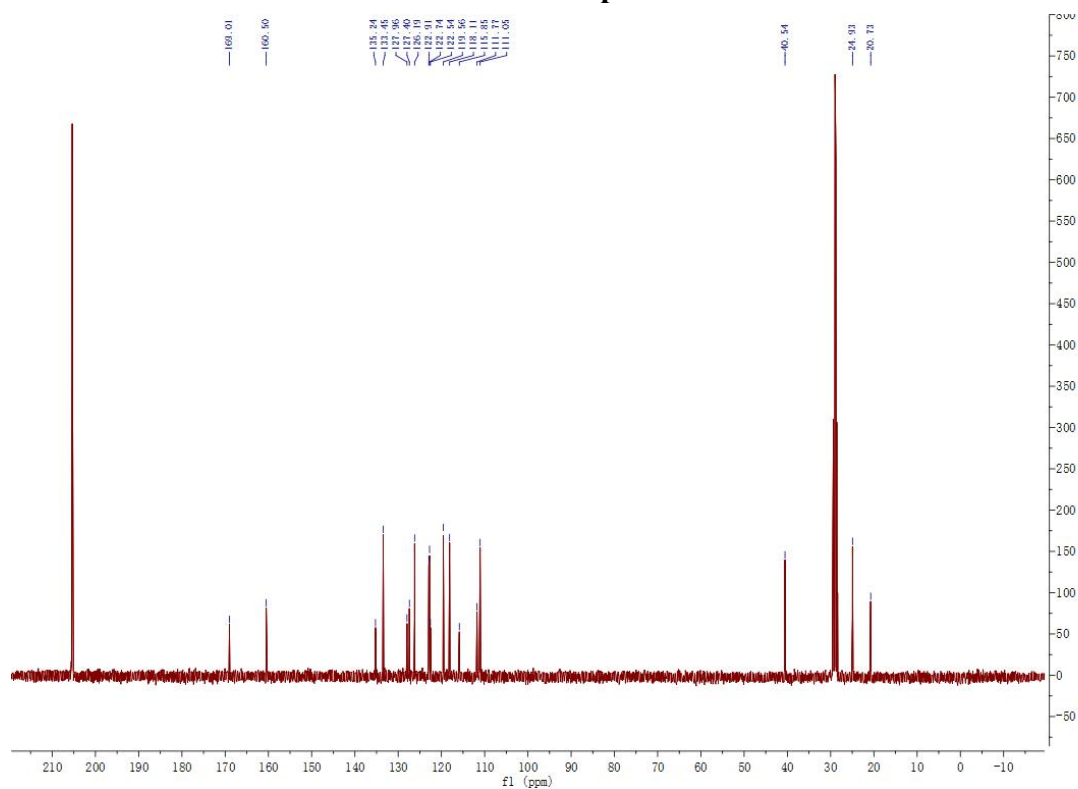
¹³C NMR of compound E15



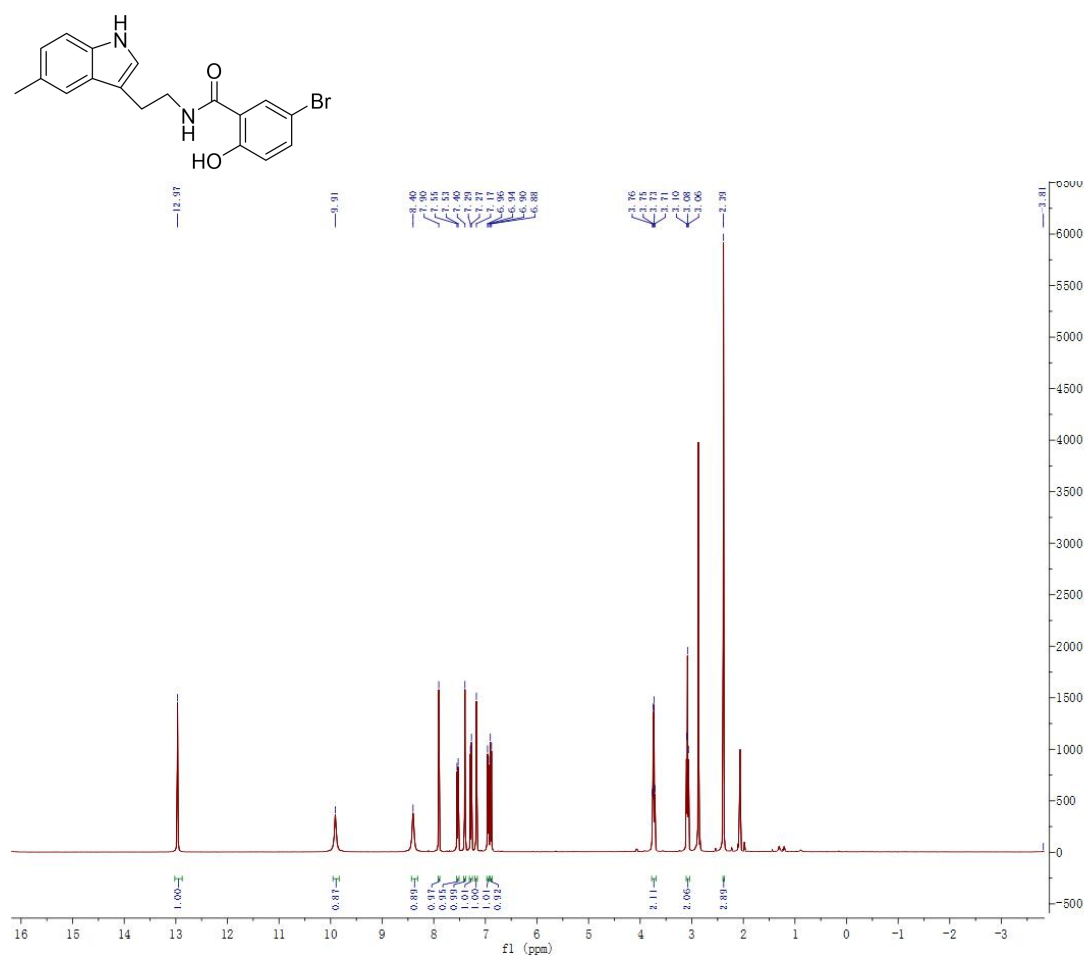
¹³C NMR of compound E16



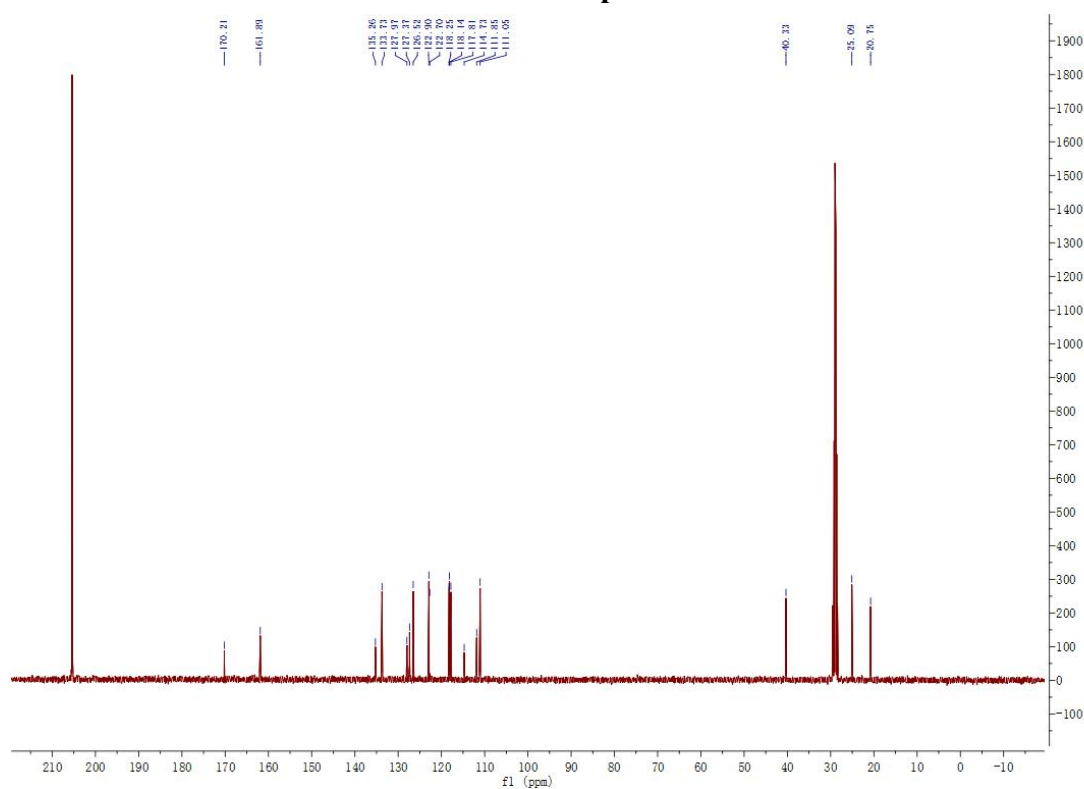
¹H NMR of compound E17



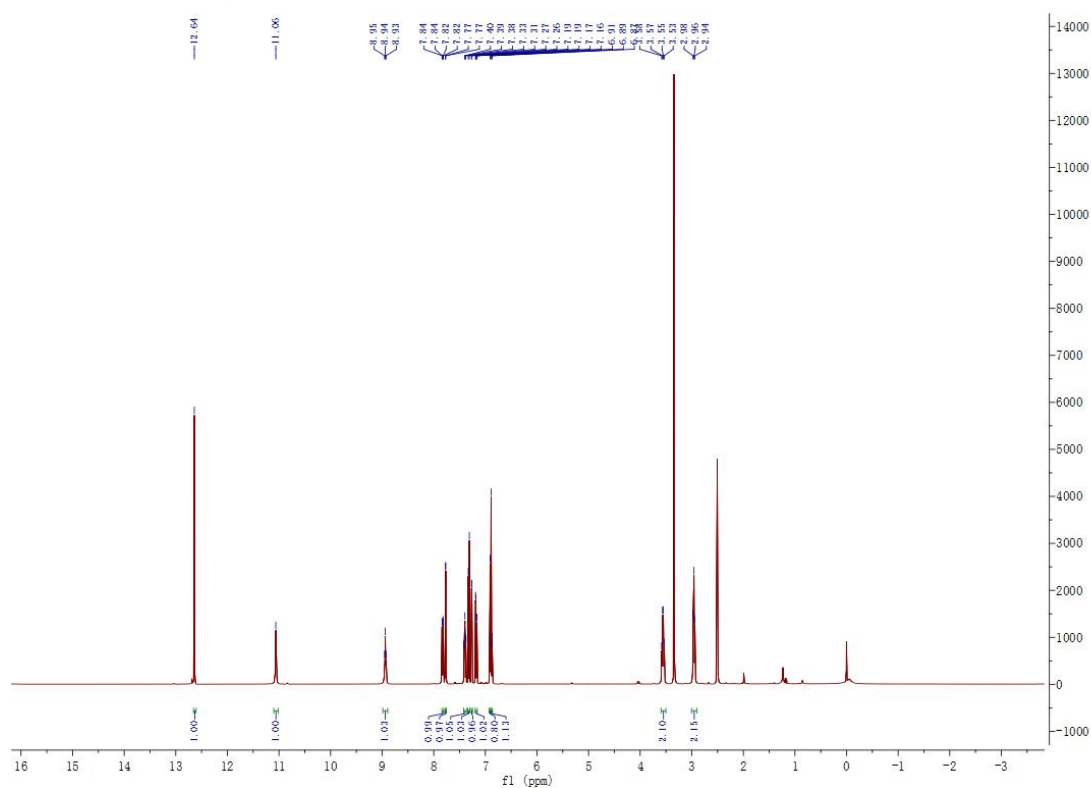
¹³C NMR of compound E17



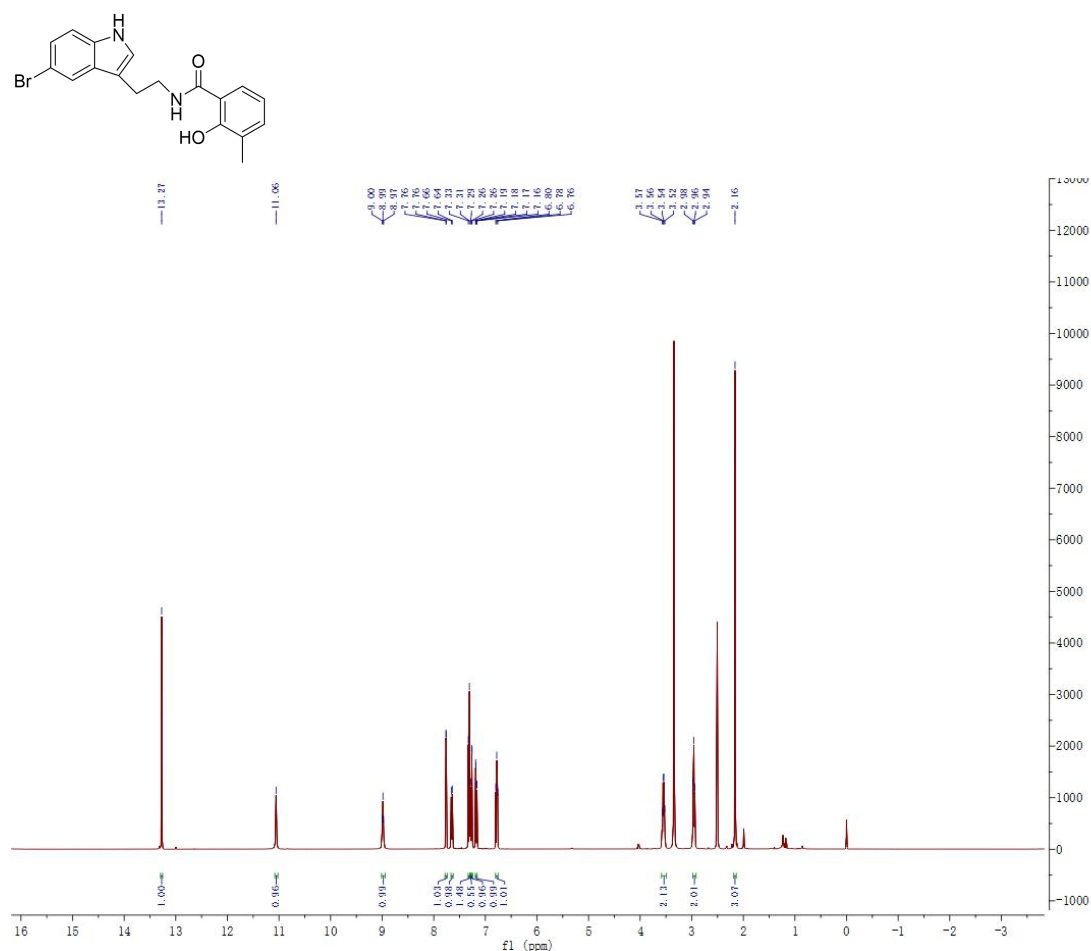
¹H NMR of compound E18



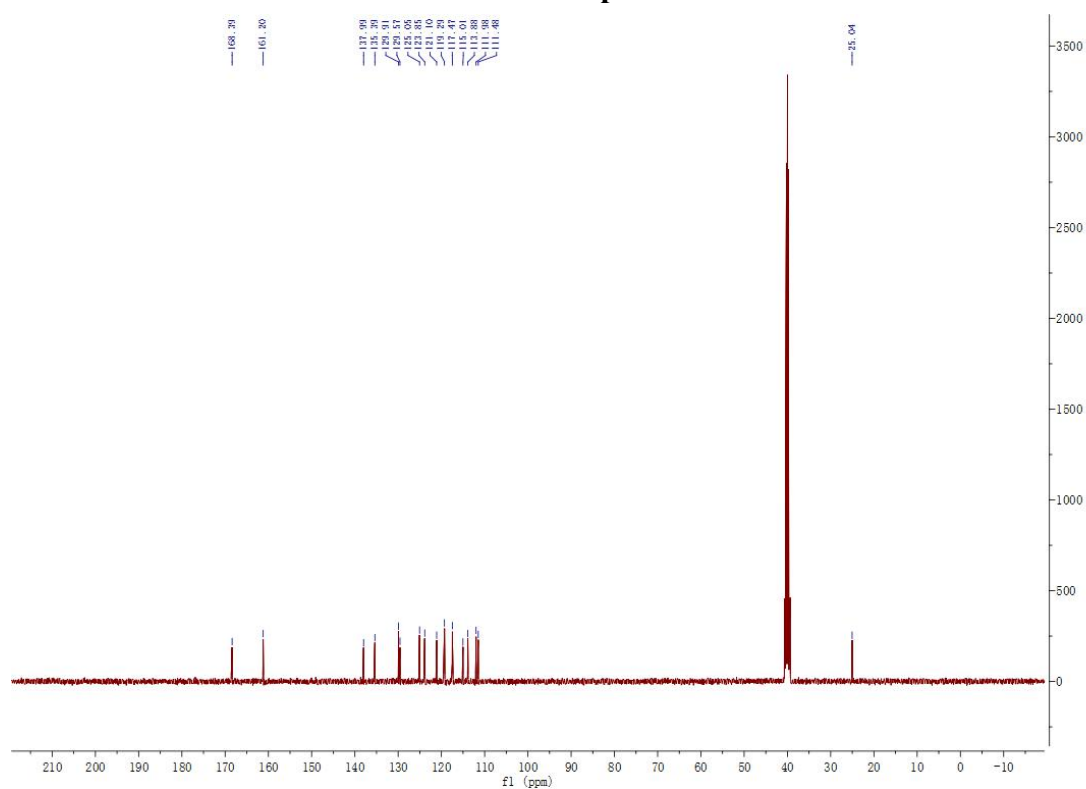
¹³C NMR of compound E18



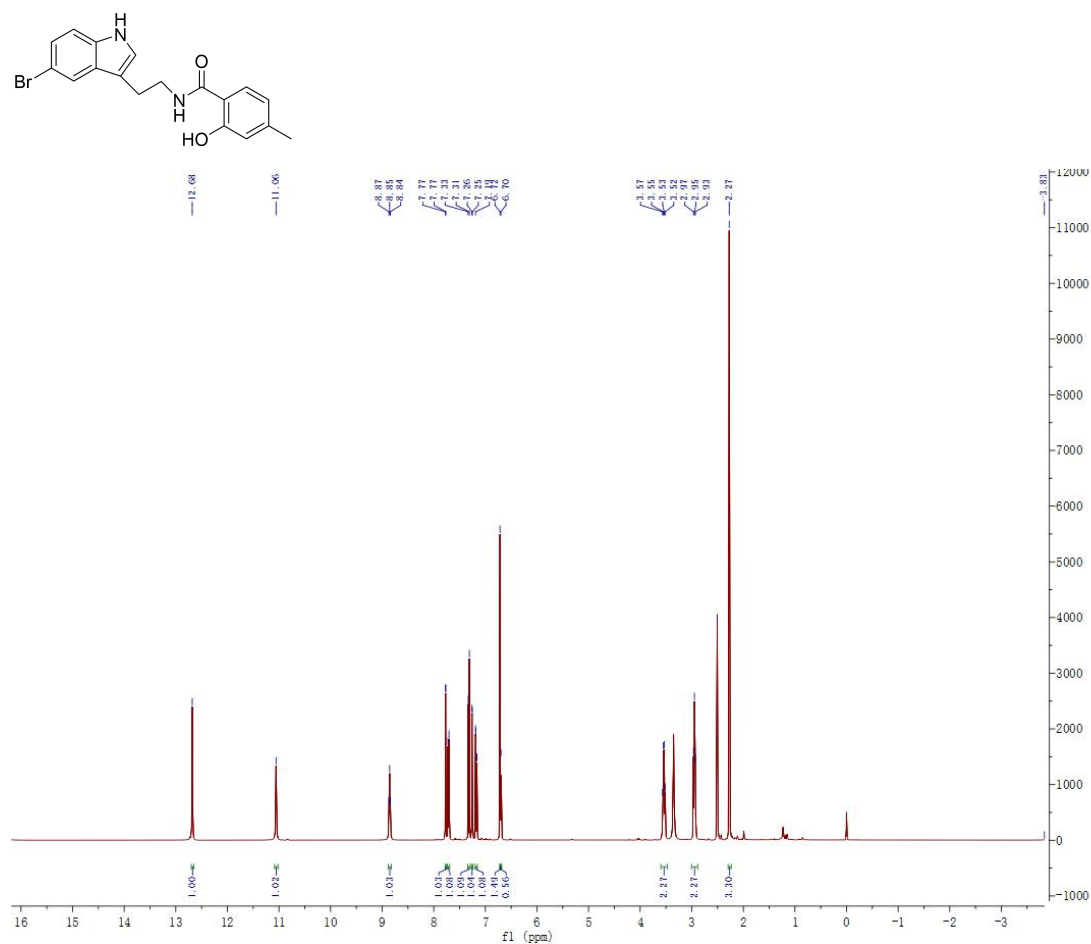
¹³C NMR of compound E19



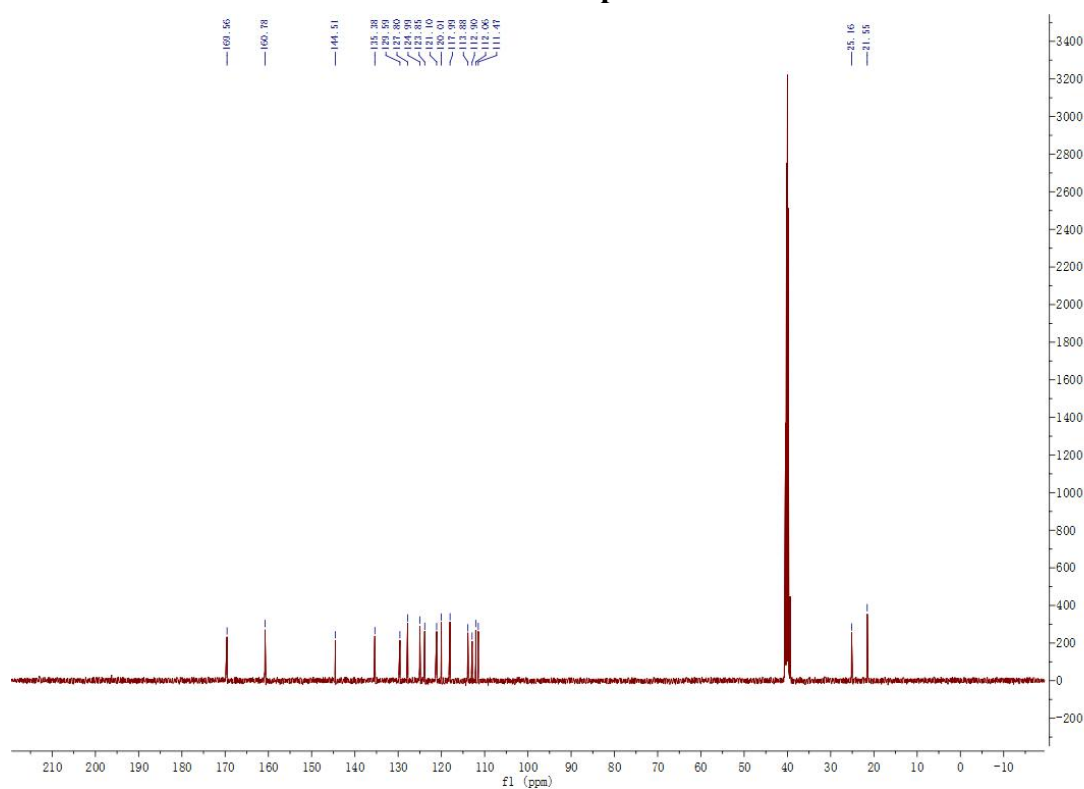
¹H NMR of compound E20



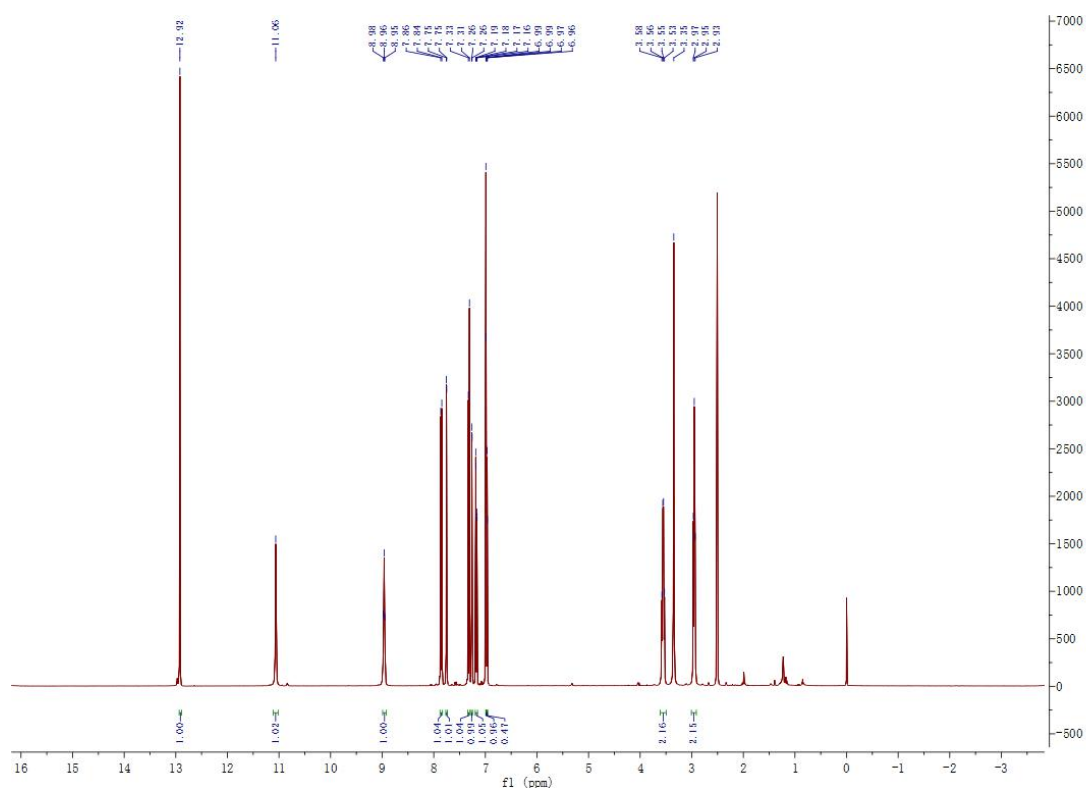
¹³C NMR of compound E20



¹H NMR of compound E21



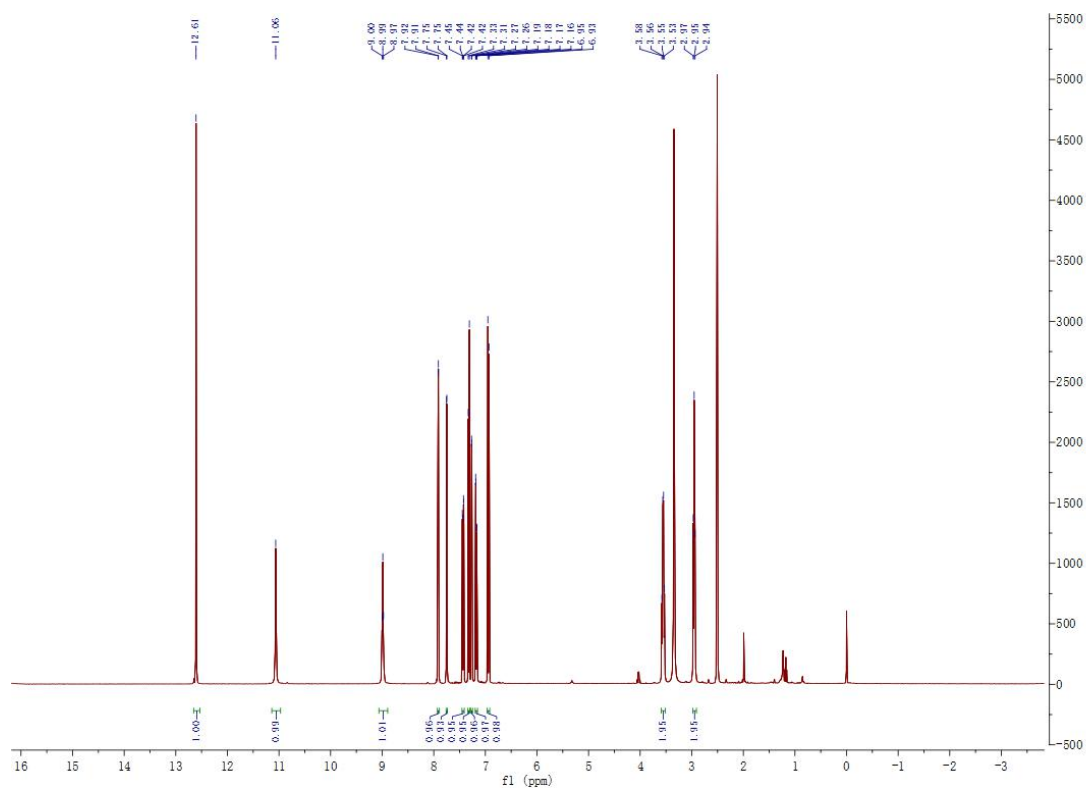
¹³C NMR of compound E21



170.57
159.83
135.37
134.89
129.59
128.72
126.02
124.90
122.84
119.15
118.13
113.98
113.81
112.01
111.47
35.05
15.93

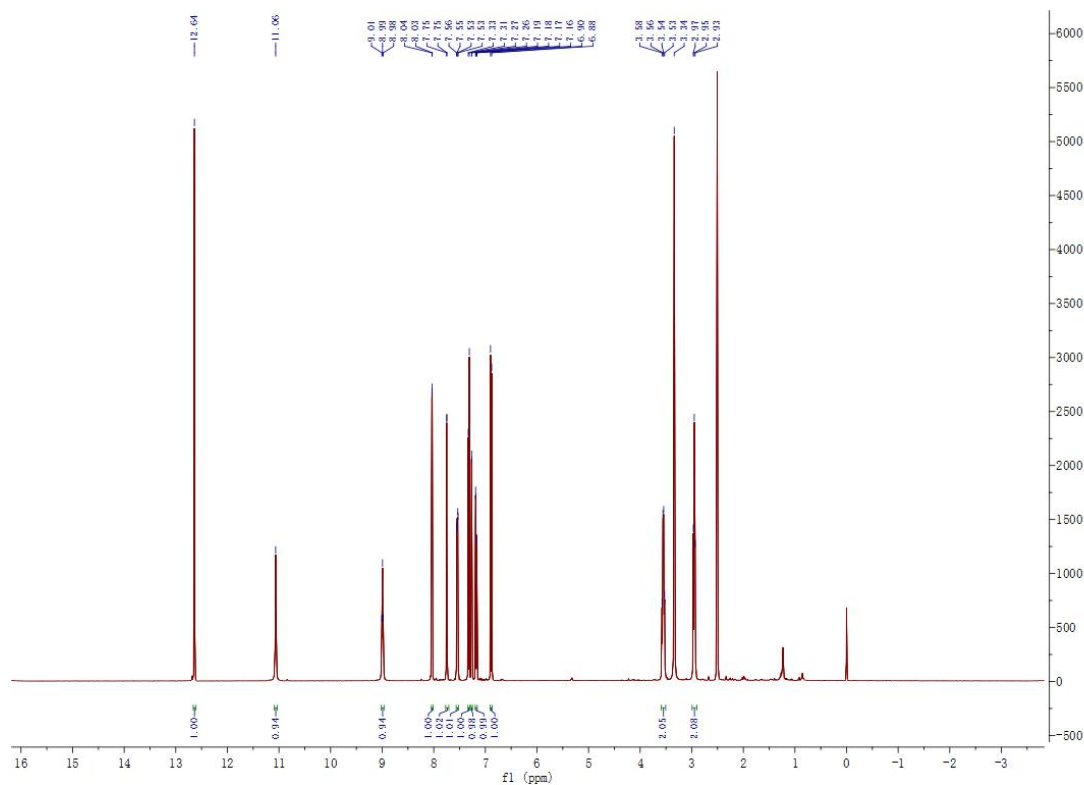
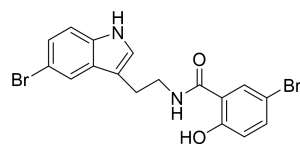
f1 (ppm)

¹³C NMR of compound E22

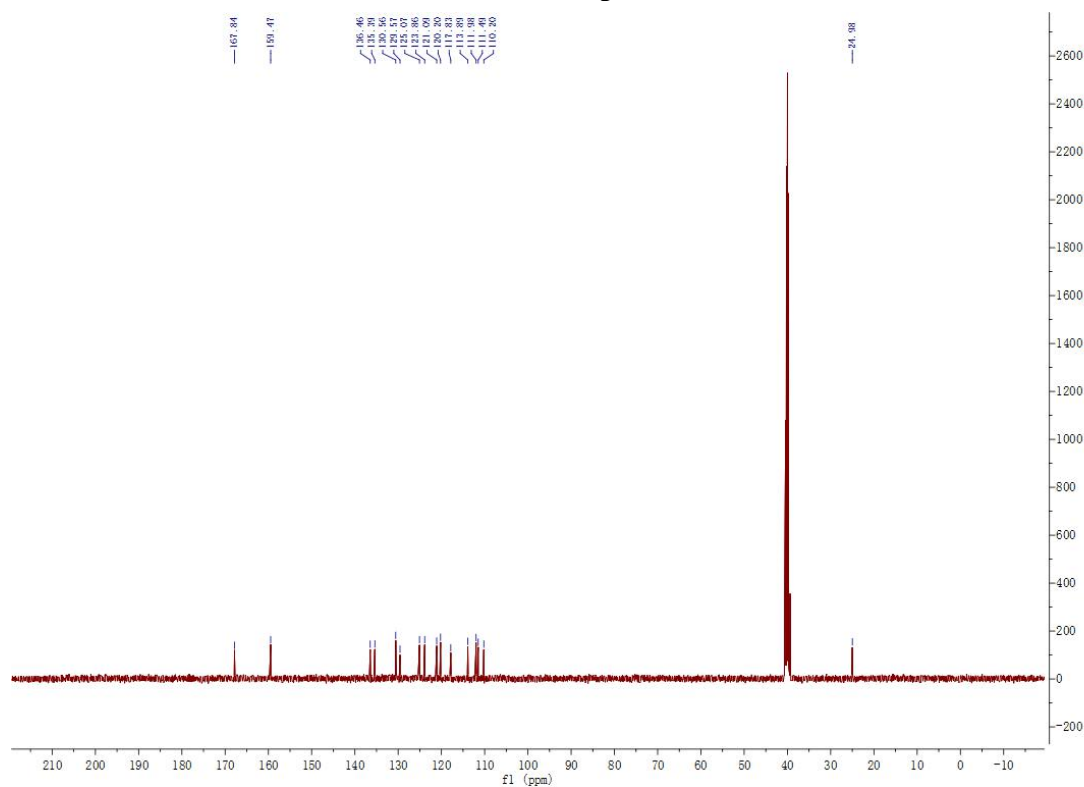


13C NMR spectrum of compound 10. The x-axis is chemical shift (ppm) from -10 to 210. The y-axis is intensity from 0 to 2500. A large peak is at 39.98 ppm. Other peaks are labeled with their chemical shifts: 167.89, 159.04, 135.29, 134.56, 129.57, 127.60, 125.08, 124.25, 122.77, 121.09, 119.14, 117.38, 113.89, 112.58, 111.49, and 24.98.

¹³C NMR of compound E23

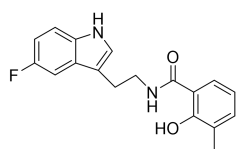


¹H NMR of compound E24

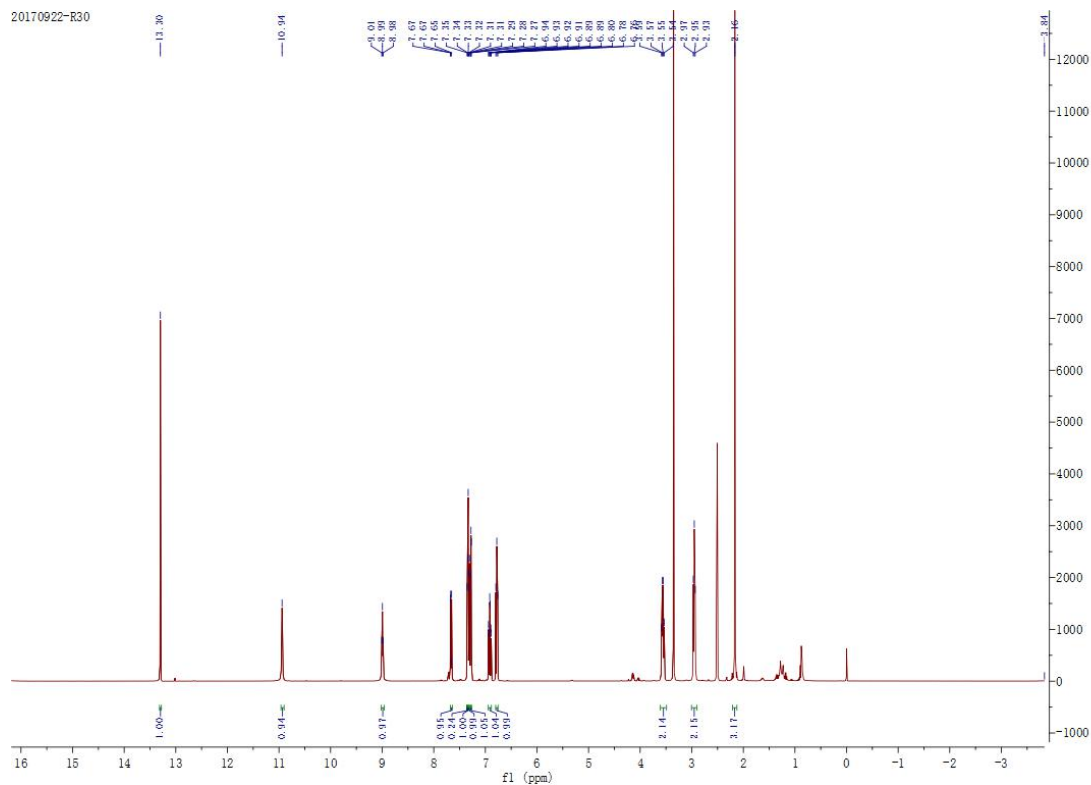


¹³C NMR of compound E24

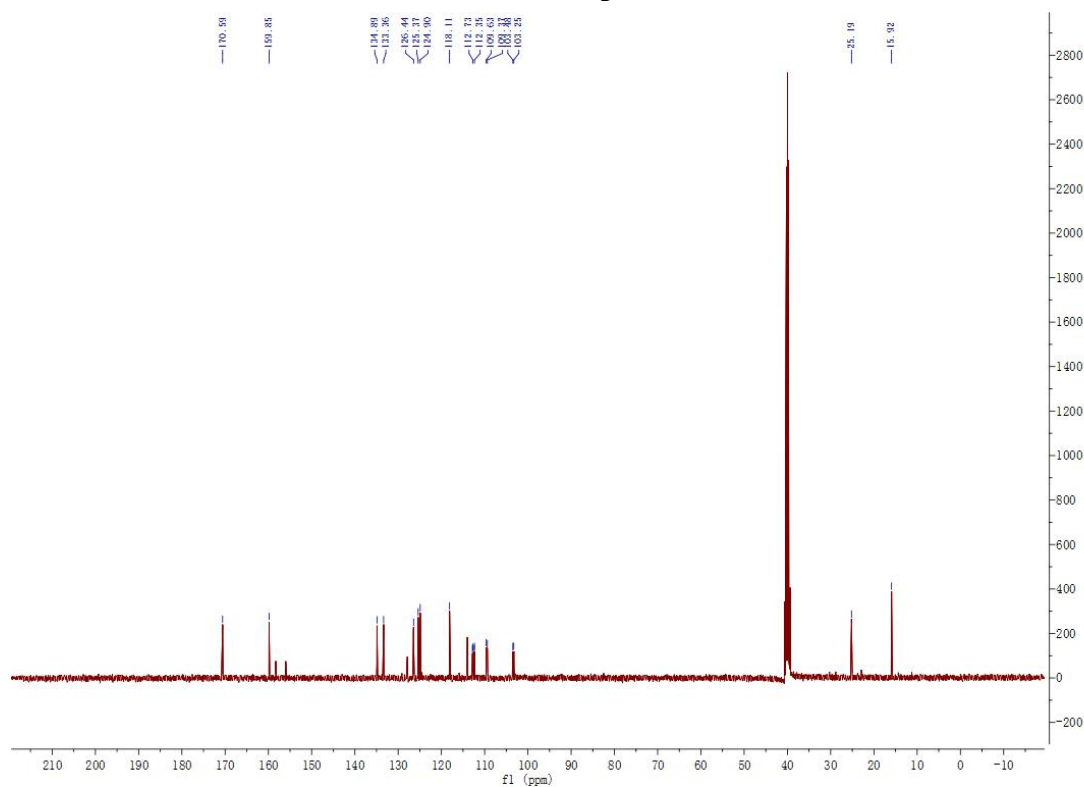




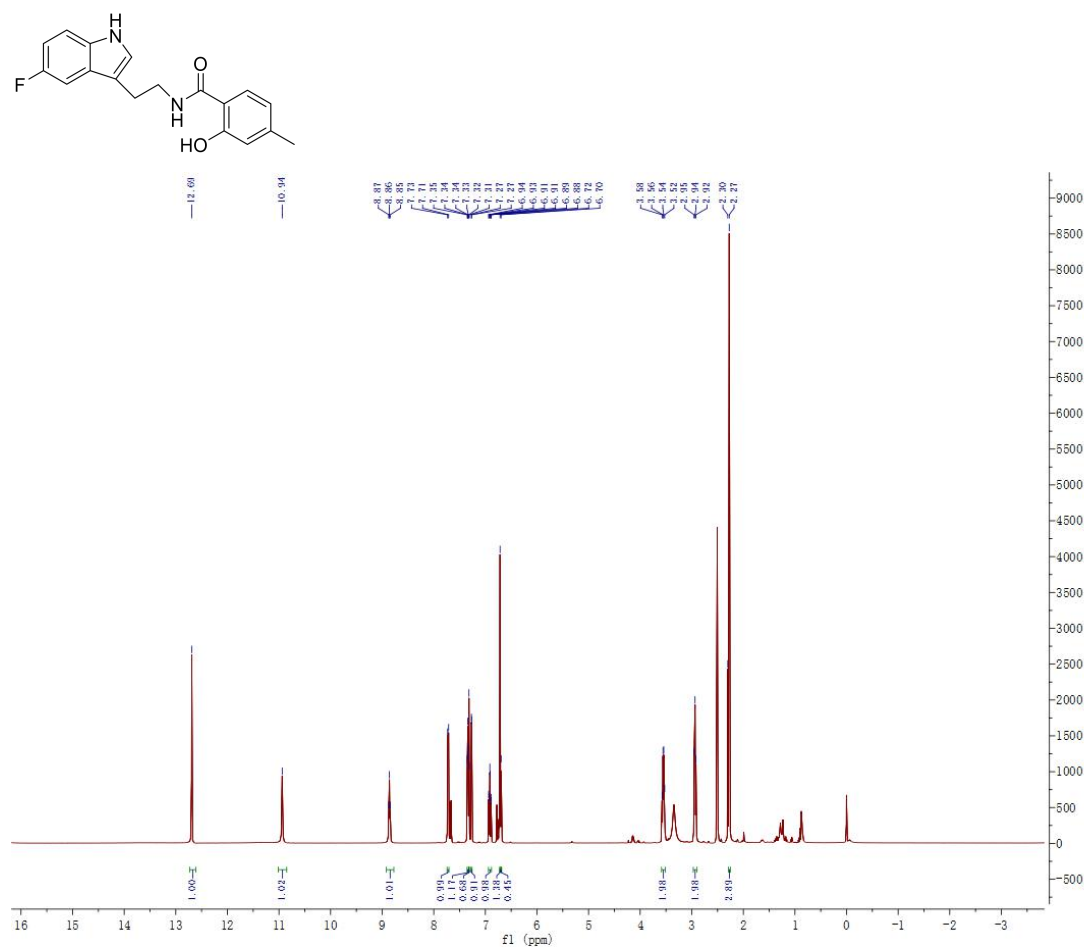
20170922-E30



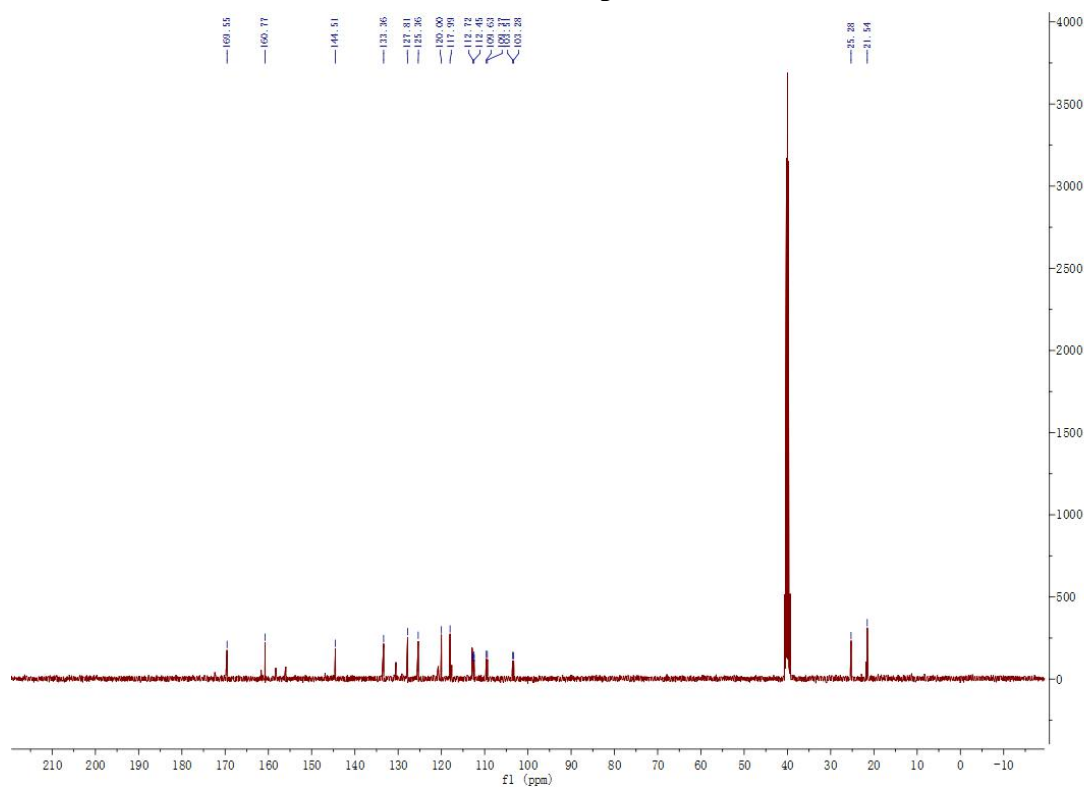
¹H NMR of compound E26



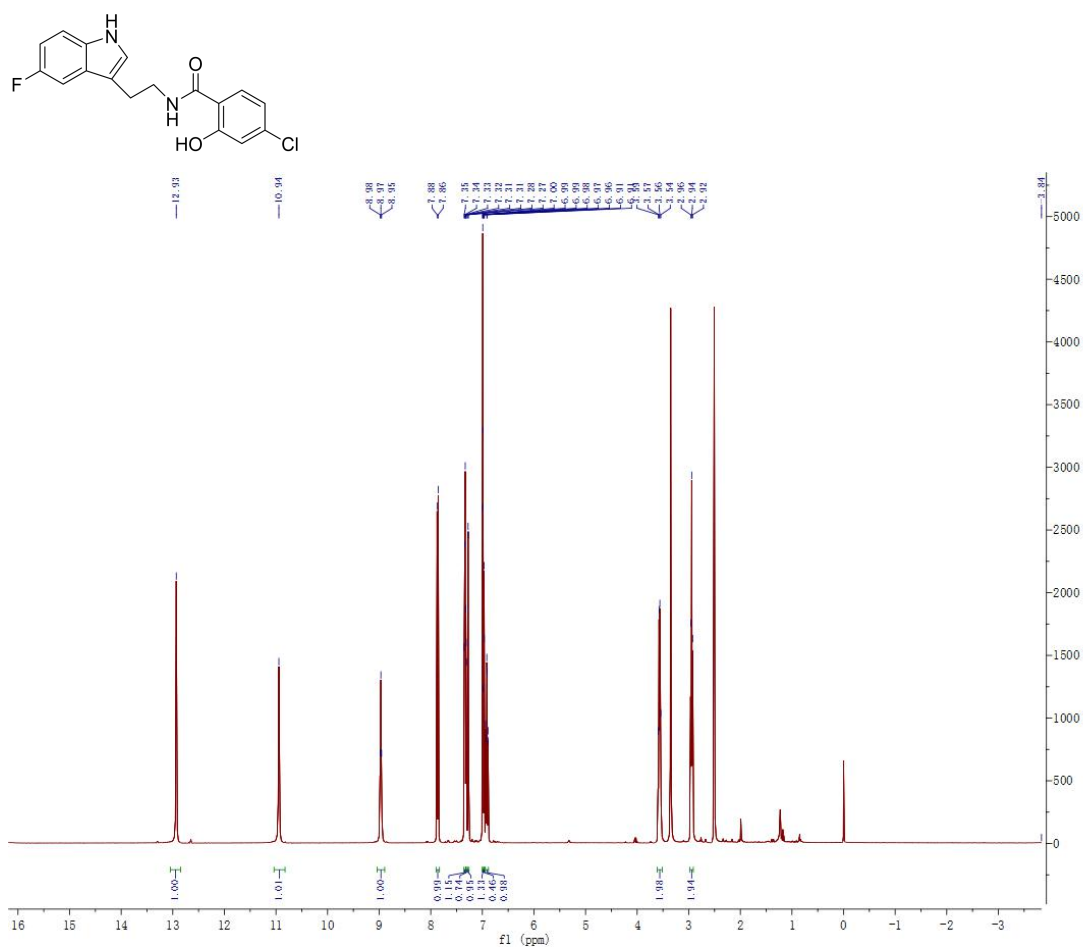
¹³C NMR of compound E26



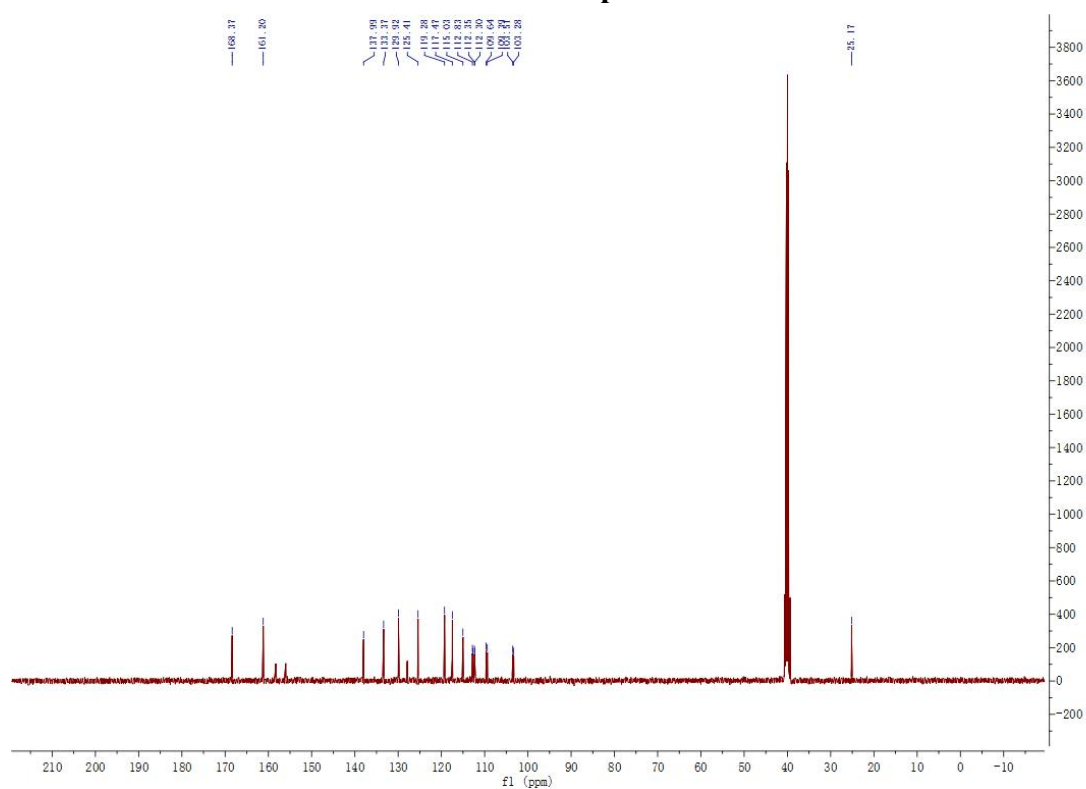
¹H NMR of compound E27



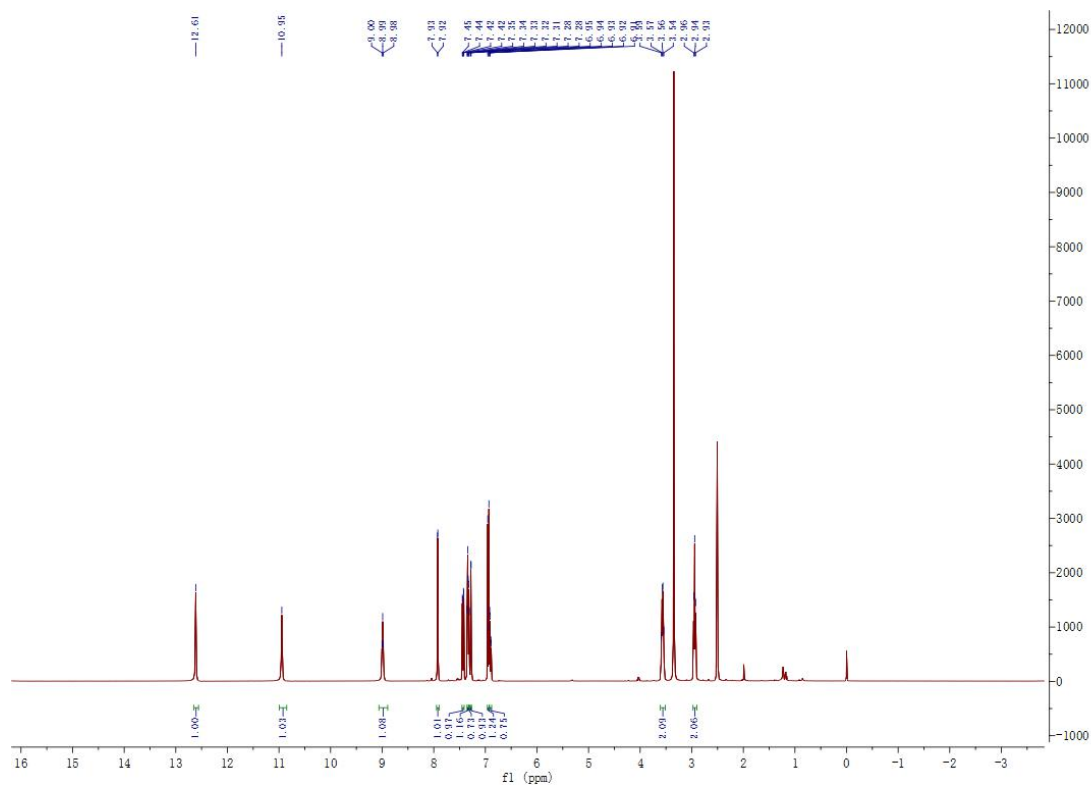
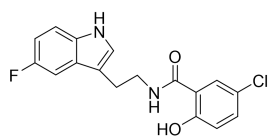
¹³C NMR of compound E27



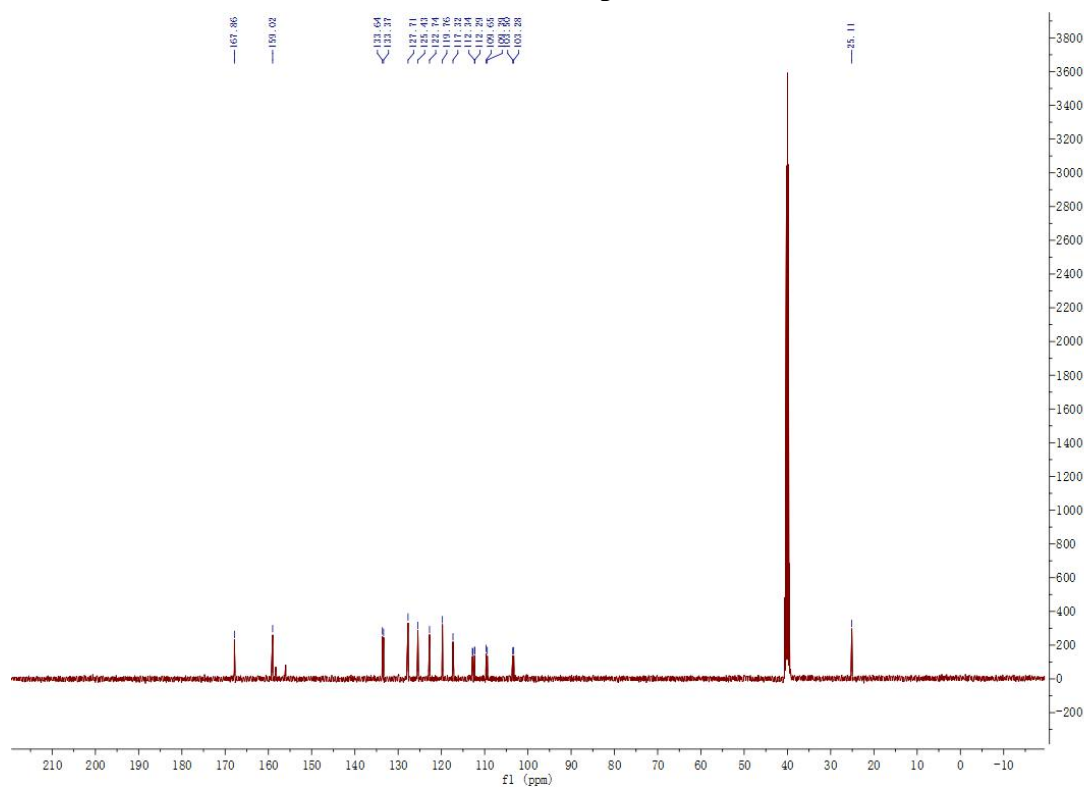
¹H NMR of compound E28



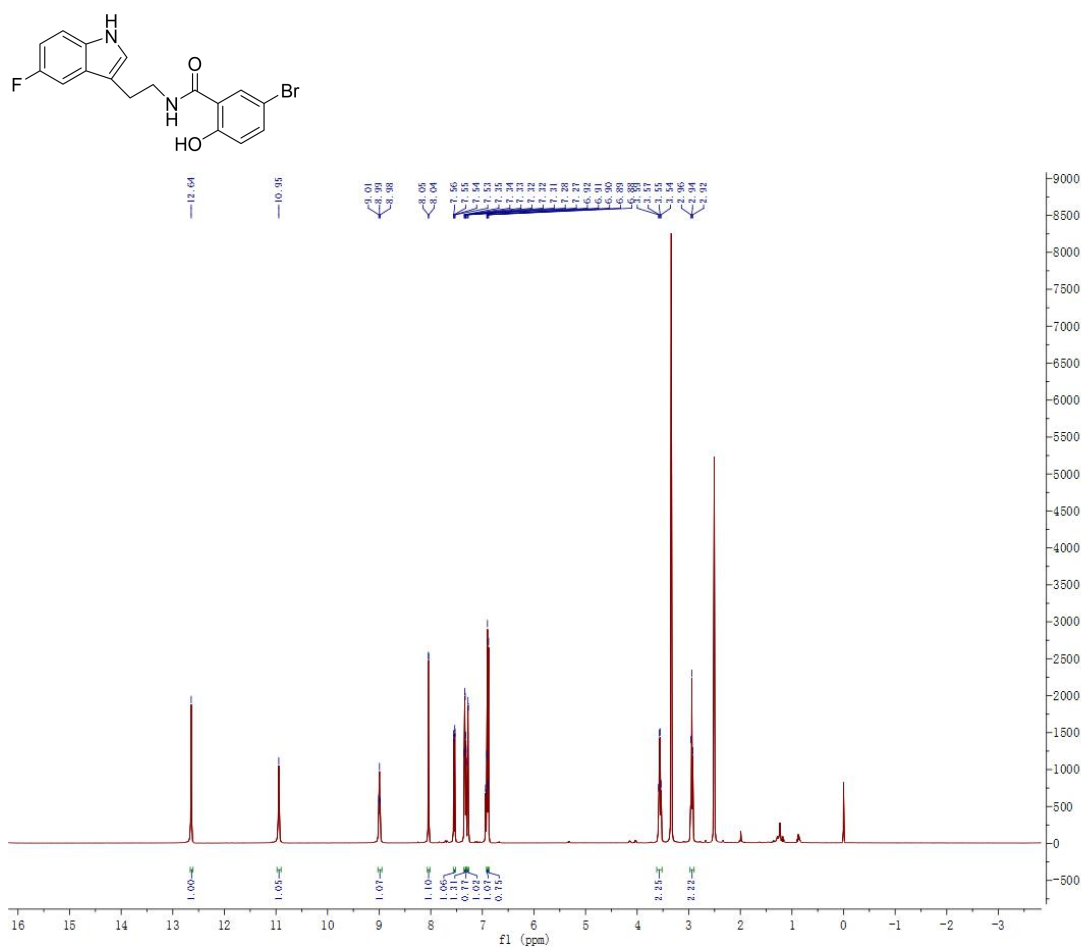
¹³C NMR of compound E28



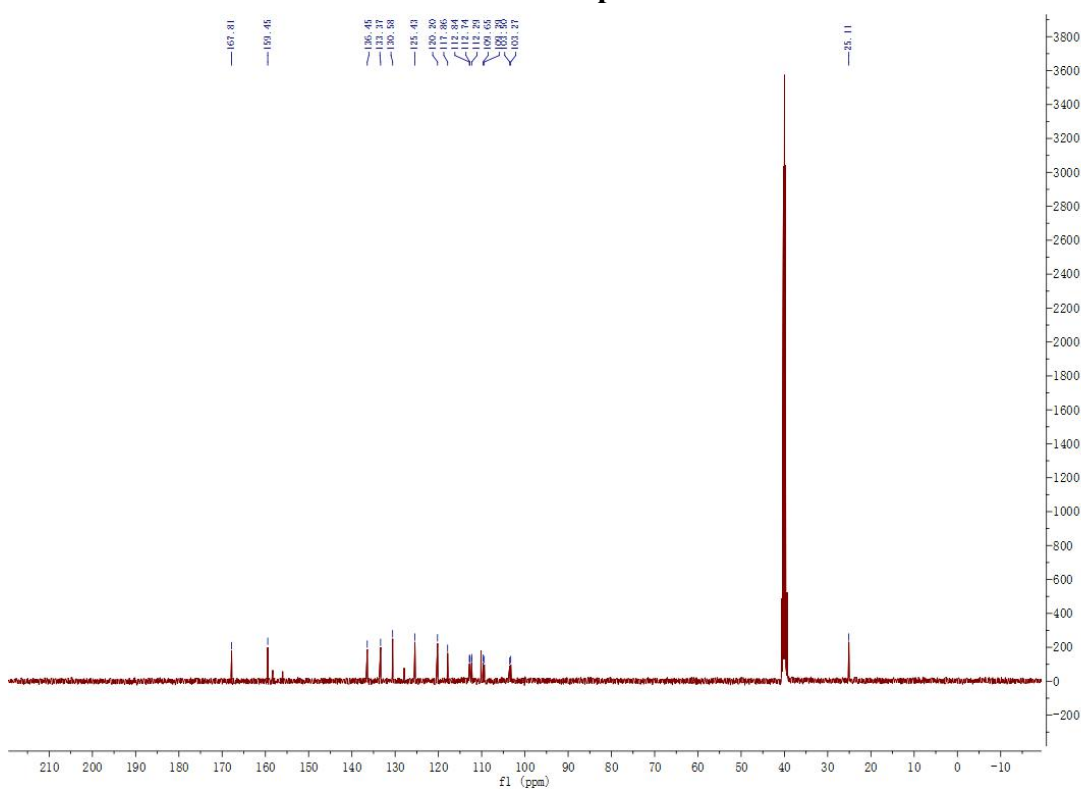
¹H NMR of compound E29



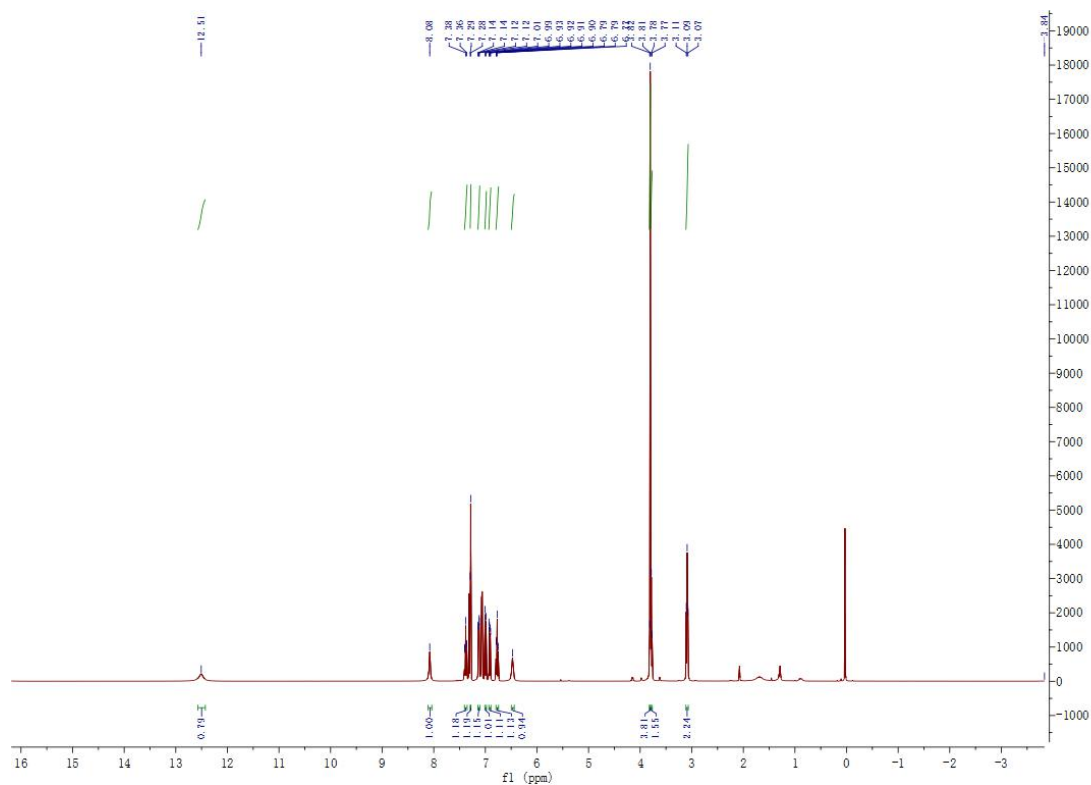
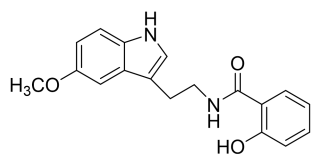
¹³C NMR of compound E29

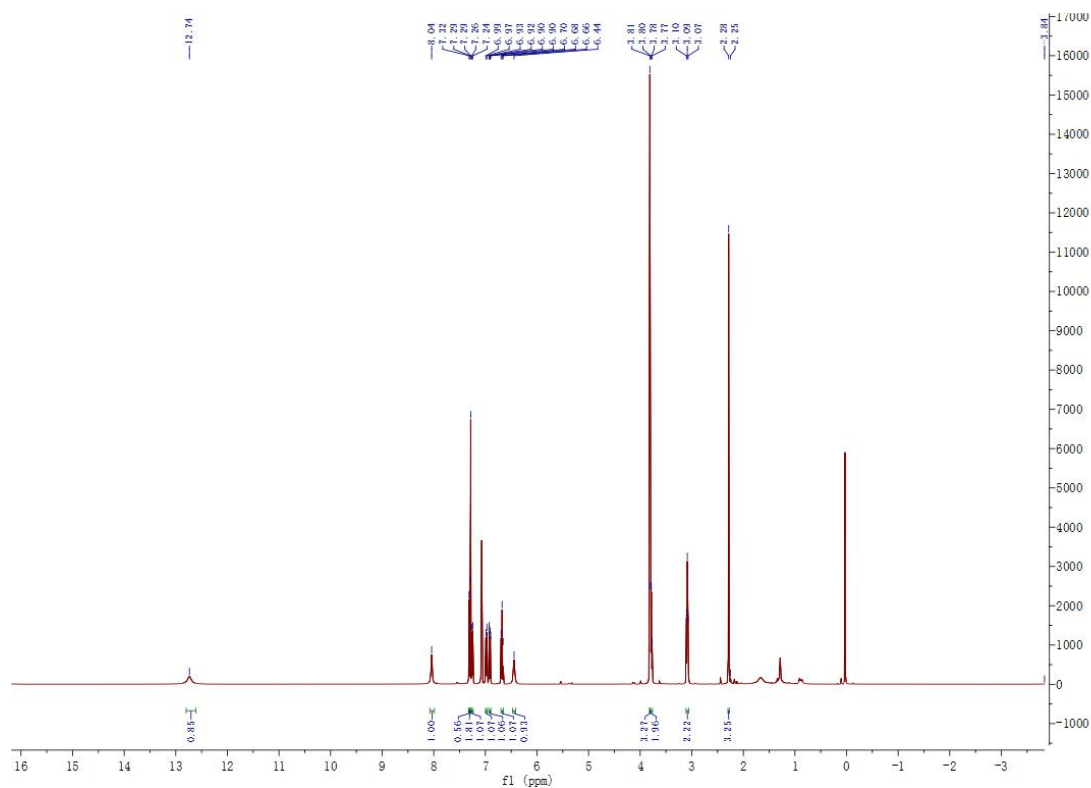
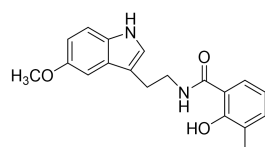


¹H NMR of compound E30

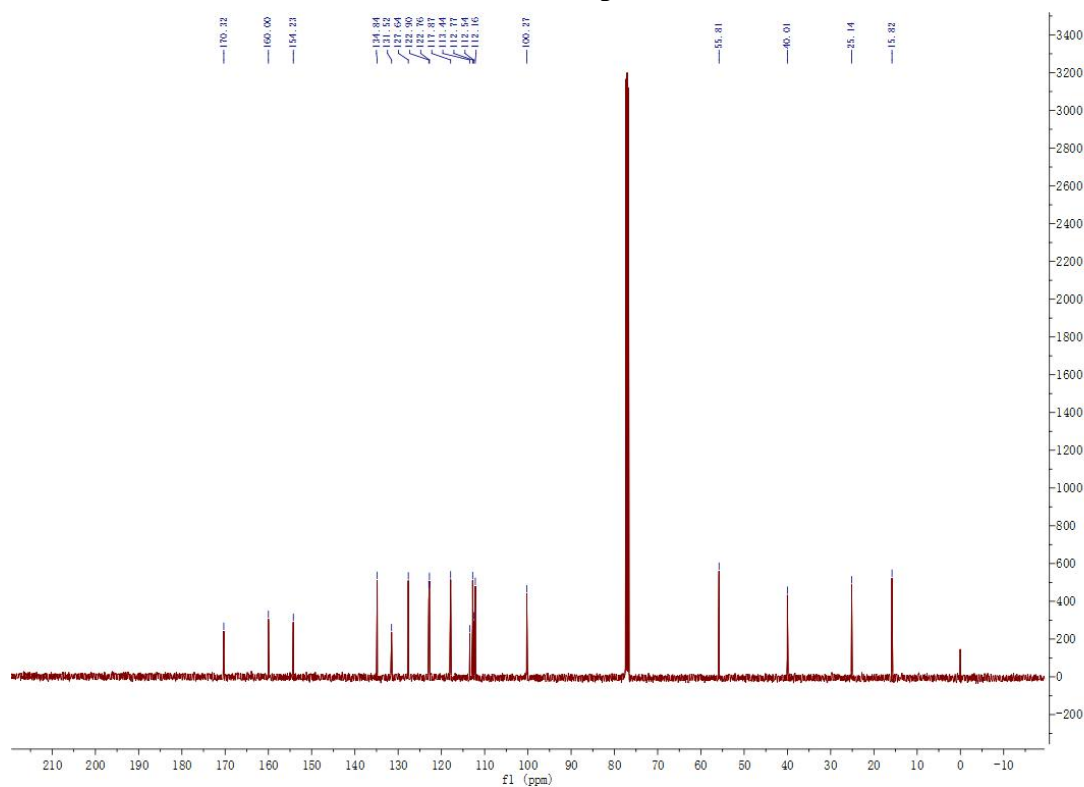


¹³C NMR of compound E30

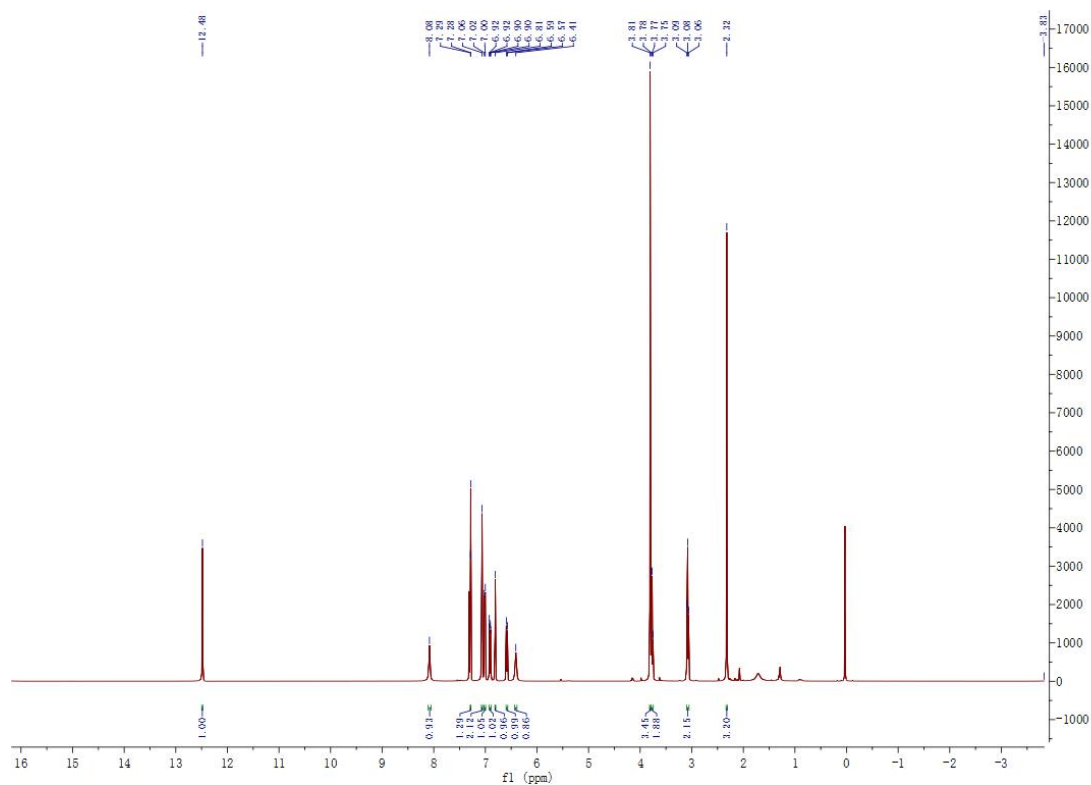
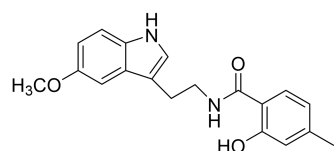




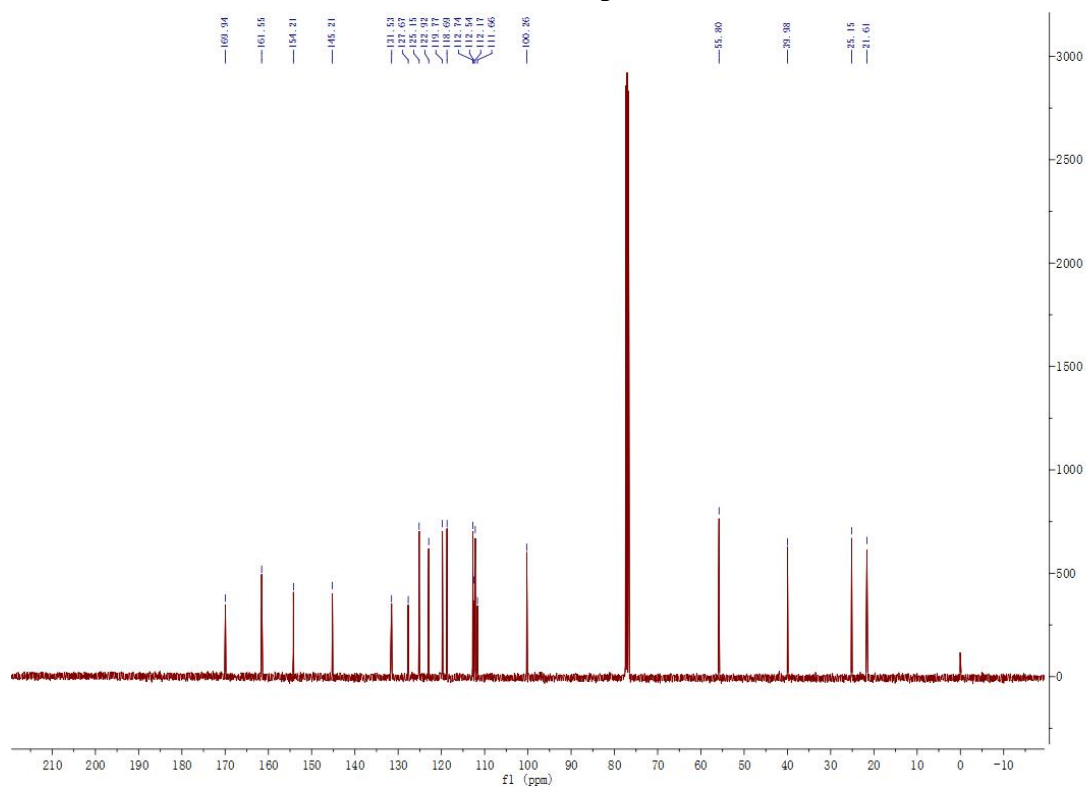
¹H NMR of compound E32



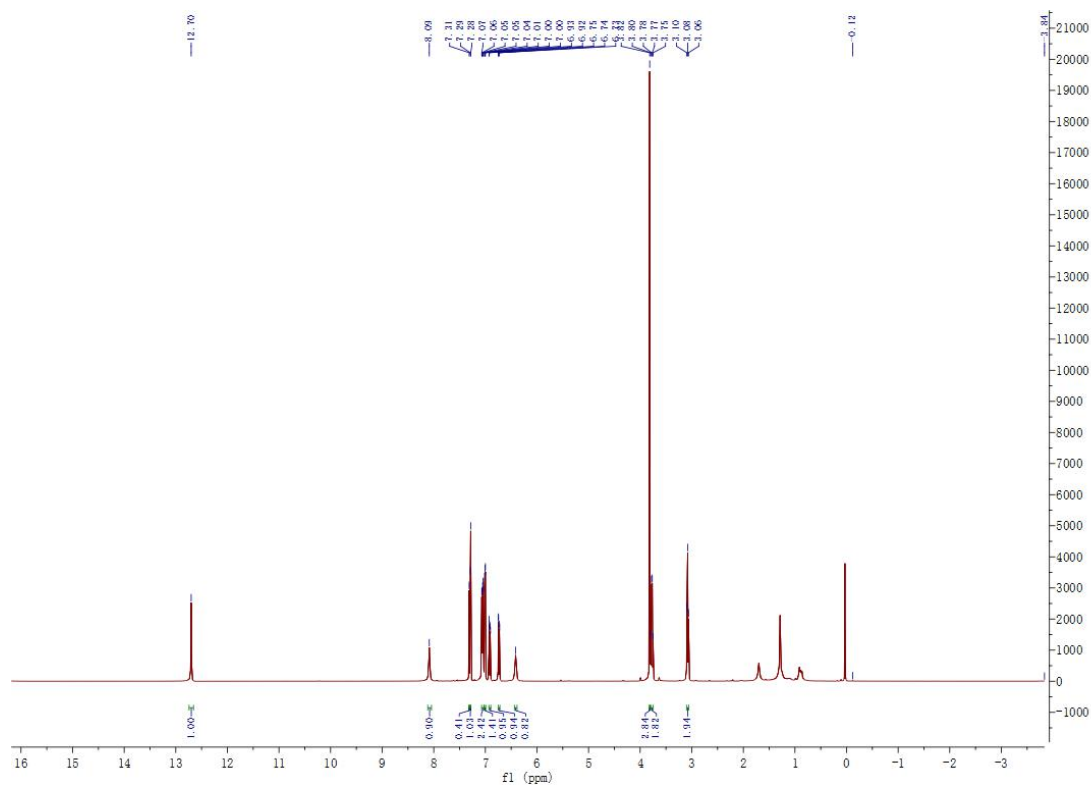
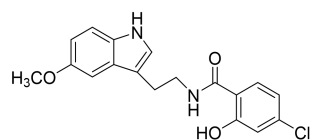
¹³C NMR of compound E32



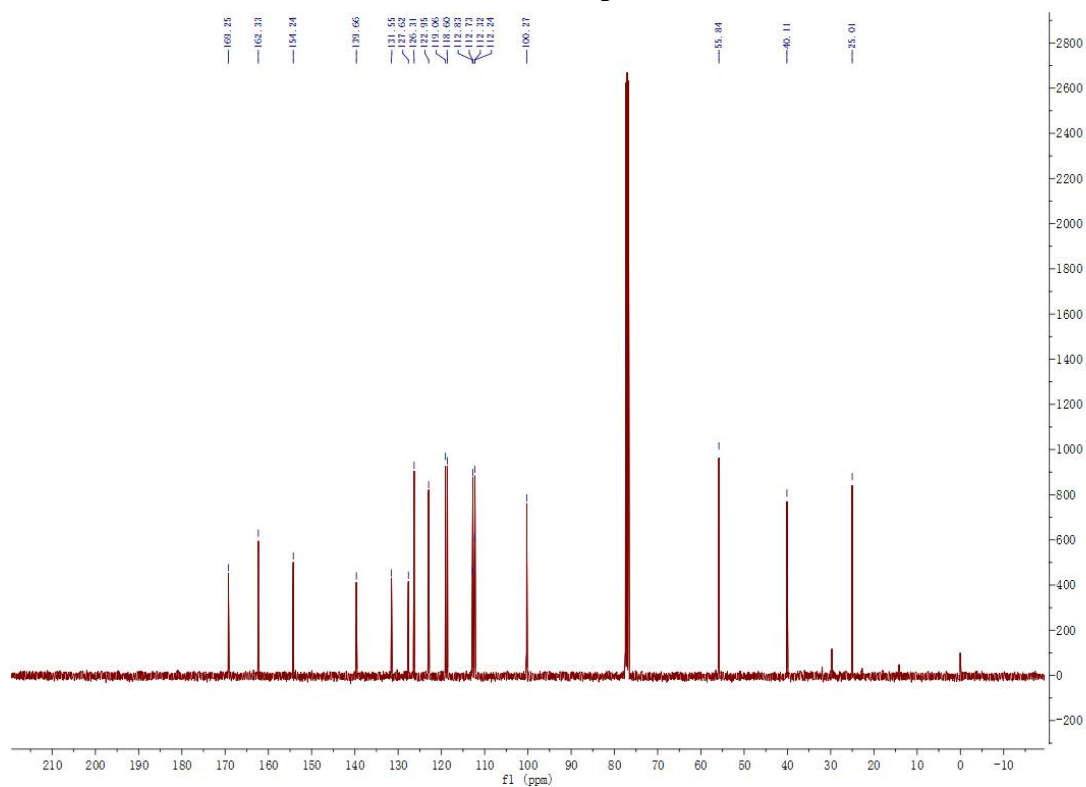
¹H NMR of compound E33



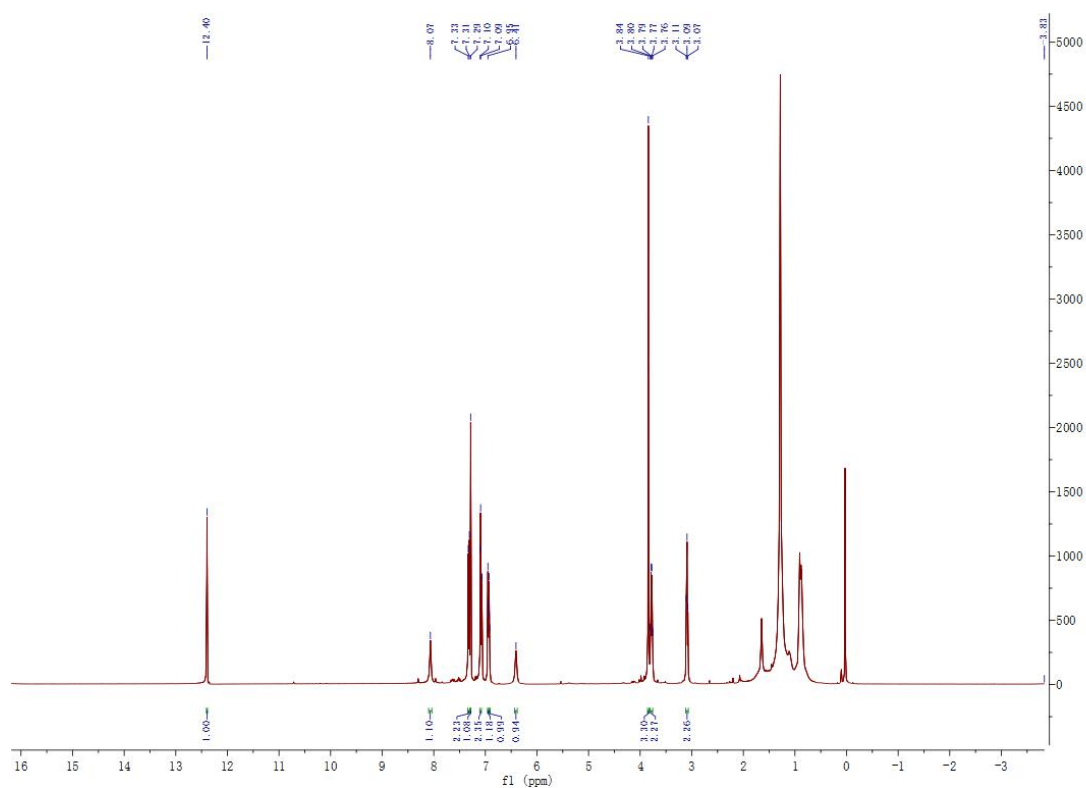
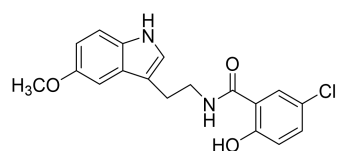
¹³C NMR of compound E33



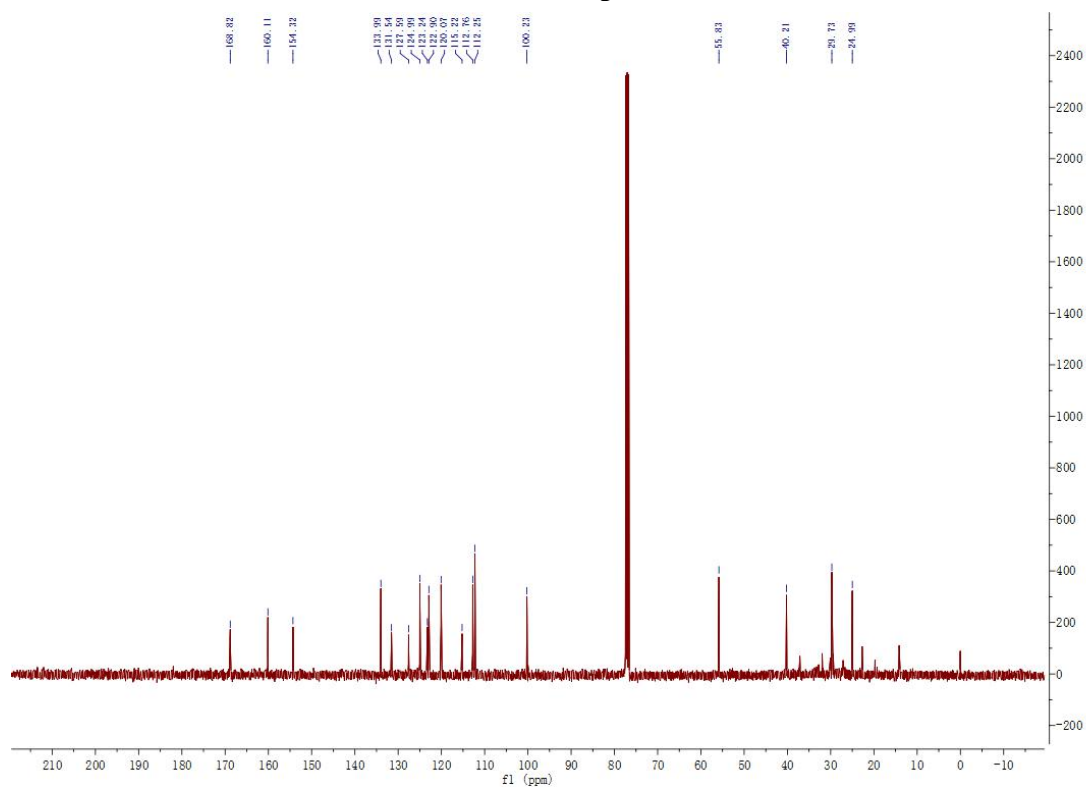
¹H NMR of compound E34



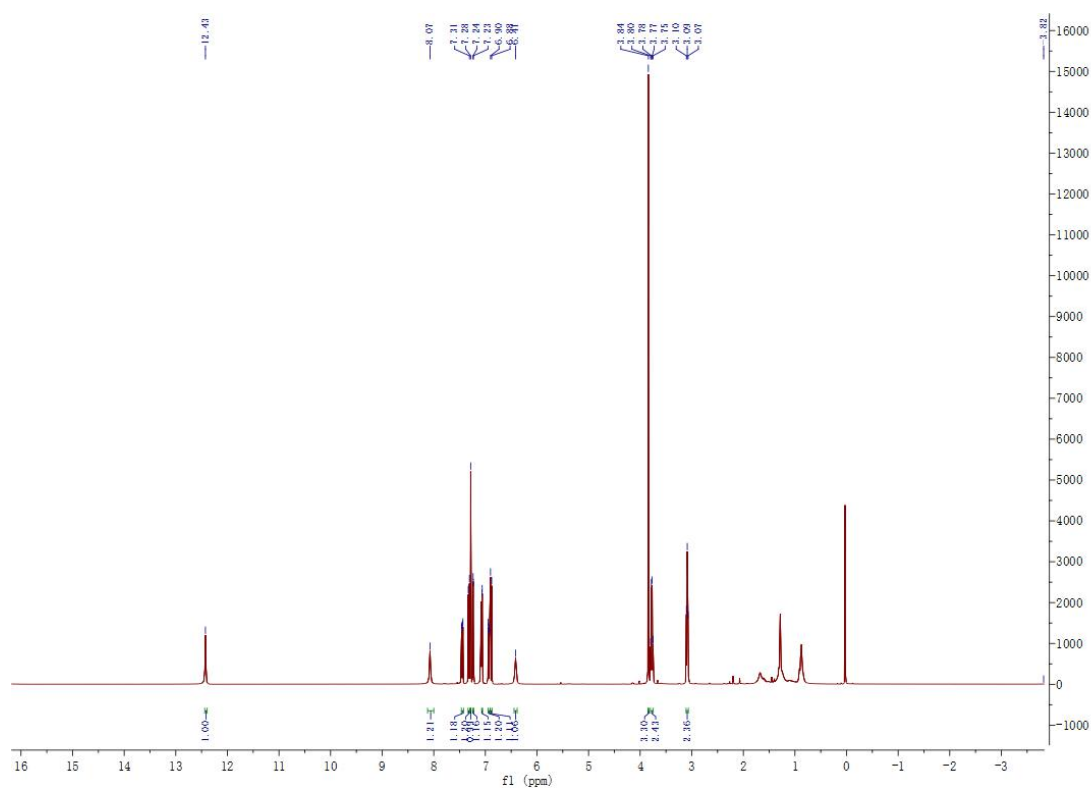
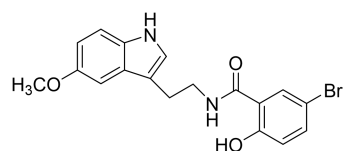
¹³C NMR of compound E34



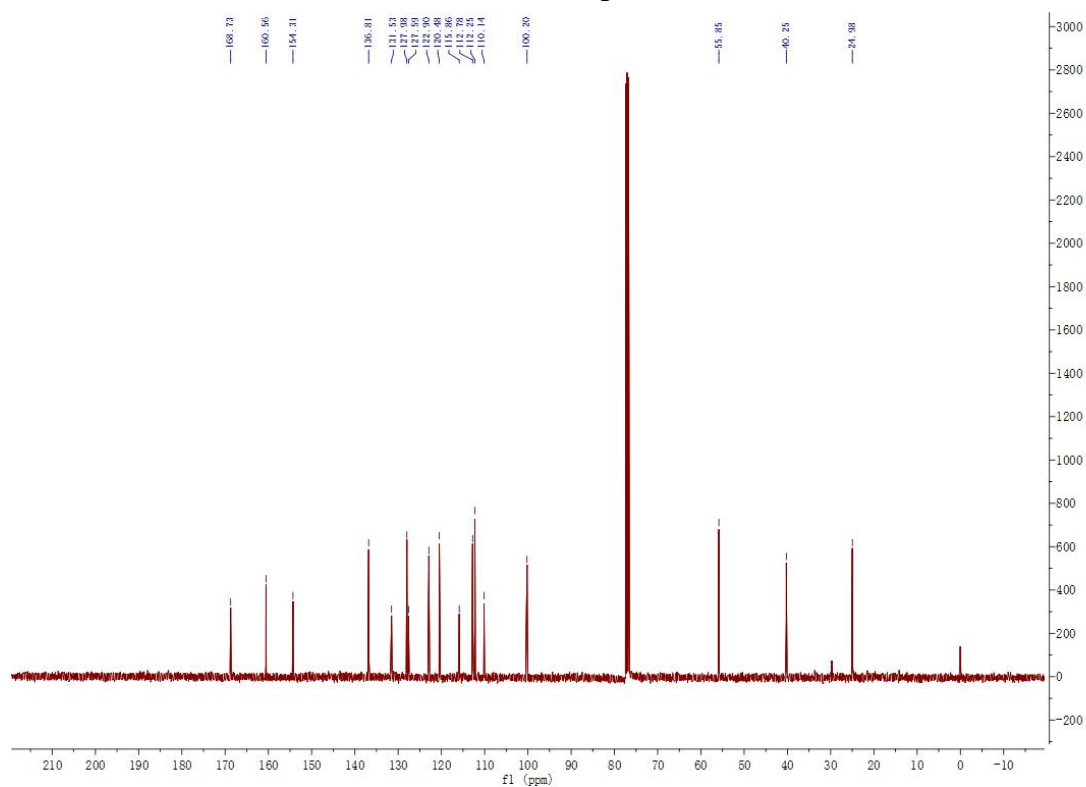
¹H NMR of compound E35



¹³C NMR of compound E35



¹H NMR of compound E36



¹³C NMR of compound E36

Table1
IC₅₀ (μM) of analogues against

	MCF-7			A549			MGC-803			HepG2			heLa		
E1	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100
E2	>100	>100	>100	>100	>100	>100	63.13	66.41	59.68	>100	>100	>100	84.22	82.31	80.21
E3	>100	>100	>100	>100	>100	>100	80.42	84.05	75.81	>100	>100	>100	>100	>100	>100
E4	>100	>100	>100	>100	>100	>100	80.26	82.73	77.24	>100	>100	>100	>100	>100	>100
E5	>100	>100	>100	>100	>100	>100	74.05	78.52	69.31	>100	>100	>100	>100	>100	>100
E6	>100	>100	>100	>100	>100	>100	78.25	83.04	72.56	>100	>100	>100	>100	>100	>100
E7	73.64	75.45	77.26	63.44	60.04	58.02	35.31	40.32	29.53	>100	>100	>100	80.78	83.32	79.21
E8	66.31	70.18	74.75	50.77	45.08	48.63	56.5	61	50.46	62±2	64	60	55.67	59.42	53.32
E9	75.34	73.65	71.11	63.53	61.86	64.65	37.24	42.31	31.21	>100	>100	>100	63.88	65.21	63.41
E10	68.88	72.45	65.65	46.61	51.75	40.64	34	37	31	90±1	91	89	63.76	62.41	66.29
E11	78.01	80.33	81.75	62.44	61.72	62.21	31	37	25	89±5	94	84	79.69	77.31	83.56
E12	70.89	74.94	78.32	63.74	67.01	58.45	35	41	29	>100	>100	>100	84.97	91.23	79
E13	93.21	97.11	89.75	>100	>100	>100	45.51	50.07	39.12	>100	>100	>100	>100	>100	>100
E14	59.34	65.11	62.31	50	49.46	51.42	38.21	40.63	35.23	63.55	69.75	58.93	60.95	58.11	64.21
E15	62.02	60	58	75.43	71.23	78.04	38.04	42.41	33.67	>100	>100	>100	>100	>100	>100
E16	>100	>100	>100	68.66	69	66.34	47	51	43	98.6	92.12	103.56	92.83	97.3	89.44
E17	79.11	76.79	81.01	89.77	93.06	84.32	42	44	40	>100	>100	>100	>100	>100	>100
E18	89.06	91.92	86.21	80.72	82.41	77.07	61.05	59.87	62.21	93.54	98	87.66	>100	>100	>100
E19	78.01	79.84	82.41	59.34	63.31	54.12	37.31	40	33.41	>100	>100	>100	78.8	83.32	74.12
E20	63.24	61.84	61.09	36.13	39.42	32.04	29	32	27	45.51	49.88	39.78	51.69	50.88	54.11
E21	75.13	80.05	84.69	61.12	62.07	60.09	48.76	53.65	42.12	80.42	86.31	73.54	61.51	57.87	64.24
E22	98.04	103	93.45	63.23	66.81	59.65	43	48	37	92	98	86	69.76	73.3	69.1
E23	77.32	69.07	73.78	63.03	66.42	59.87	63.26	68.32	56.89	87	92	82	79.97	83.32	77.22
E24	>100	>100	>100	62.23	58.21	65.31	80.4	83.5	76.21	>100	>100	>100	>100	>100	>100
E25	>100	>100	>100	>100	>100	>100	63	62.42	64.21	>100	>100	>100	>100	>100	>100
E26	>100	>100	>100	>100	67.05	71.44	62.89	52.32	56.21	47.89	>100	>100	>100	>100	>100
E27	>100	>100	>100	>100	>100	>100	60.03	63	57.32	>100	>100	>100	>100	>100	>100
E28	>100	>100	>100	>100	>100	>100	62.23	59	65.14	>100	>100	>100	>100	>100	>100
E29	>100	>100	>100	53.4	57	49.07	53.44	59.21	47	>100	>100	>100	>100	>100	>100
E30	>100	>100	>100	77.35	74.15	80.21	80.32	83.41	77	>100	>100	>100	75.77	79.21	73.63
E31	>100	>100	>100	>100	>100	>100	59.42	55.98	62.23	>100	>100	>100	82.2	85.4	79
E32	101	97.64	92.5	>100	>100	>100	43.06	44.42	42.21	85.21	87.22	82.45	41.95	44.89	39.55
E33	>100	>100	>100	>100	>100	>100	59	61.22	57.33	80.42	81.22	79	80.23	83	77.54
E34	>100	>100	>100	>100	>100	>100	56.32	53	59.21	>100	>100	>100	71.32	65.78	7.21
E35	>100	>100	>100	>100	>100	>100	55.21	54.32	56.07	75.36	78.42	71.56	>100	>100	>100
E36	>100	>100	>100	>100	>100	>100	62.22	64.32	60.11	>100	>100	>100	73.87	70.23	78.21
5-FU	56.56	53.94	60.21	>100	>100	>100	58.43	56.78	59.33	68.21	75.87	60.22	50.21	57.31	43.22

