

## Supporting Information

### **$\alpha$ -Trifluoromethyl Chalcones as Potent Anticancer Agents for Androgen Receptor-Independent Prostate Cancer**

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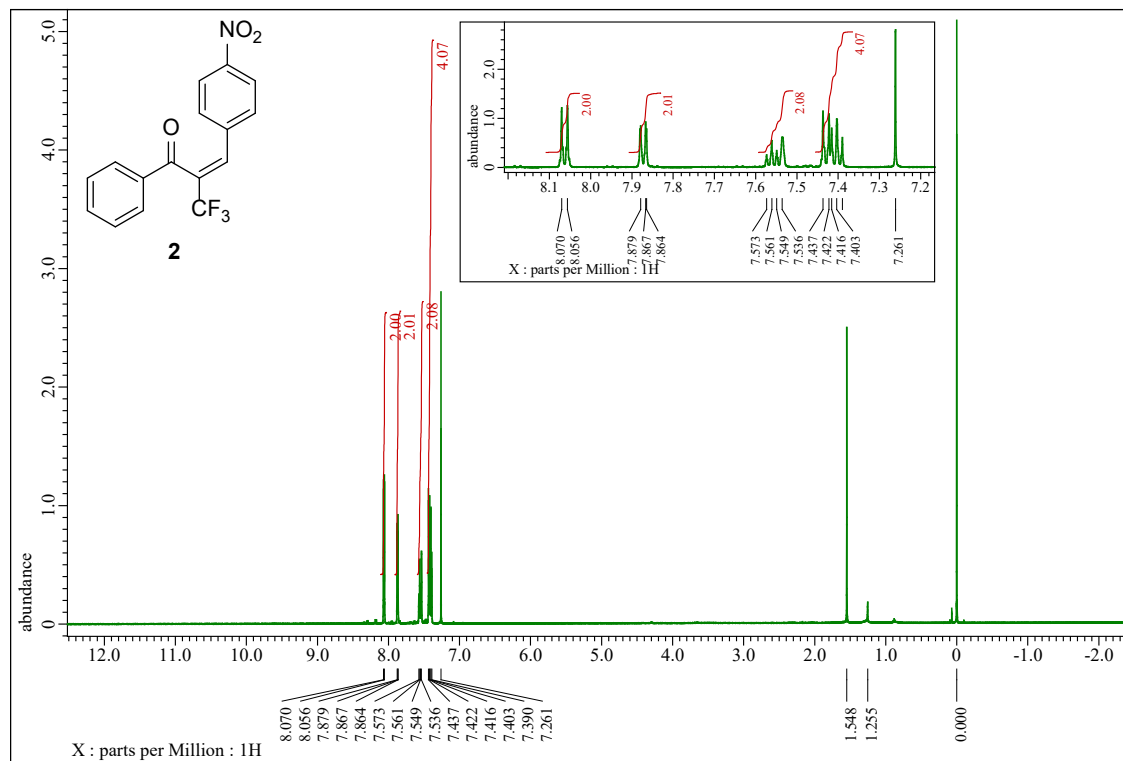
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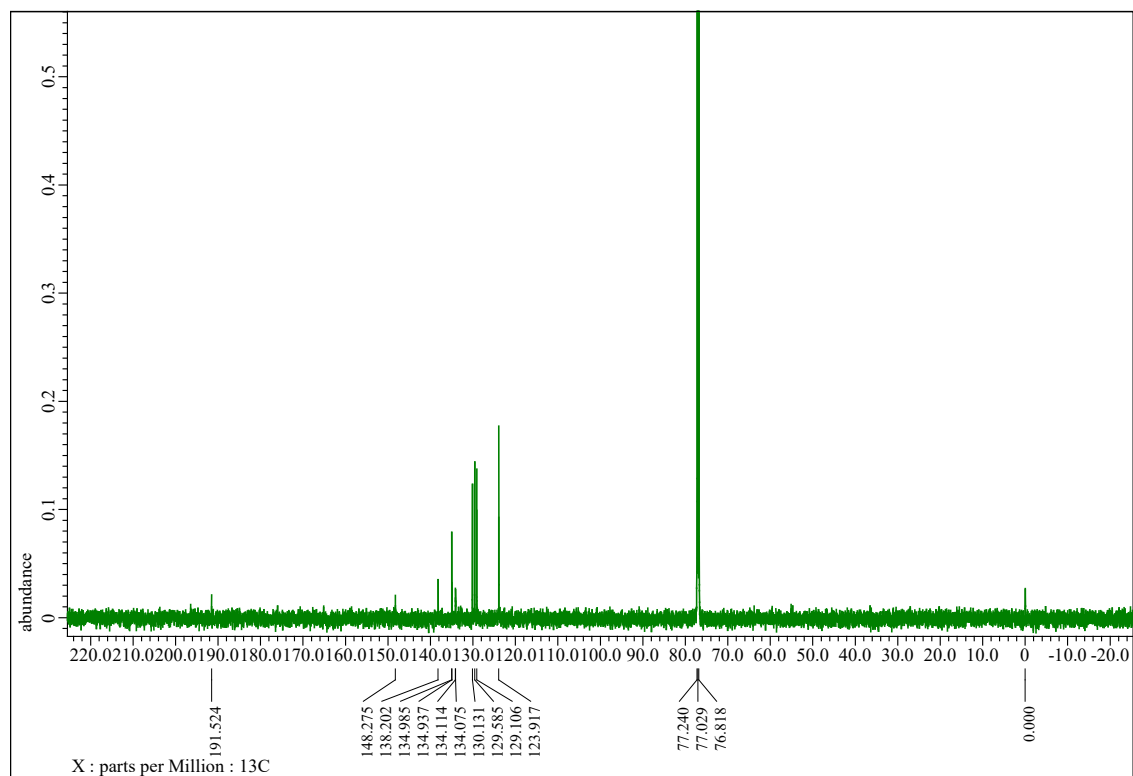
#### **Table of Contents**

Figures S1–S40. <sup>1</sup> H NMR, <sup>13</sup> C NMR, FT-IR, and UV-VIS spectra of compounds <b>2–11</b>	S2–22
Table S1. Detailed information of detected binding proteins.....	S23

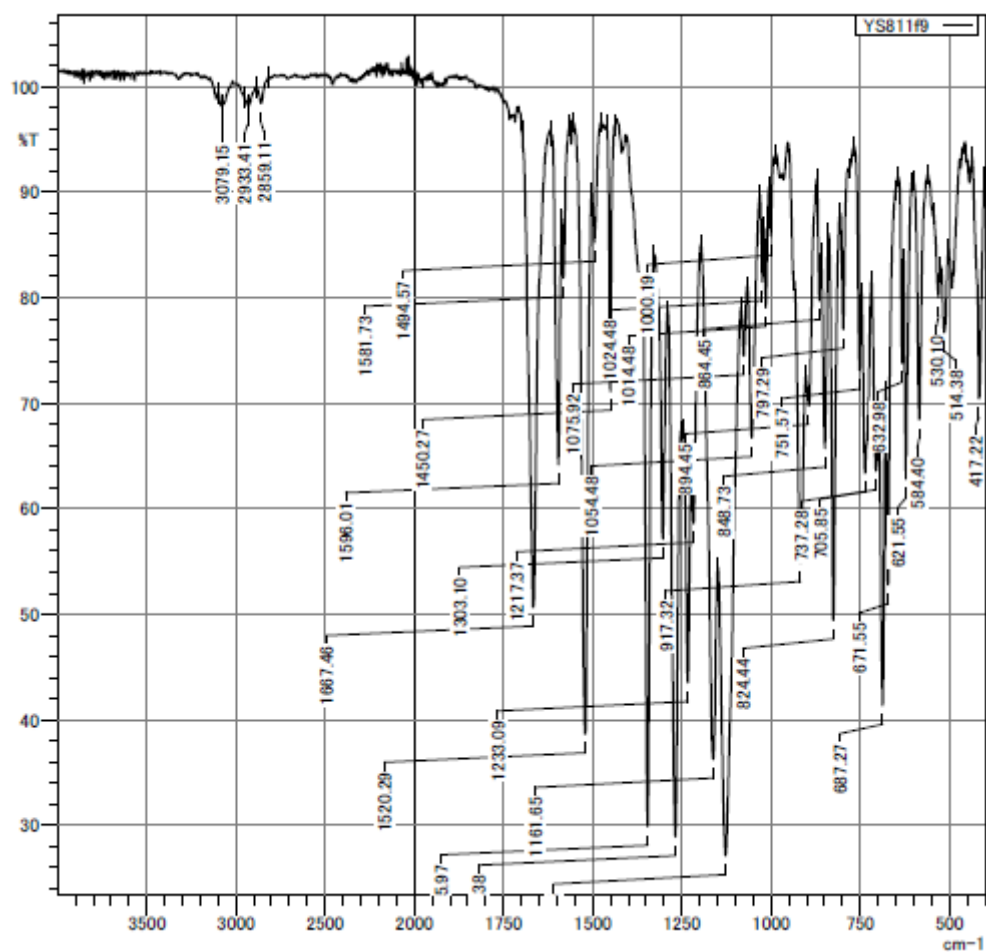
**Figure S1.**  $^1\text{H}$  NMR spectrum of compound **2** (600 MHz, in  $\text{CDCl}_3$ )



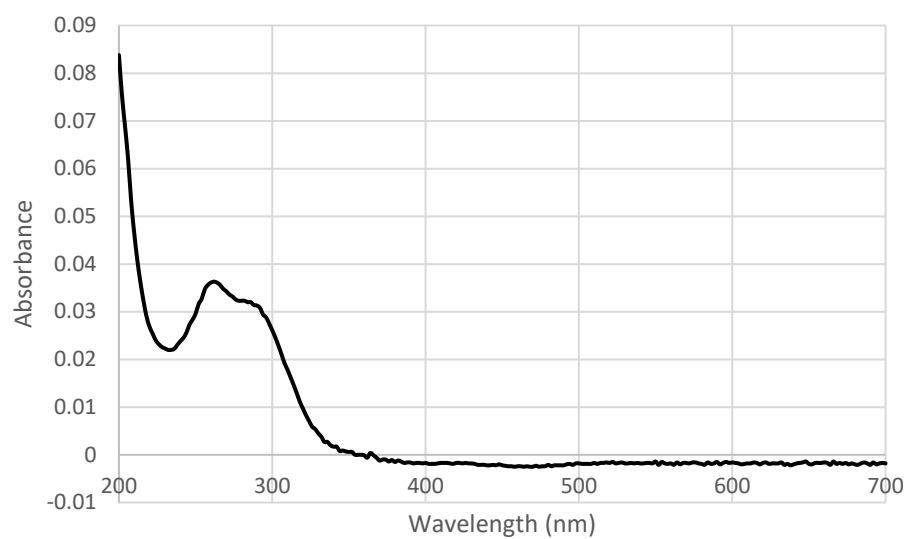
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of compound **2** (150 MHz, in  $\text{CDCl}_3$ )



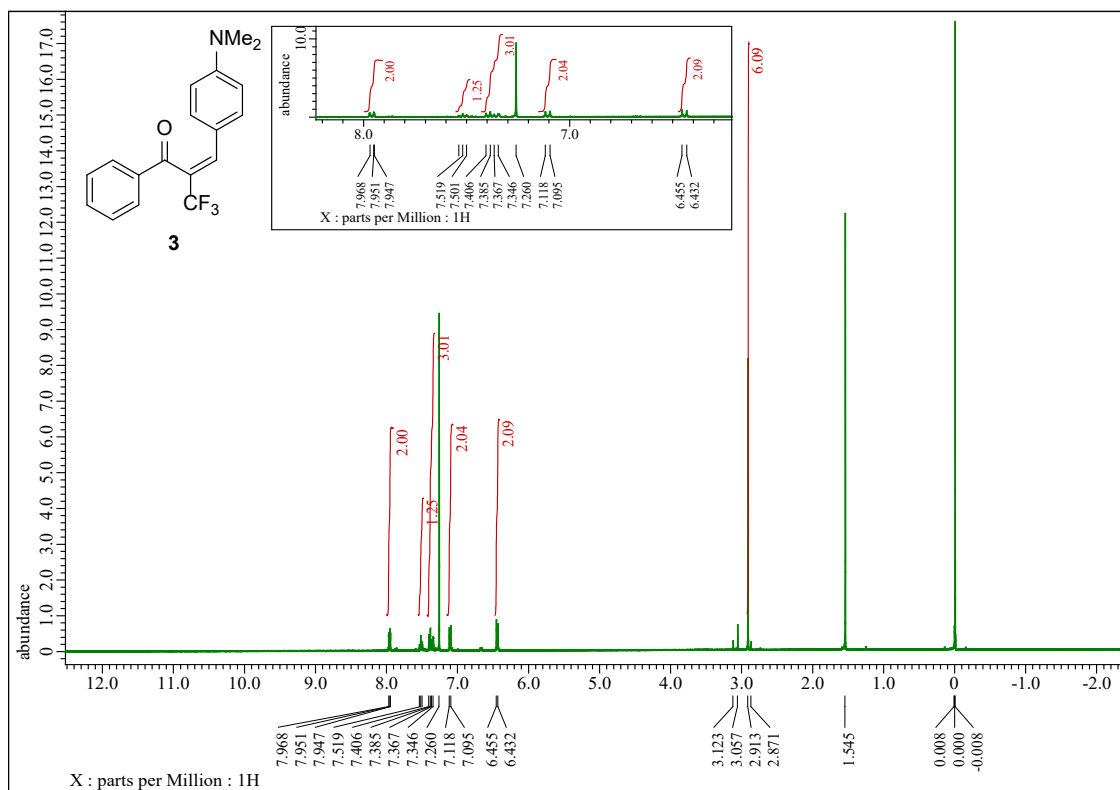
**Figure S3.** FT-IR spectrum of compound **2** (neat)



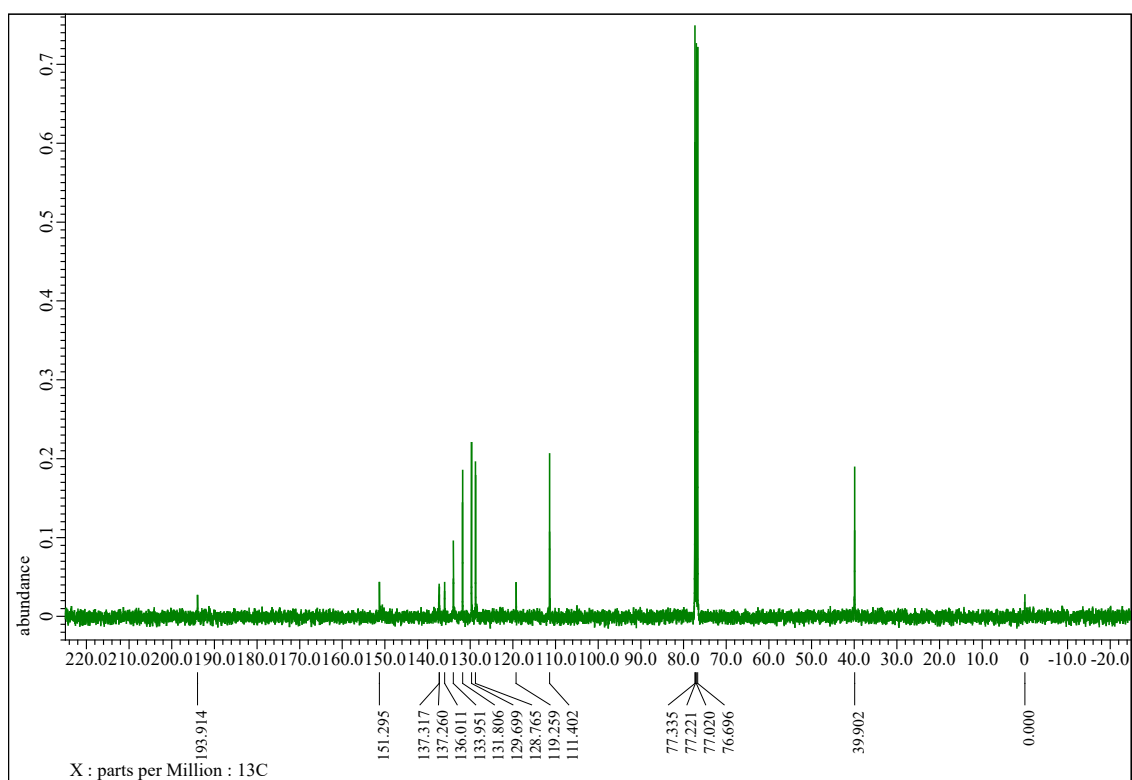
**Figure S4.** UV-VIS spectrum of compound **2** (MeCN/H<sub>2</sub>O, 1:1)



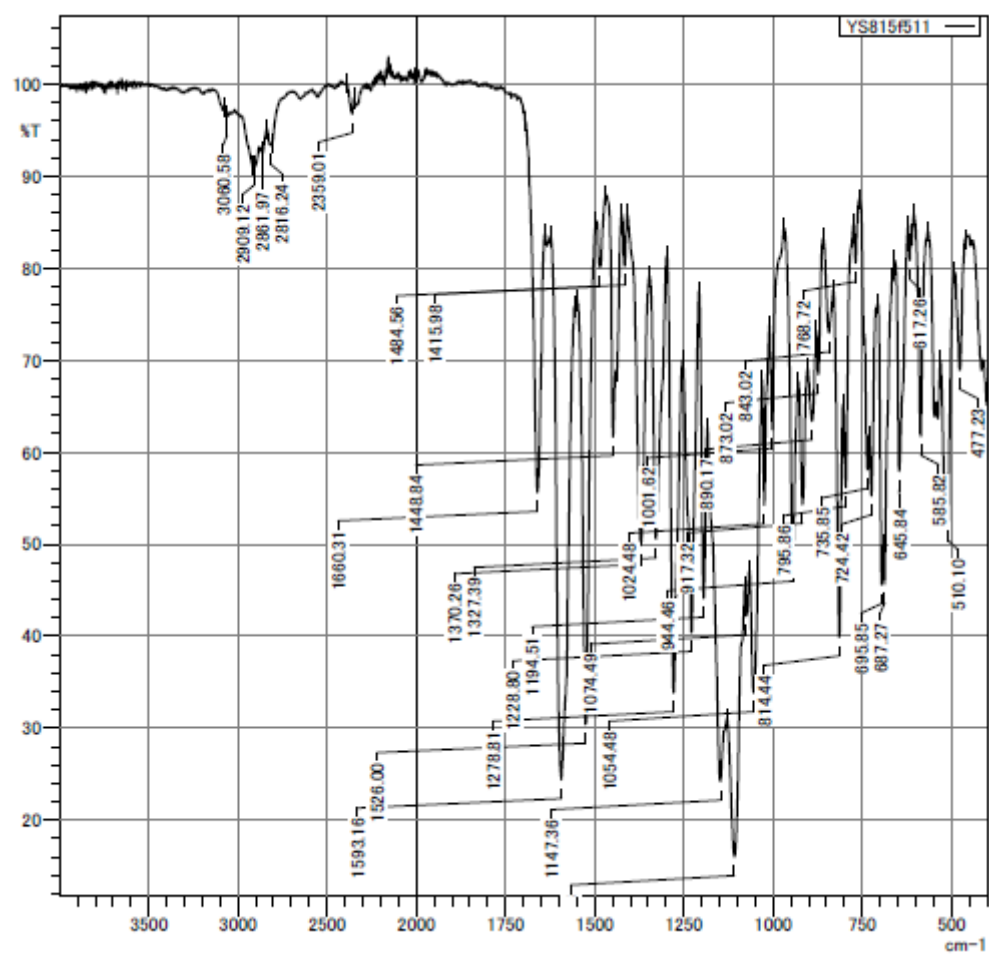
**Figure S5.**  $^1\text{H}$  NMR spectrum of compound **3** (400 MHz, in  $\text{CDCl}_3$ )



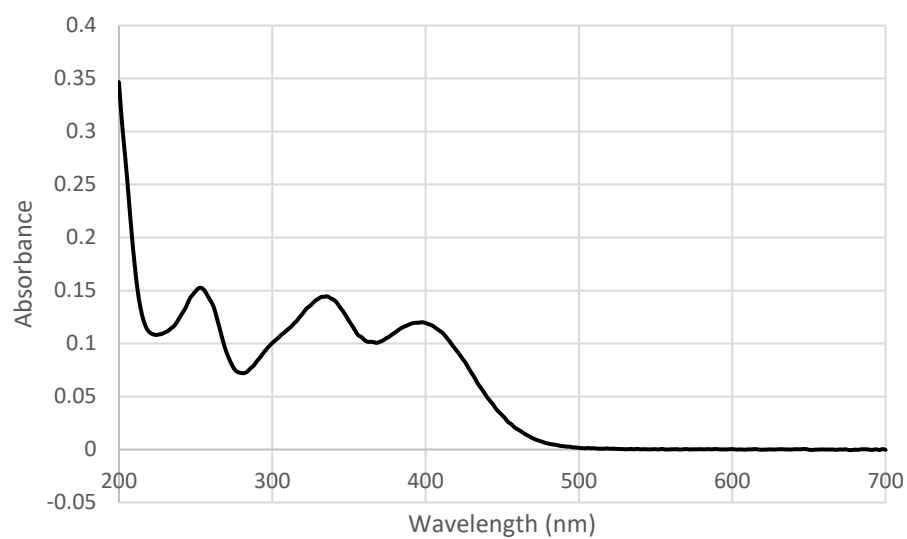
**Figure S6.**  $^{13}\text{C}$  NMR spectrum of compound **3** (100 MHz, in  $\text{CDCl}_3$ )



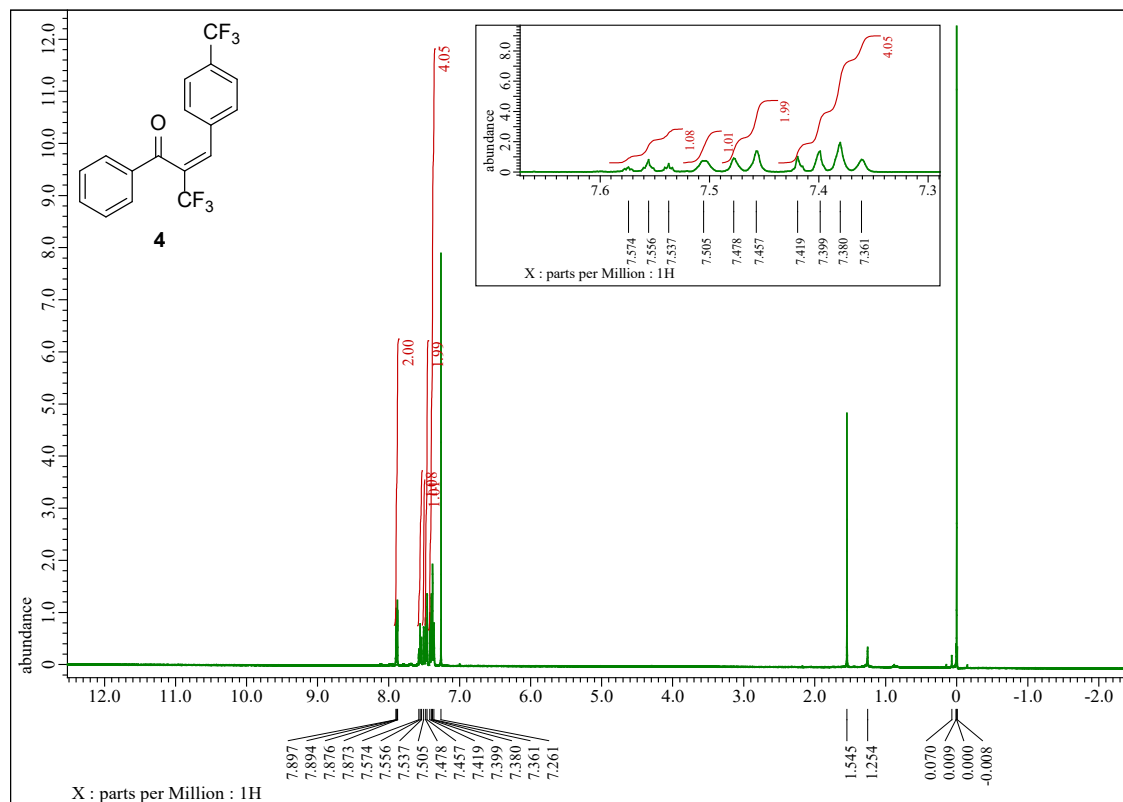
**Figure S7.** FT-IR spectrum of compound **3** (neat)



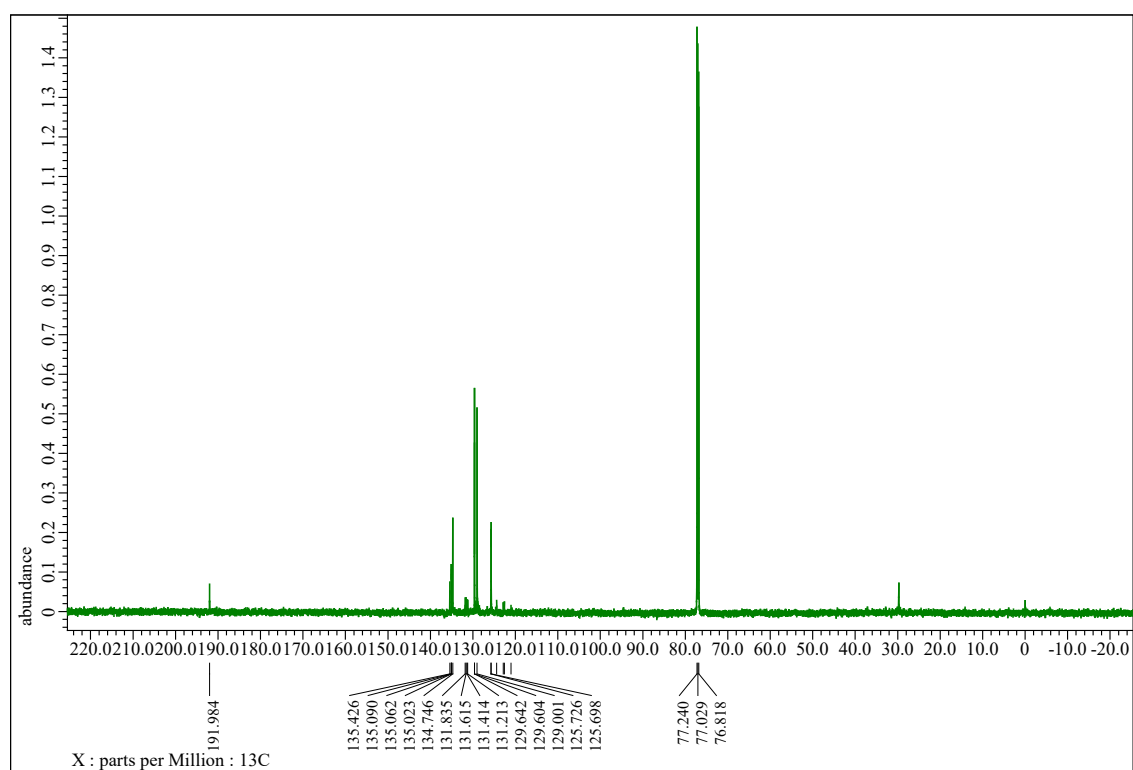
**Figure S8.** UV-VIS spectrum of compound **3** (MeCN/H<sub>2</sub>O, 1:1)



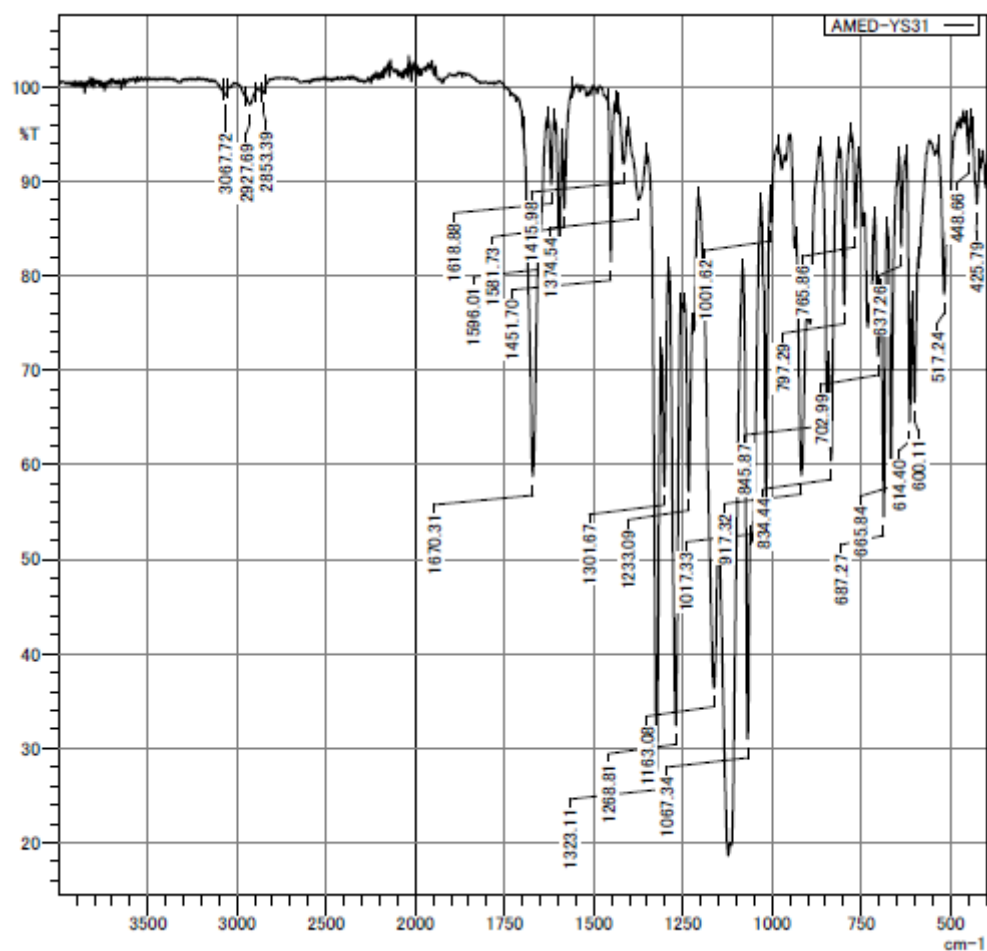
**Figure S9.**  $^1\text{H}$  NMR spectrum of compound **4** (400 MHz, in  $\text{CDCl}_3$ )



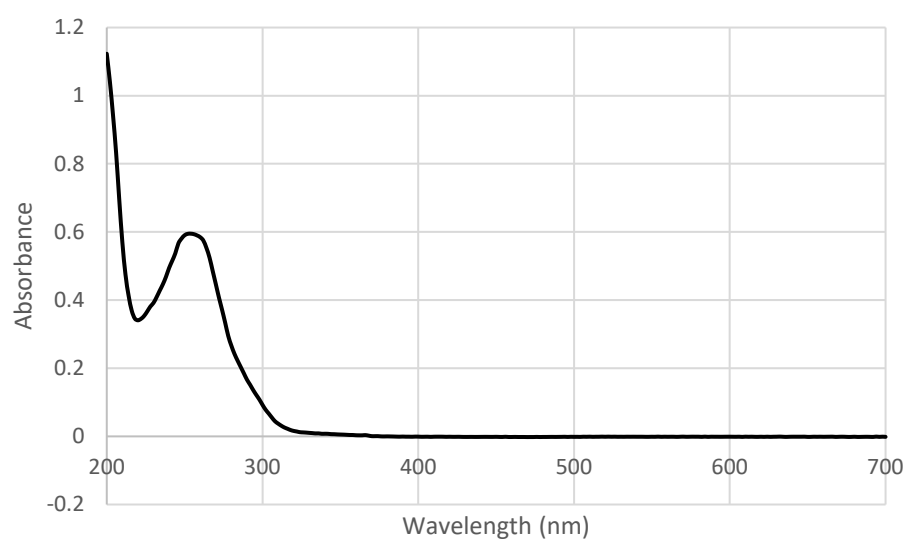
**Figure S10.**  $^{13}\text{C}$  NMR spectrum of compound **4** (150 MHz, in  $\text{CDCl}_3$ )



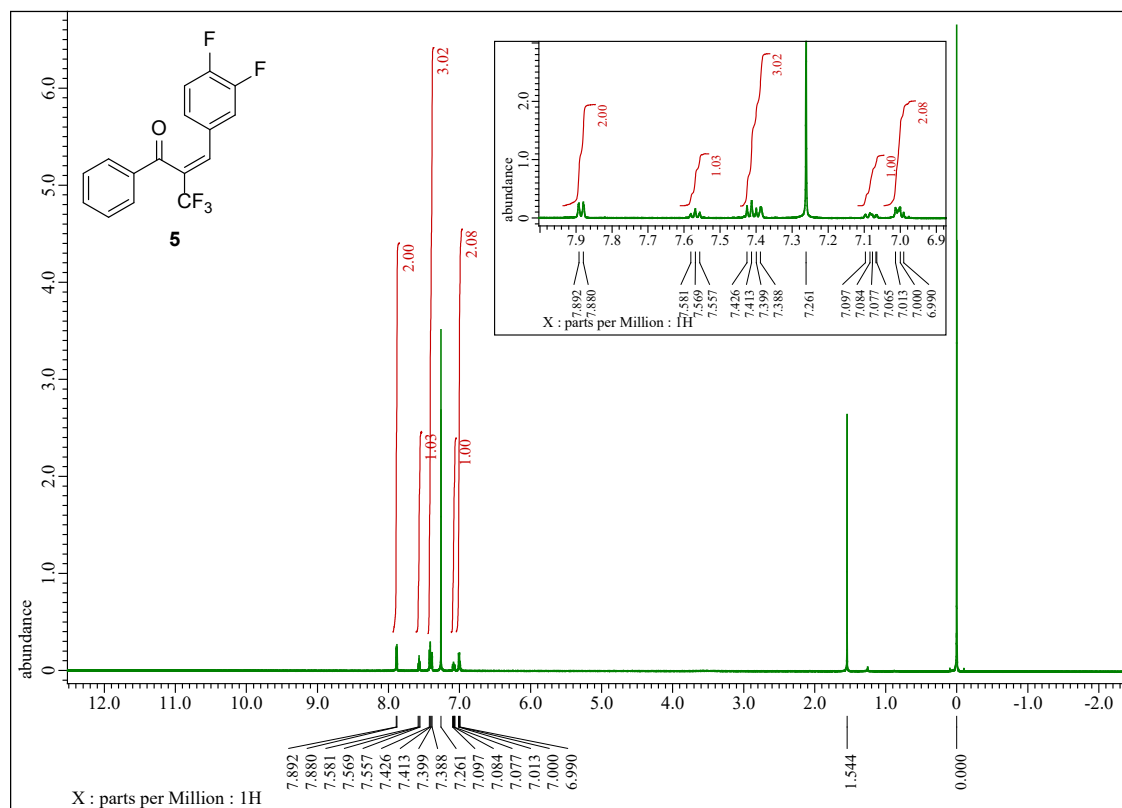
**Figure S11.** FT-IR spectrum of compound **4** (neat)



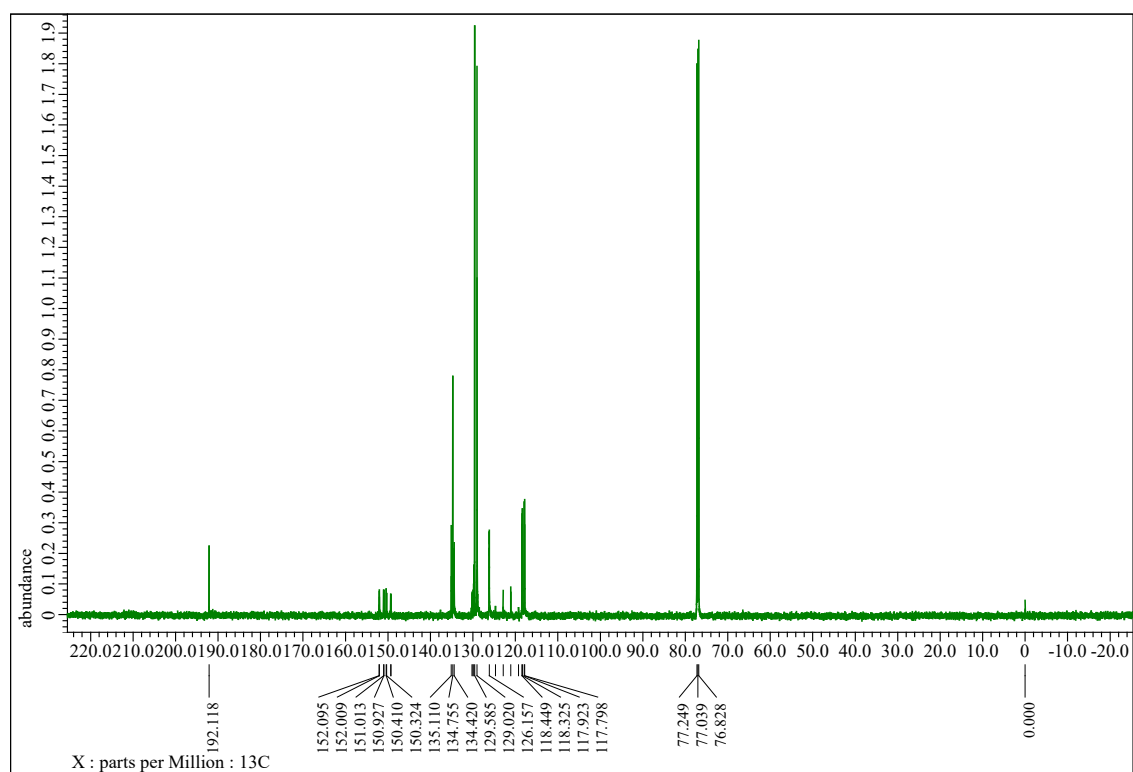
**Figure S12.** UV-VIS spectrum of compound **4** (MeCN/H<sub>2</sub>O, 1:1)



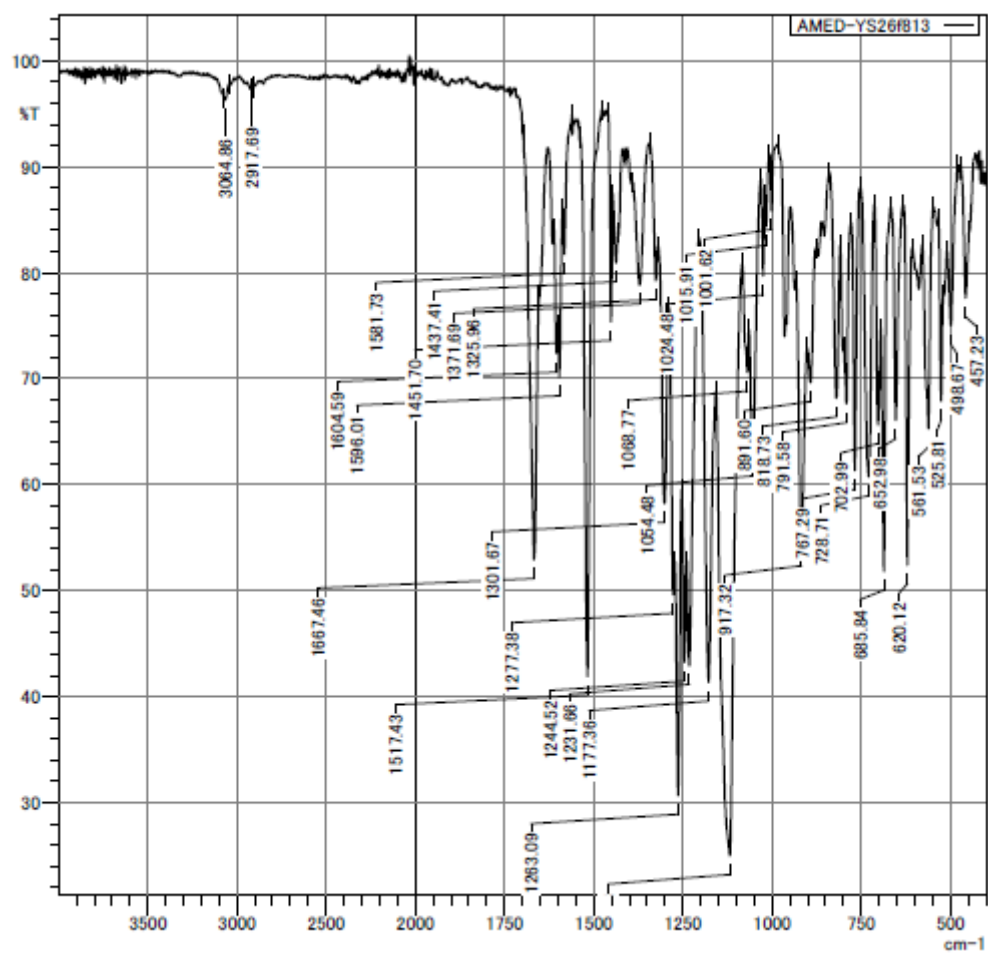
**Figure S13.**  $^1\text{H}$  NMR spectrum of compound **5** (600 MHz, in  $\text{CDCl}_3$ )



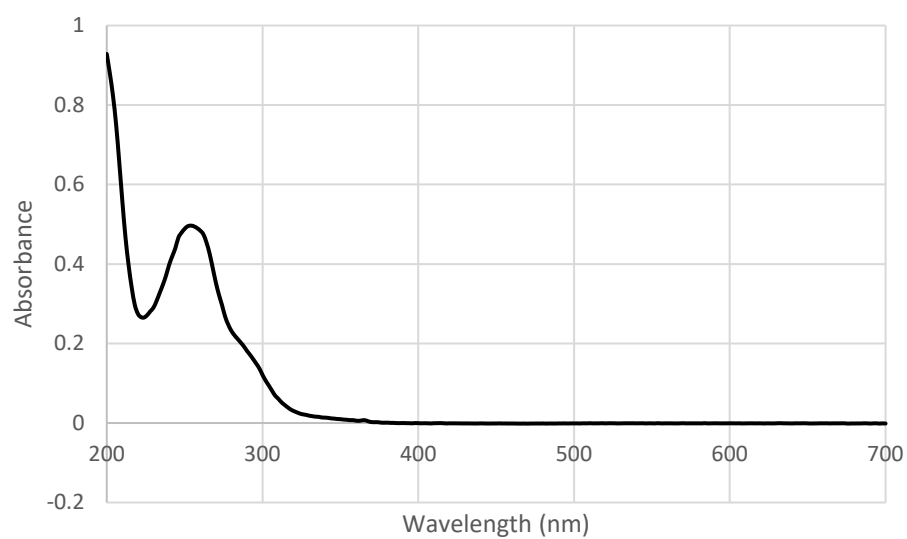
**Figure S14.**  $^{13}\text{C}$  NMR spectrum of compound **5** (150 MHz, in  $\text{CDCl}_3$ )



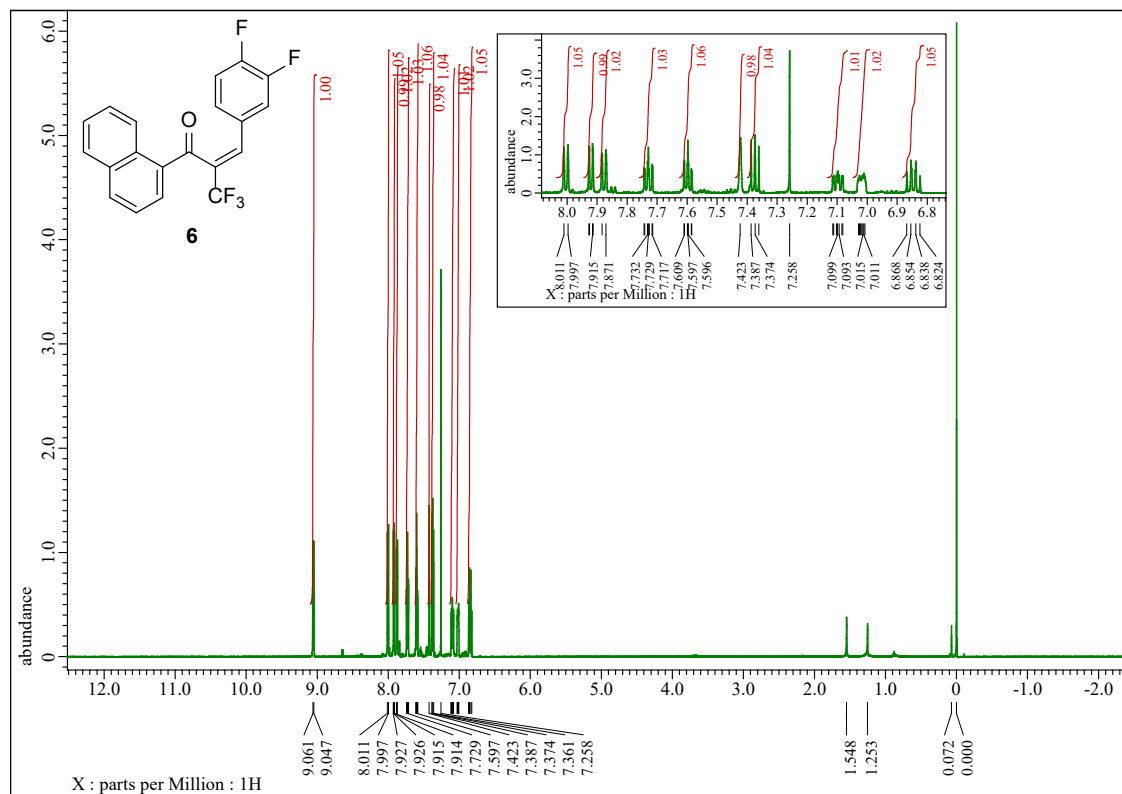
**Figure S15.** FT-IR spectrum of compound **5** (neat)



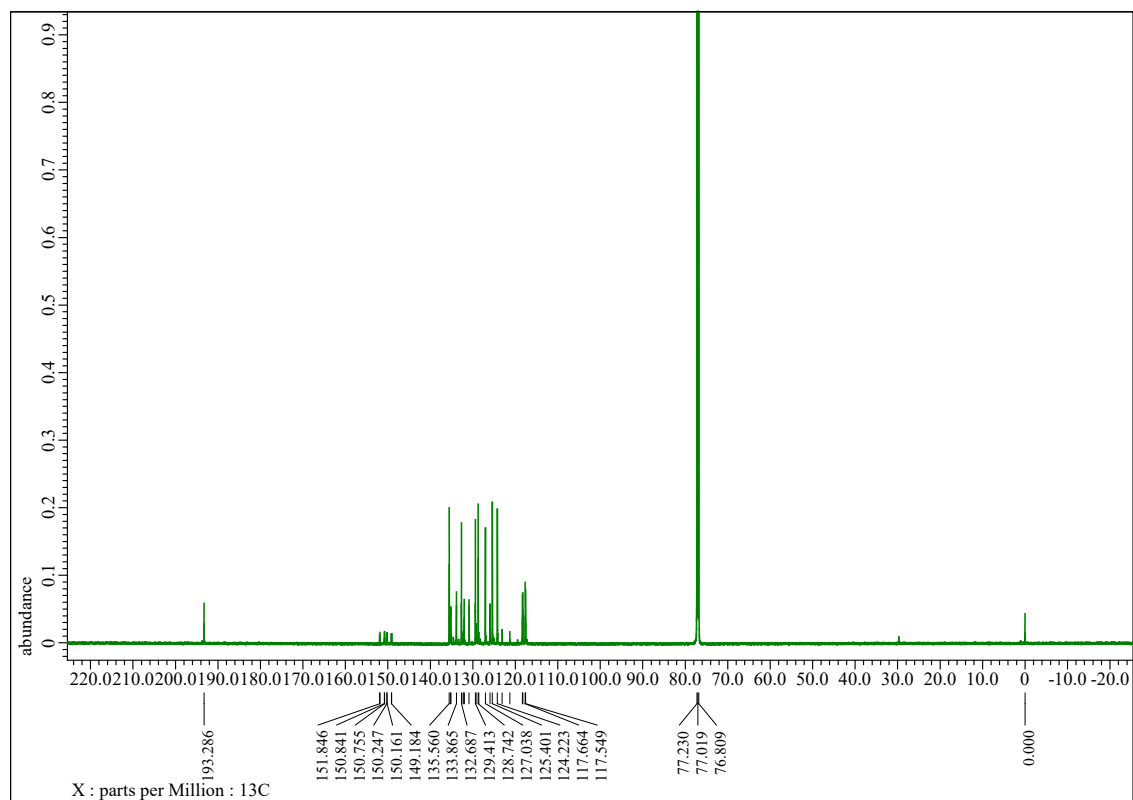
**Figure S16.** UV-VIS spectrum of compound **5** (MeCN/H<sub>2</sub>O, 1:1)



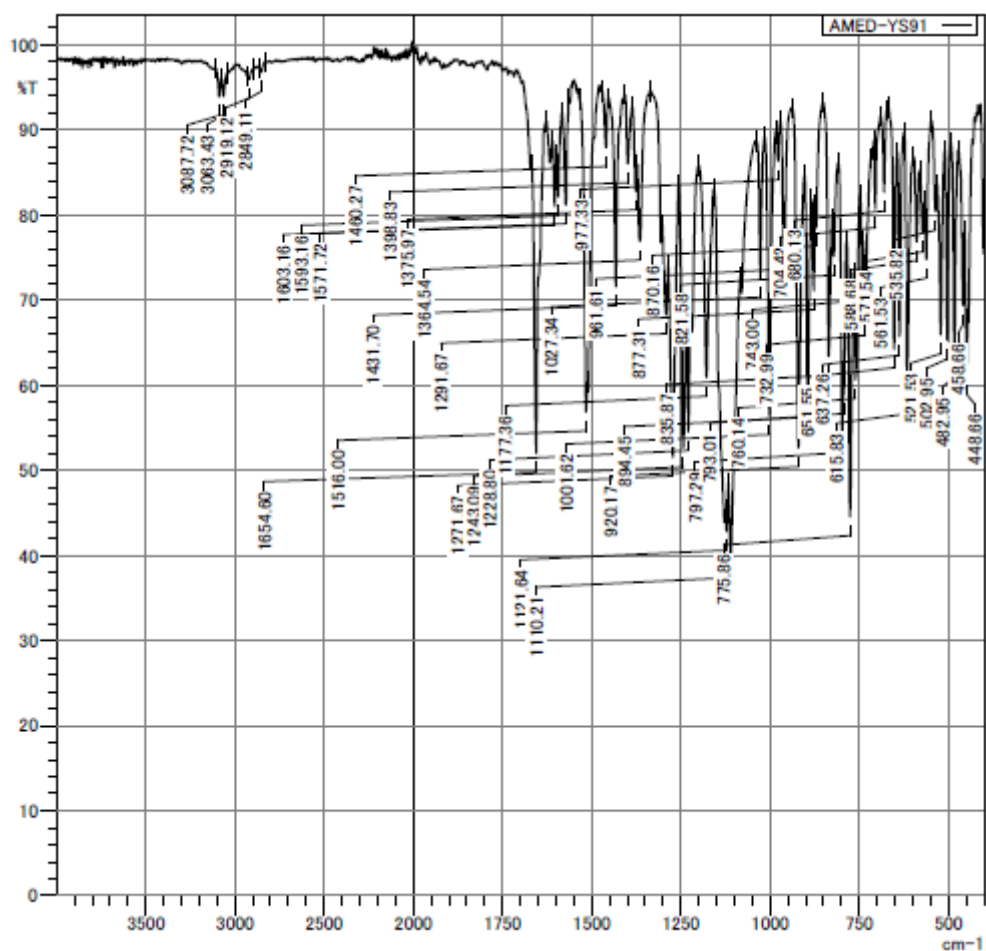
**Figure S17.**  $^1\text{H}$  NMR spectrum of compound **6** (600 MHz, in  $\text{CDCl}_3$ )



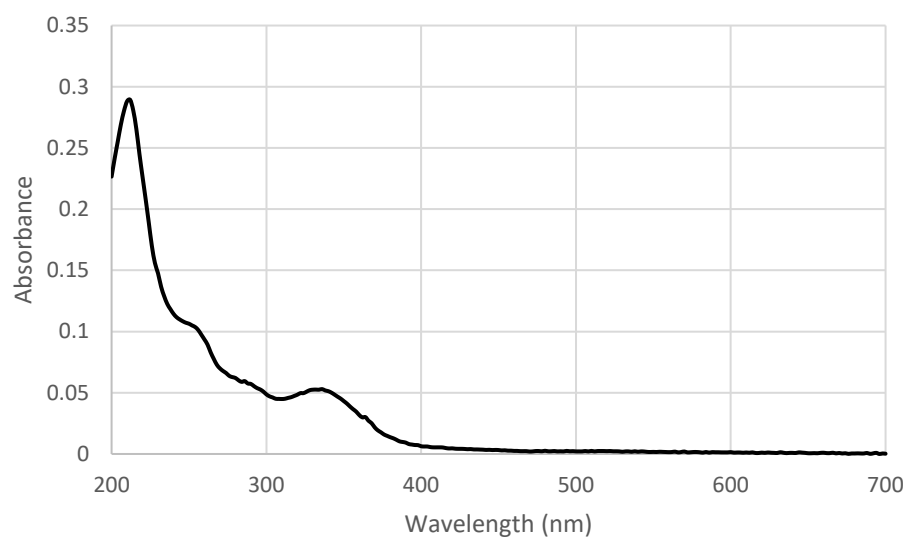
**Figure S18.**  $^{13}\text{C}$  NMR spectrum of compound **6** (150 MHz, in  $\text{CDCl}_3$ )



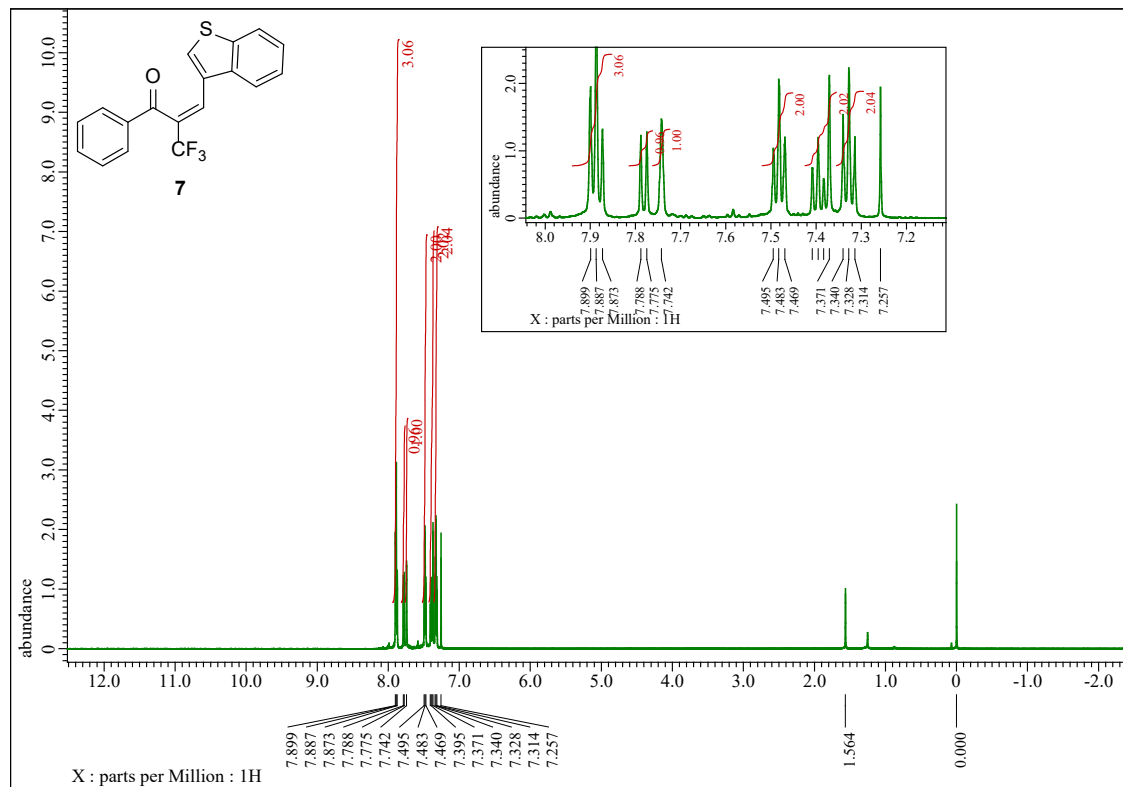
**Figure S19.** FT-IR spectrum of compound **6** (neat)



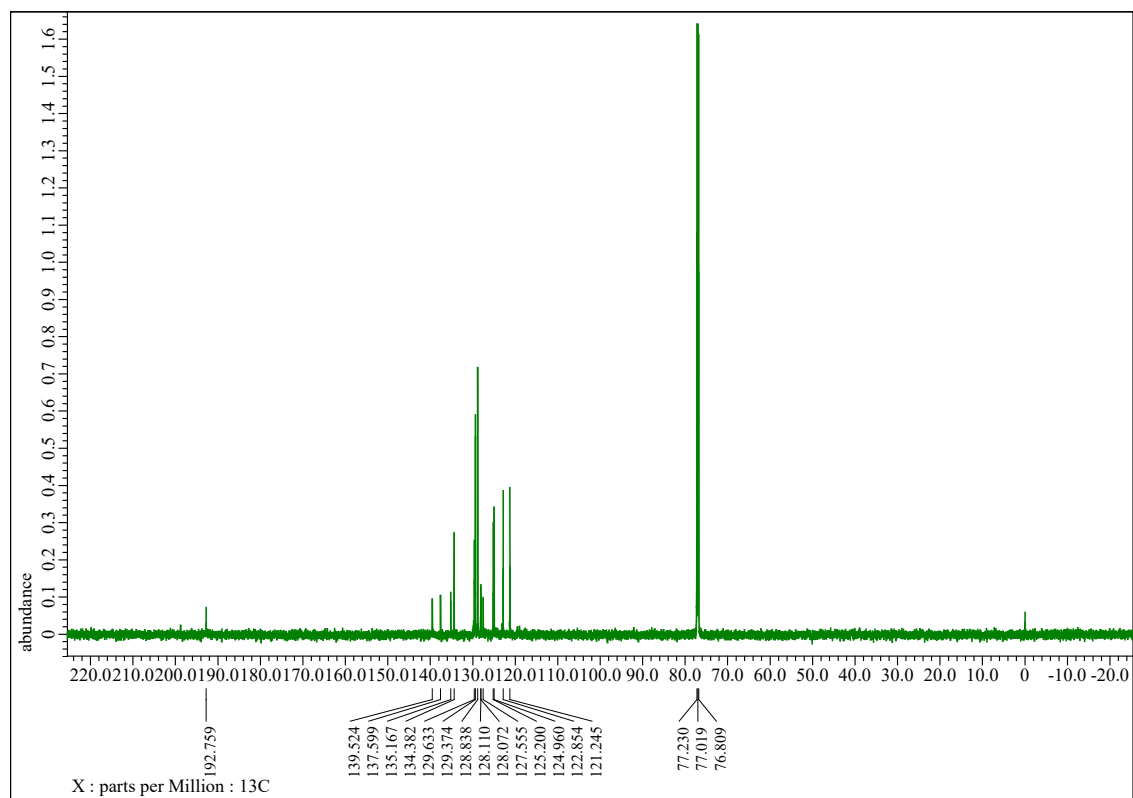
**Figure S20.** UV-VIS spectrum of compound **6** (MeCN/H<sub>2</sub>O, 1:1)



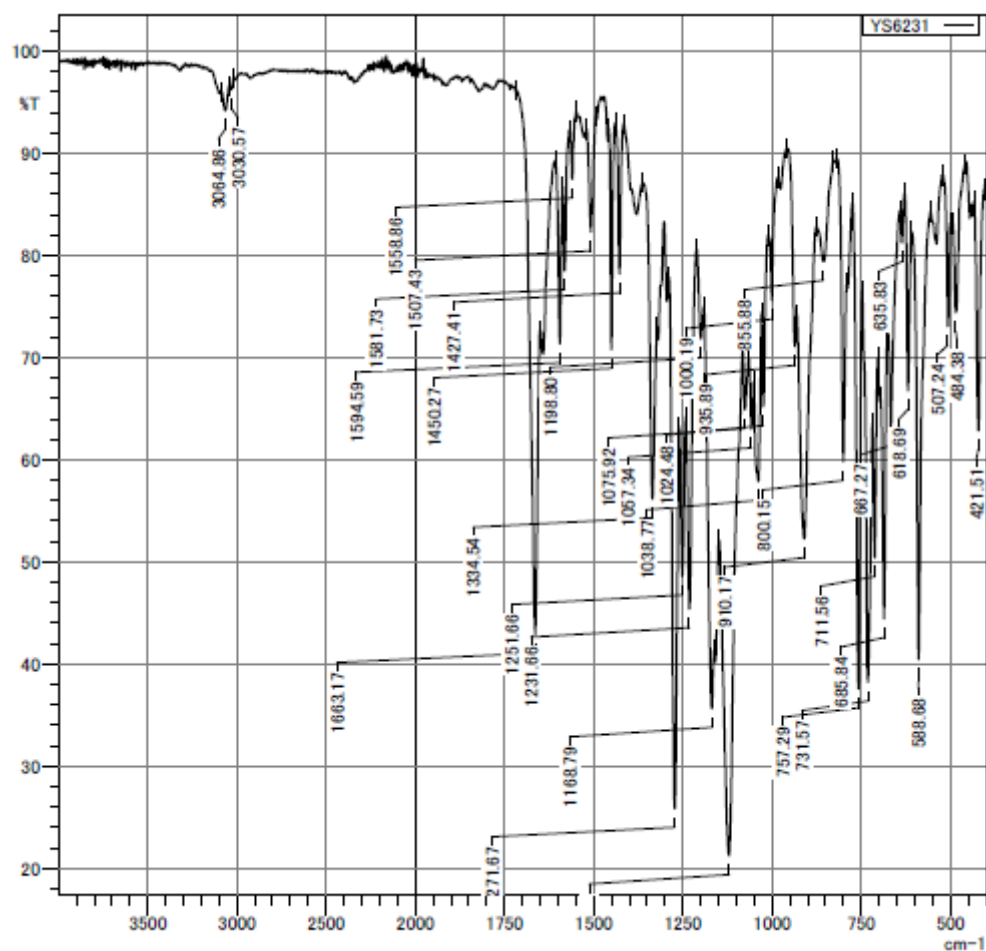
**Figure S21.**  $^1\text{H}$  NMR spectrum of compound **7** (600 MHz, in  $\text{CDCl}_3$ )



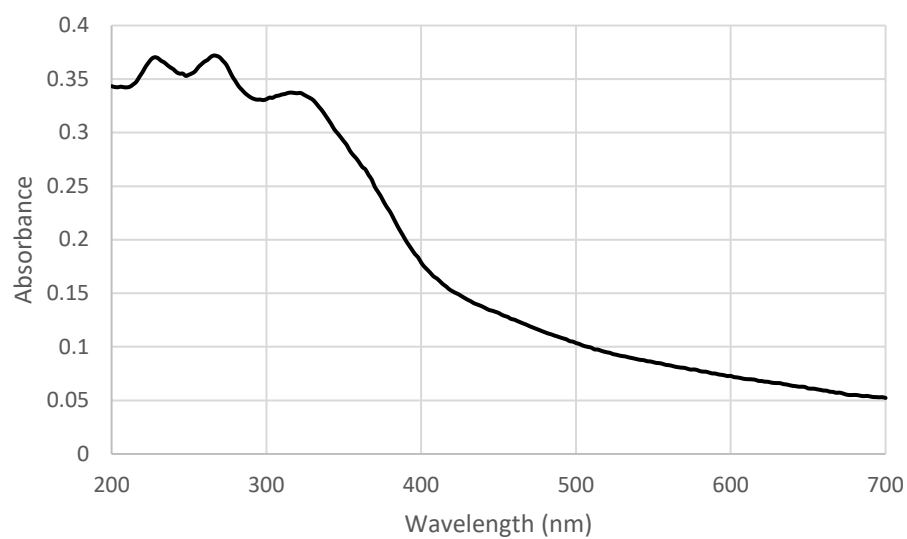
**Figure S22.**  $^{13}\text{C}$  NMR spectrum of compound **7** (150 MHz, in  $\text{CDCl}_3$ )



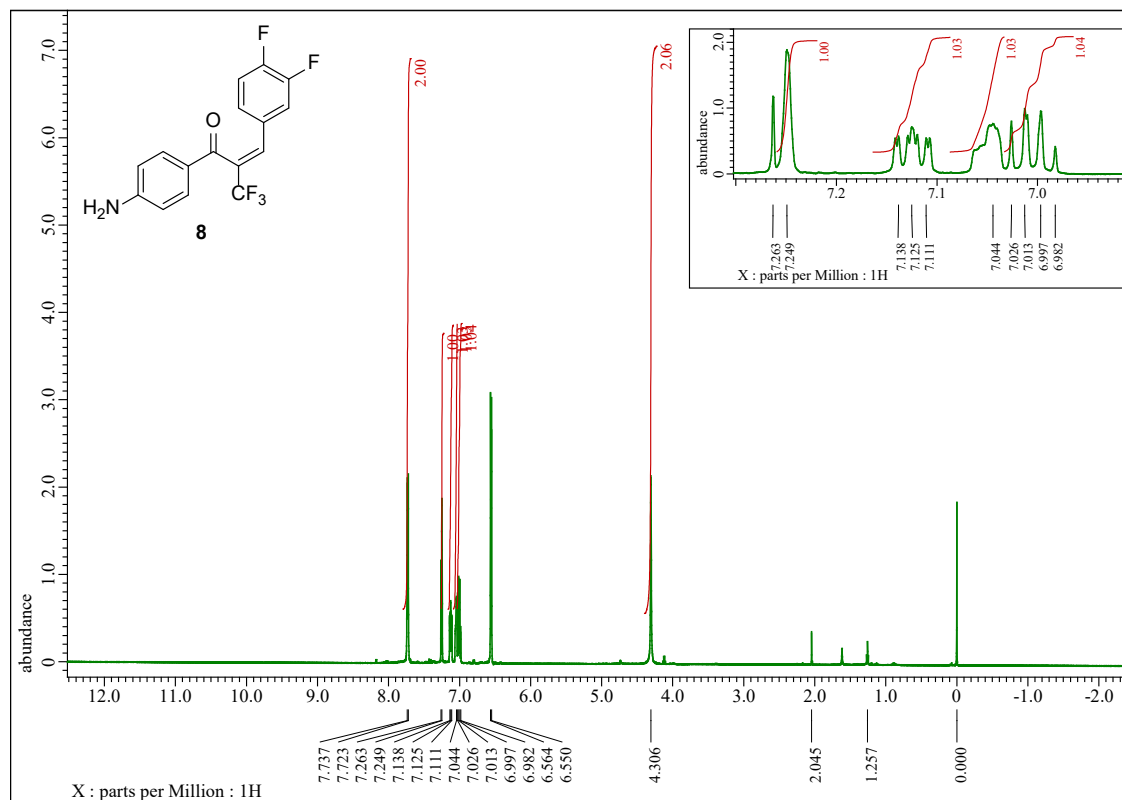
**Figure S23.** FT-IR spectrum of compound **7** (neat)



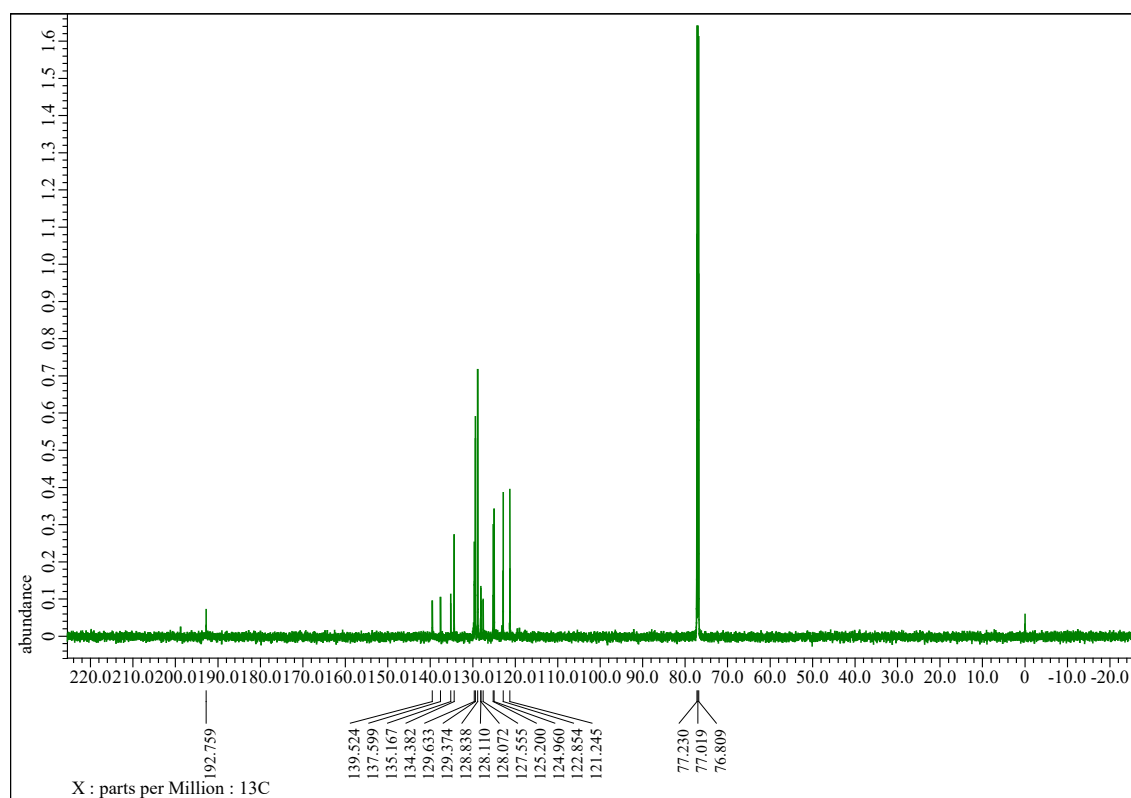
**Figure S24.** UV-VIS spectrum of compound **7** (MeCN/H<sub>2</sub>O, 1:1)



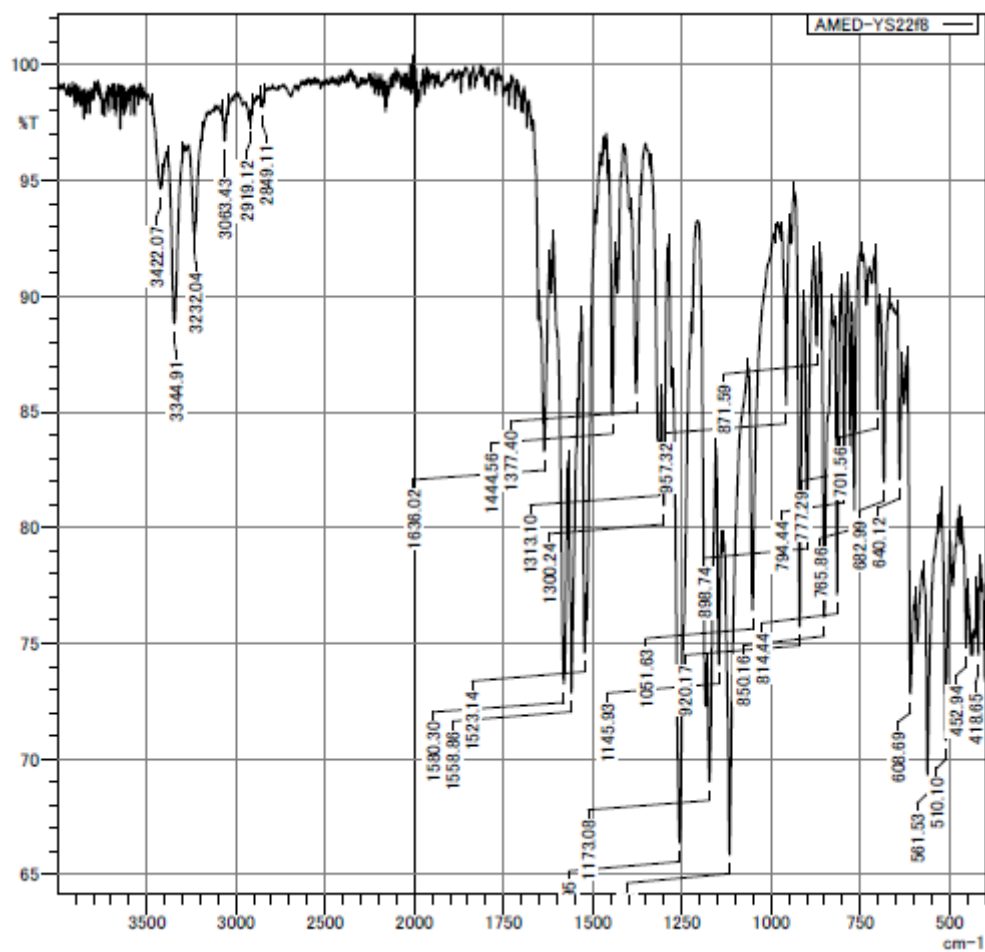
**Figure S25.**  $^1\text{H}$  NMR spectrum of compound **8** (400 MHz, in  $\text{CDCl}_3$ )



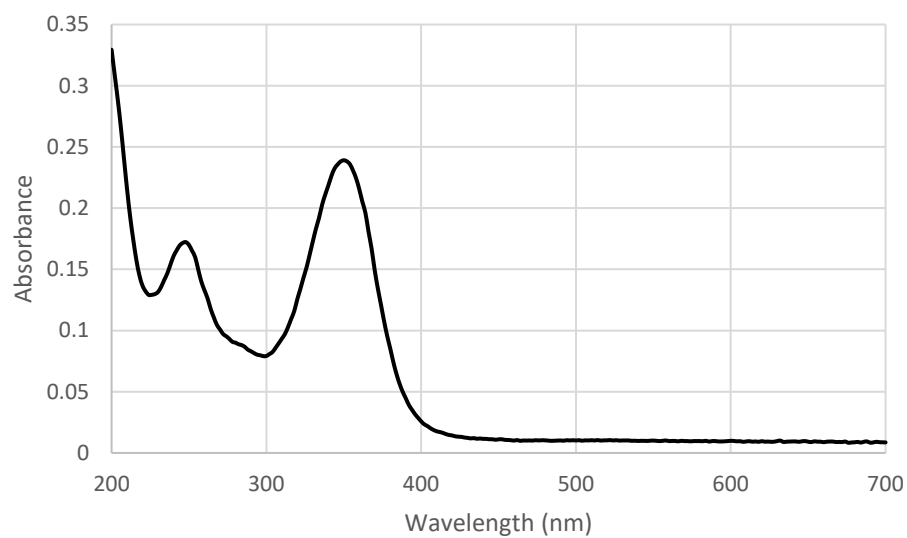
**Figure S26.**  $^{13}\text{C}$  NMR spectrum of compound **8** (150 MHz, in  $\text{CDCl}_3$ )



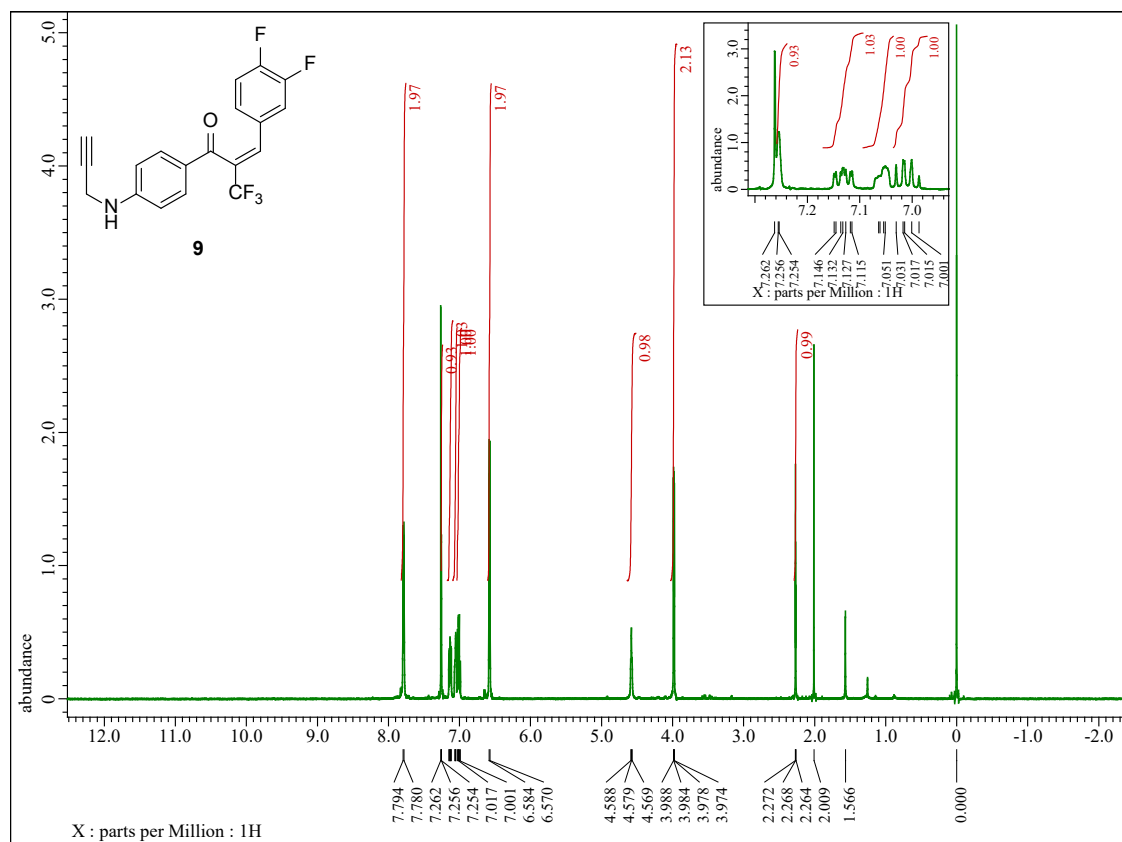
**Figure S27.** FT-IR spectrum of compound **8** (neat)



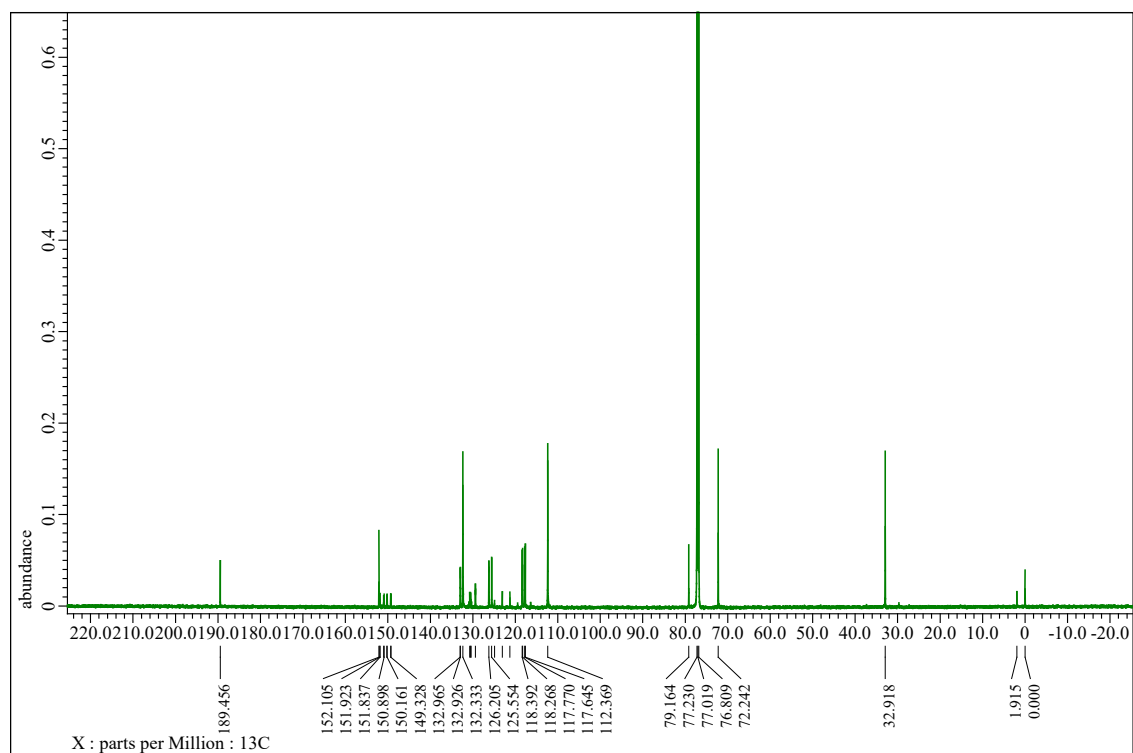
**Figure S28.** UV-VIS spectrum of compound **8** (MeCN/H<sub>2</sub>O, 1:1)



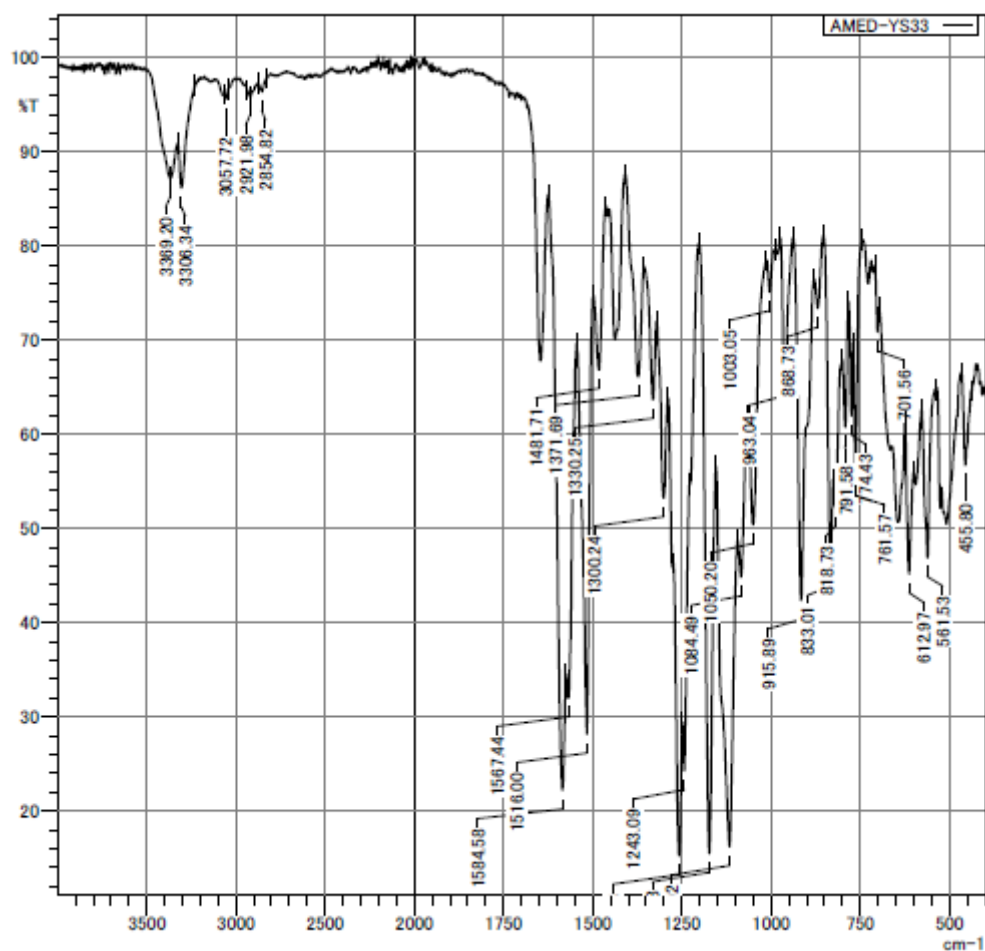
**Figure S29.**  $^1\text{H}$  NMR spectrum of compound **9** (600 MHz, in  $\text{CDCl}_3$ )



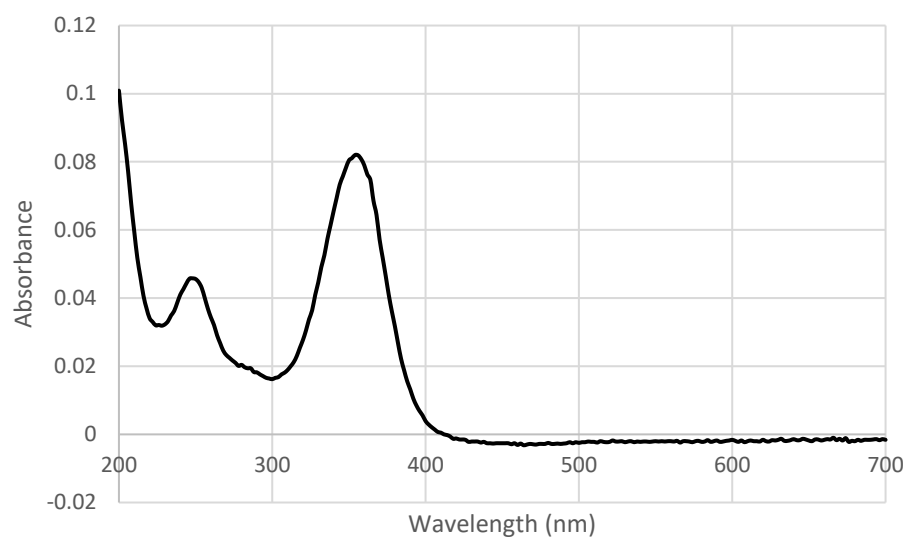
**Figure S30.**  $^{13}\text{C}$  NMR spectrum of compound **9** (150 MHz, in  $\text{CDCl}_3$ )



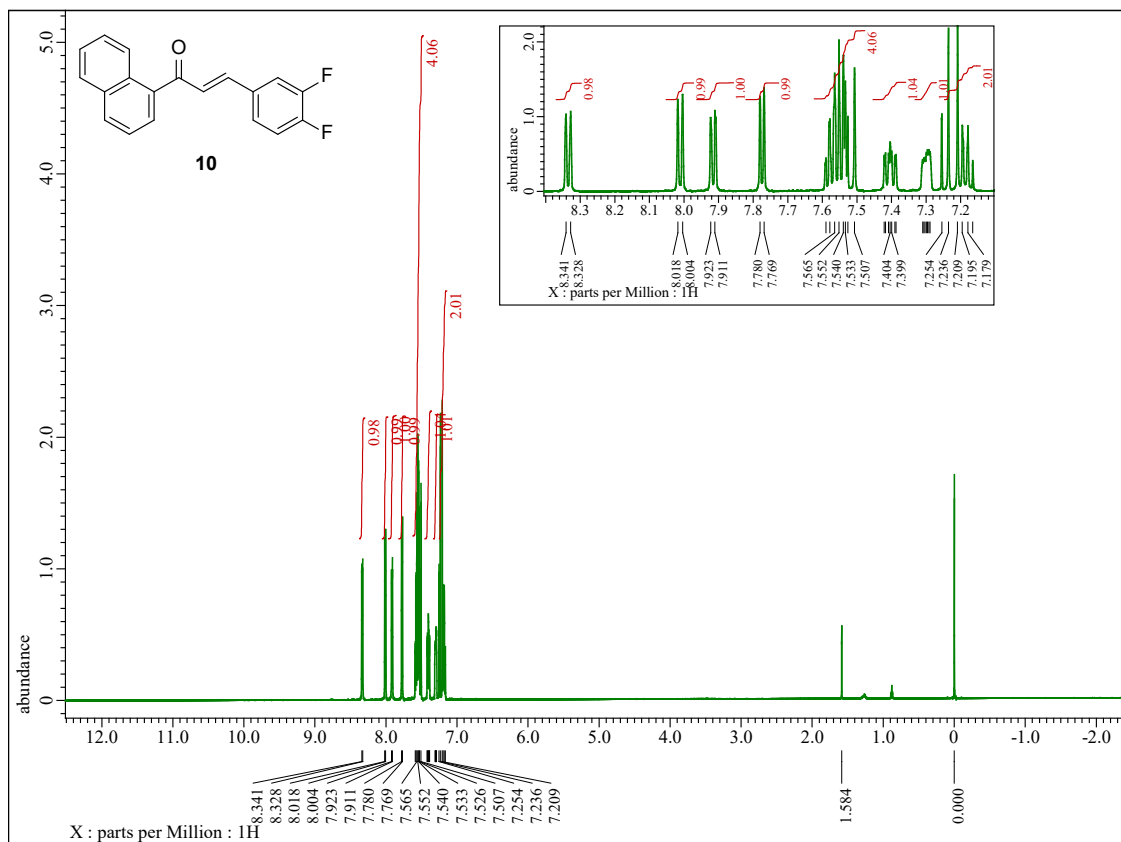
**Figure S31.** FT-IR spectrum of compound **9** (neat)



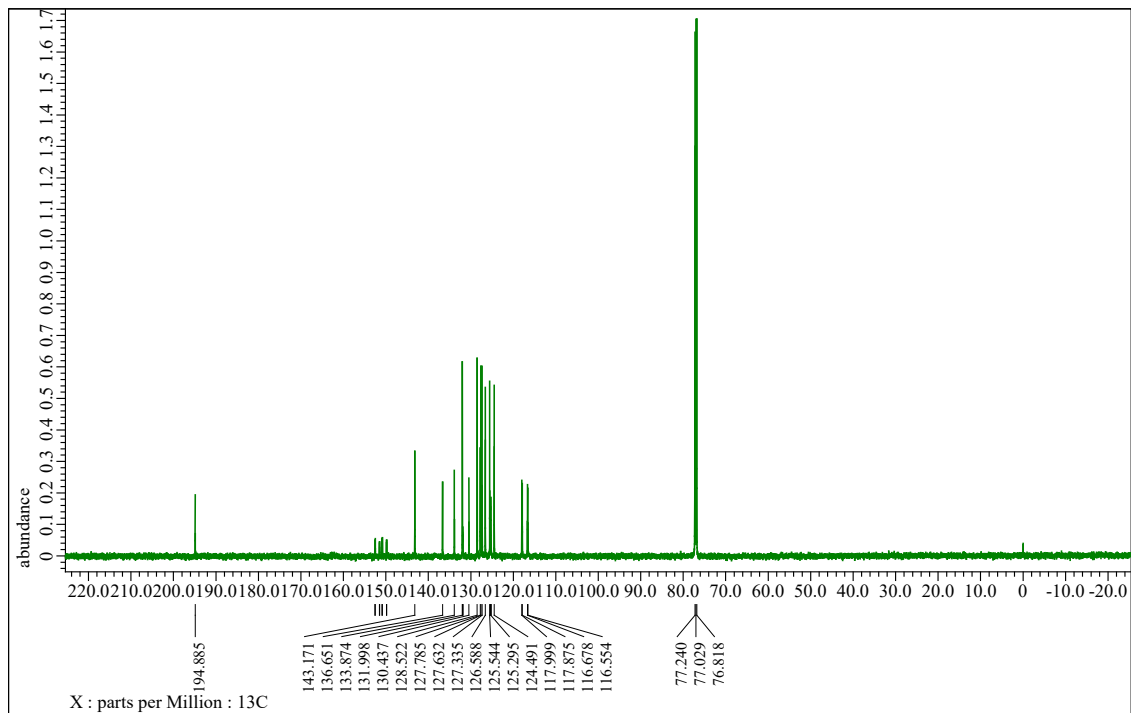
**Figure S32.** UV-VIS spectrum of compound **9** (MeCN/H<sub>2</sub>O, 1:1)



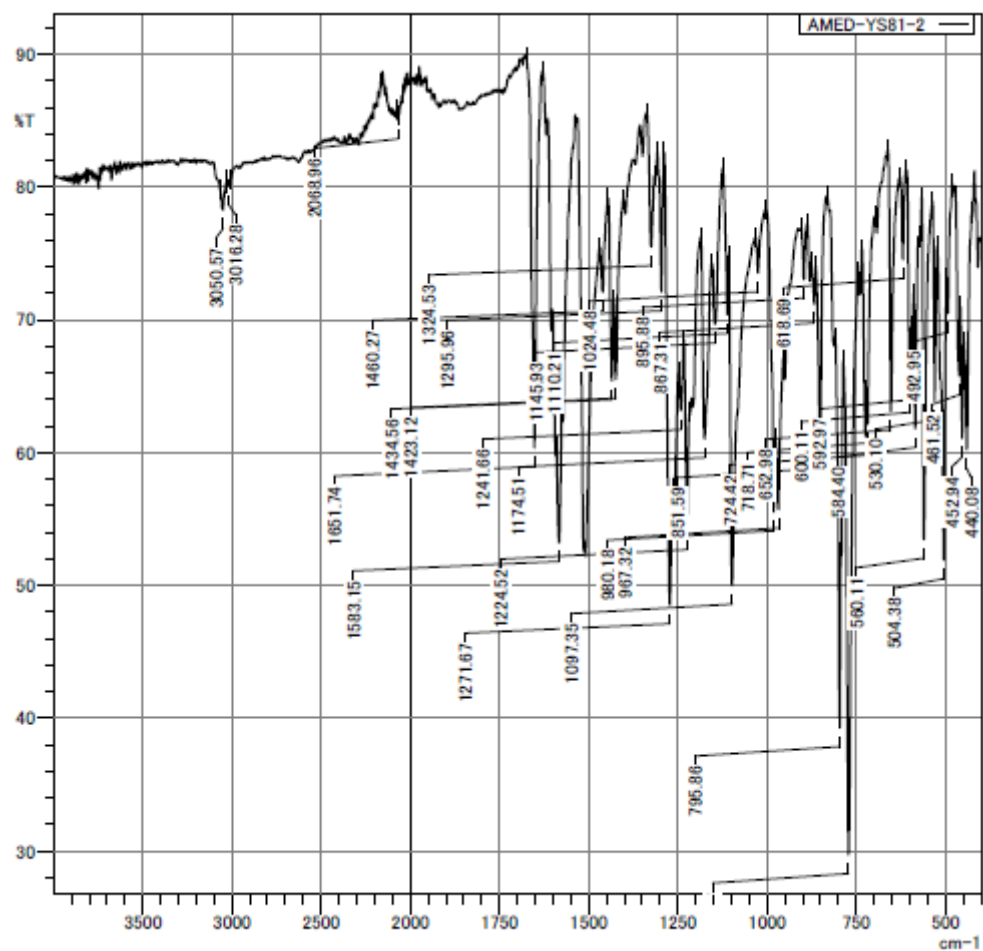
**Figure S33.**  $^1\text{H}$  NMR spectrum of compound **10** (600 MHz, in  $\text{CDCl}_3$ )



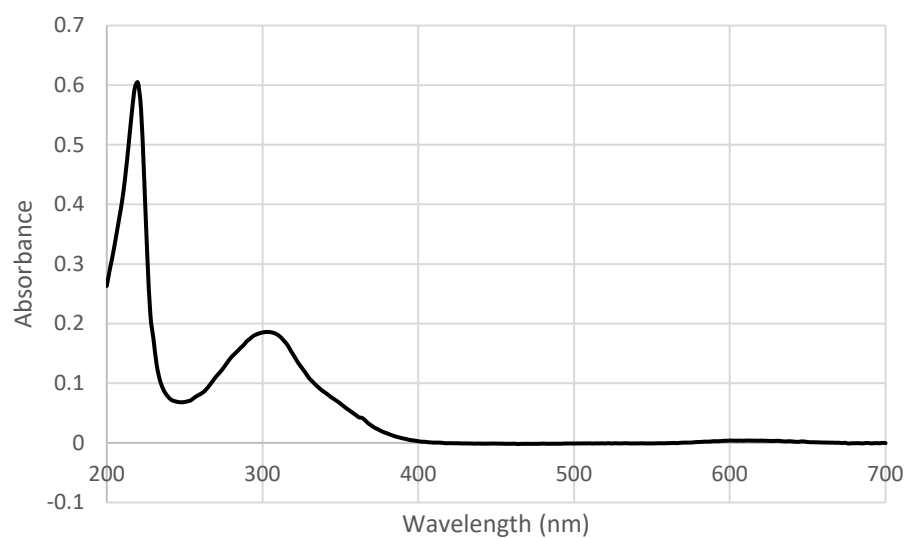
**Figure S34.**  $^{13}\text{C}$  NMR spectrum of compound **10** (150 MHz, in  $\text{CDCl}_3$ )



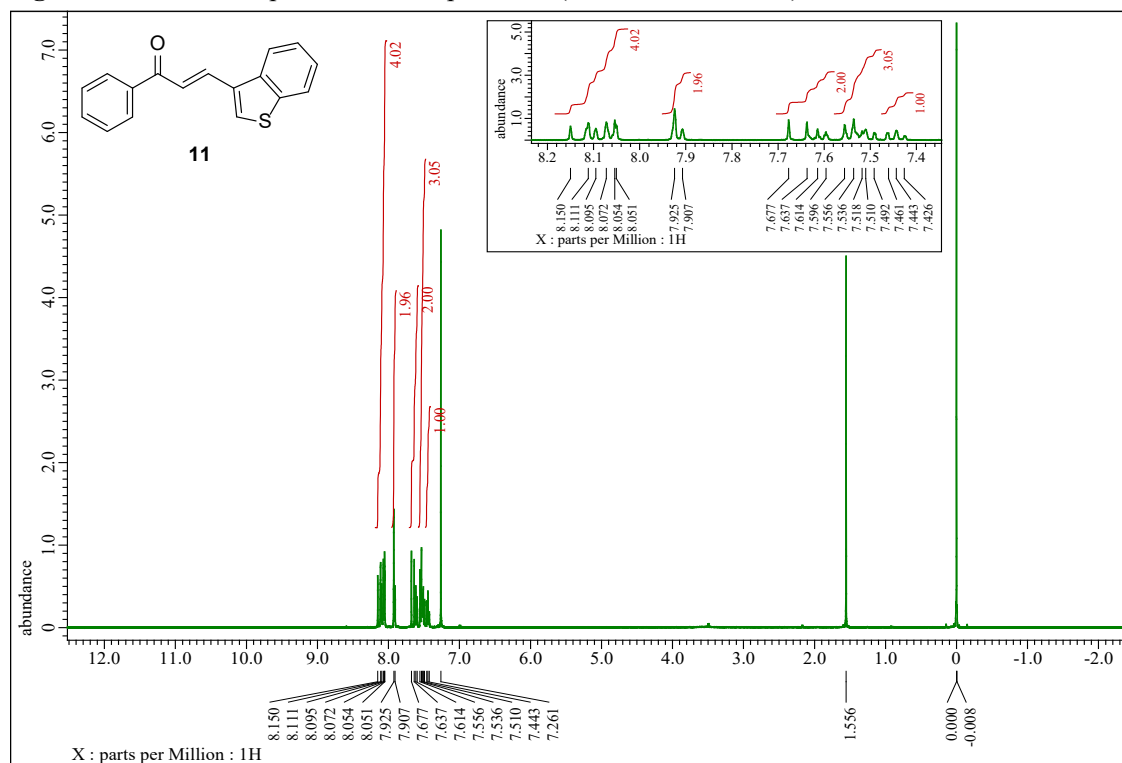
**Figure S35.** FT-IR spectrum of compound **10** (neat)



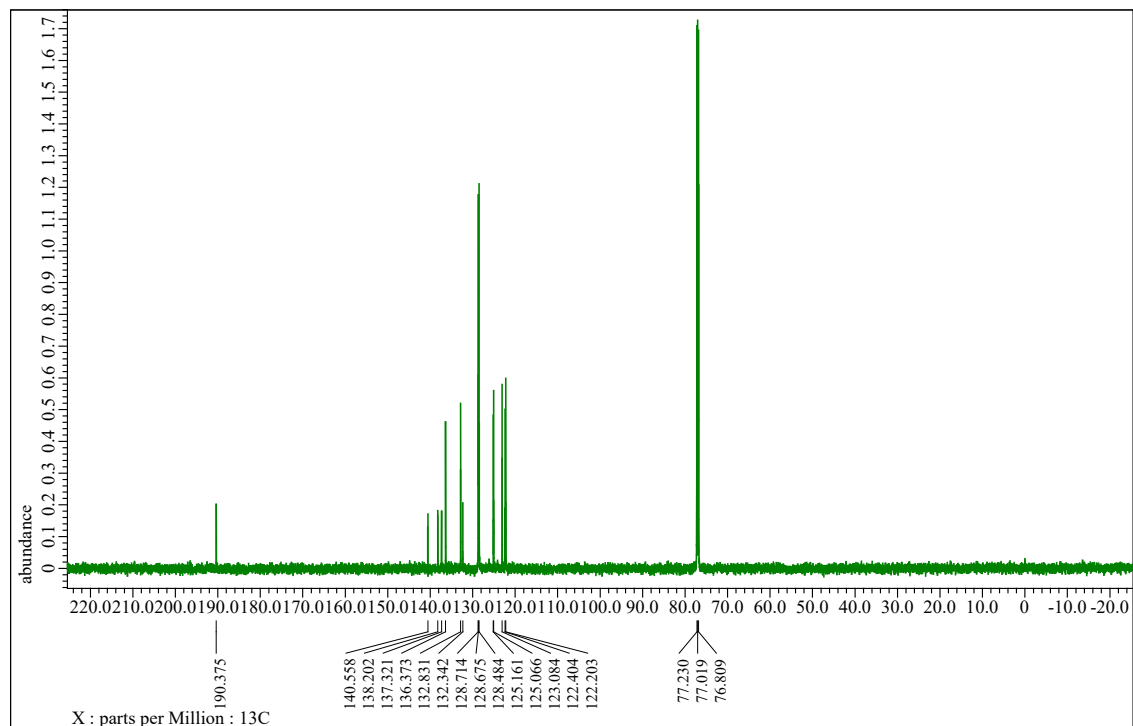
**Figure S36.** UV-VIS spectrum of compound **10** (MeCN/H<sub>2</sub>O, 1:1)



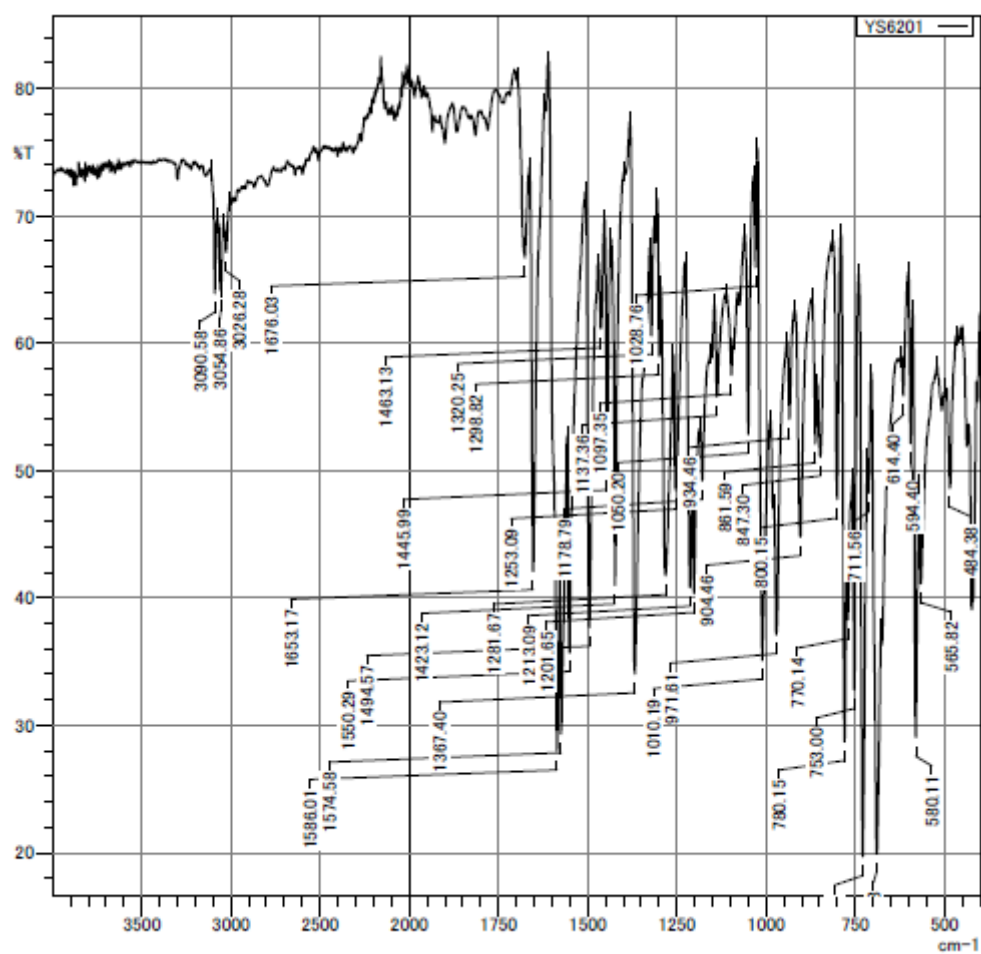
**Figure S37.**  $^1\text{H}$  NMR spectrum of compound **11** (600 MHz, in  $\text{CDCl}_3$ )



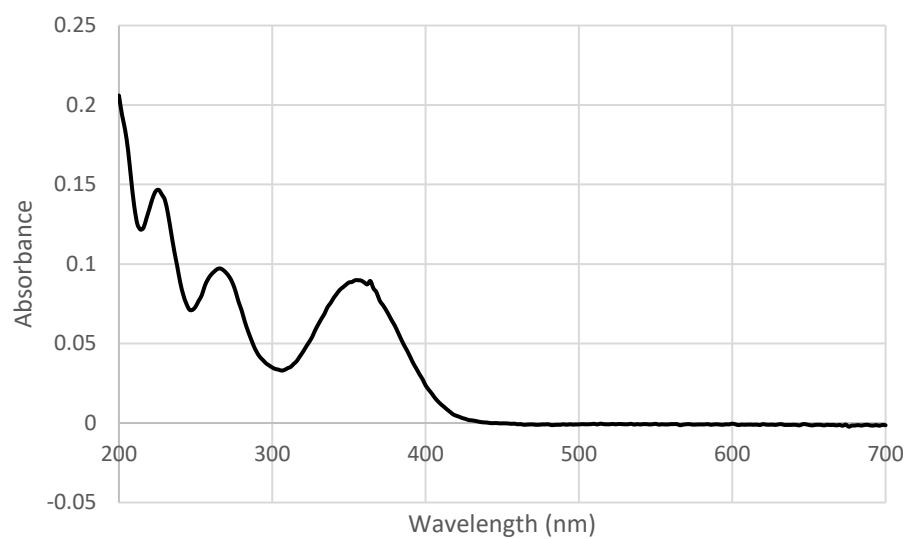
**Figure S38.**  $^{13}\text{C}$  NMR spectrum of compound **11** (150 MHz, in  $\text{CDCl}_3$ )



**Figure S39.** FT-IR spectrum of compound **11** (neat)



**Figure S40.** UV-VIS spectrum of compound **11** (MeCN/H<sub>2</sub>O, 1:1)



**Table S1.** Detailed information of detected binding proteins.

Band No.	Accession	Description	Coverage [%]	# Peptides	# PSMs	# Unique Peptides	MW {kDa}
1	P08238	Heat shock protein HSP 90-beta	64	53	508	32	83.2
	P07900	Heat shock protein HSP 90-alpha	61	51	476	32	84.6
	Q16891	MICOS complex subunit MIC60	42	42	85	39	83.6
2	P11142	Heat shock cognate 71 kDa protein	52	35	201	28	70.9
	P38646	Stress-70 protein, mitochondrial	46	38	91	37	73.6
	A0A0G2JIW1	Heat shock 70 kDa protein 1B	37	28	107	16	70.1
3	P10809	60 kDa heat shock protein, mitochondrial	59	38	178	38	61
	P14618	Pyruvate kinase PKM	60	27	81	14	57.9
	P48643	T-complex protein 1 subunit epsilon	44	28	62	27	59.6
	P17987	T-complex protein 1 subunit alpha	50	25	63	25	60.3
	P50990	T-complex protein 1 subunit theta	41	23	43	23	59.6
4	P06733	Alpha-enolase	58	37	161	36	47.1
5	P60709	Actin, cytoplasmic 1	52	18	483	5	41.7
	P68032	Actin, alpha cardiac muscle 1	52	14	263	4	42
	Q9UQ80	Proliferation- associated protein 2G4	39	18	58	18	43.8