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Supporting Information

Targeting the Transmembrane Domain 5 of Latent Membrane Protein 1 Using Small Molecule Modulators

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Supplementary figures

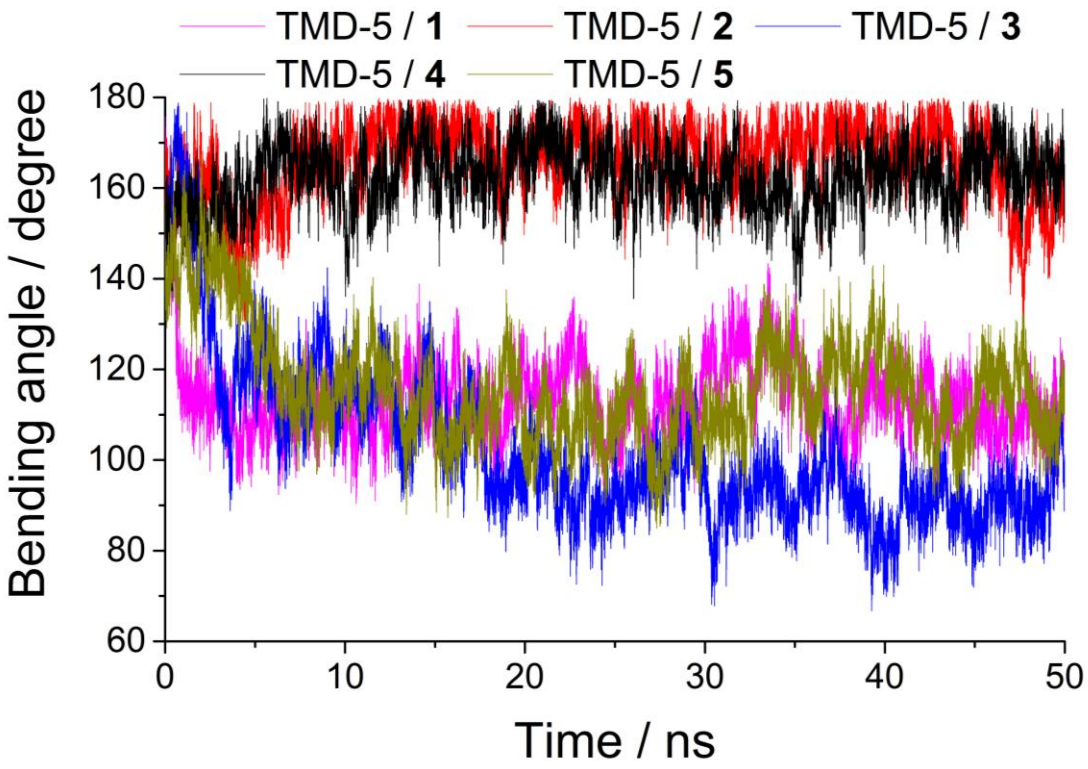


Figure S1. Bending angle of TMD-5 during molecular dynamics simulations with the influence of compound **1 – 5**.

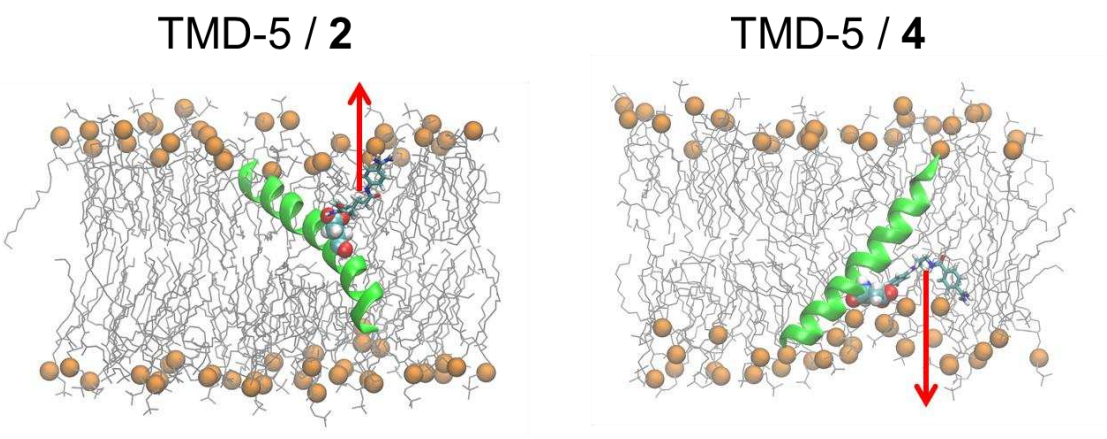


Figure S2. Definition of reaction coordinates for compound binding to TMD5. The reaction coordinate for TMD-5/2 is $Z_{\text{COM of non-hydrogen atoms of compound}} - Z_{\text{carbon atom of carboxyl group of D150}}$ and the reaction coordinate for TMD5/4 is $Z_{\text{carbon atom of carboxyl group of D150}} - Z_{\text{COM of non-hydrogen atoms of compound}}$.

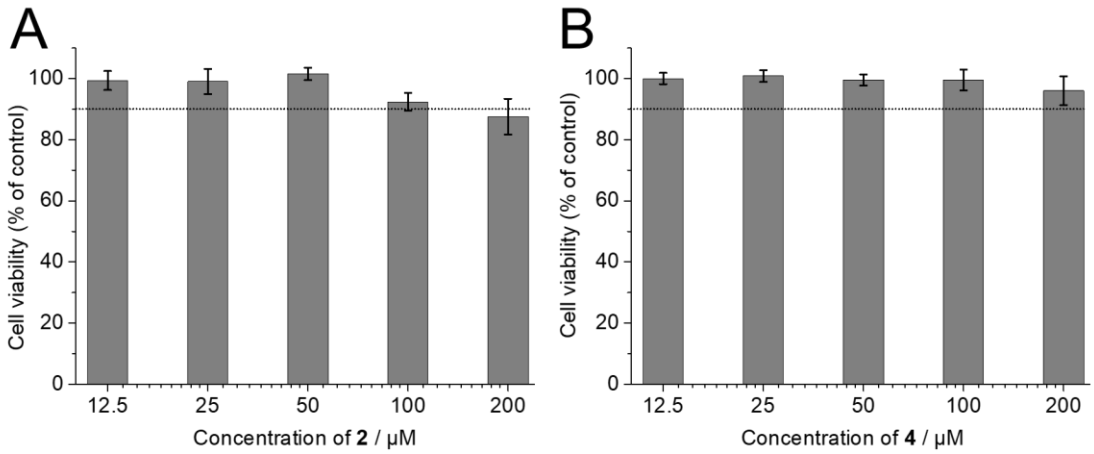


Figure S3. Cell viability measured by the MTT assay. The MTT assay indicated that compounds **2** and **4** were nontoxic to the MDCK cells at the concentration of 100 μM.

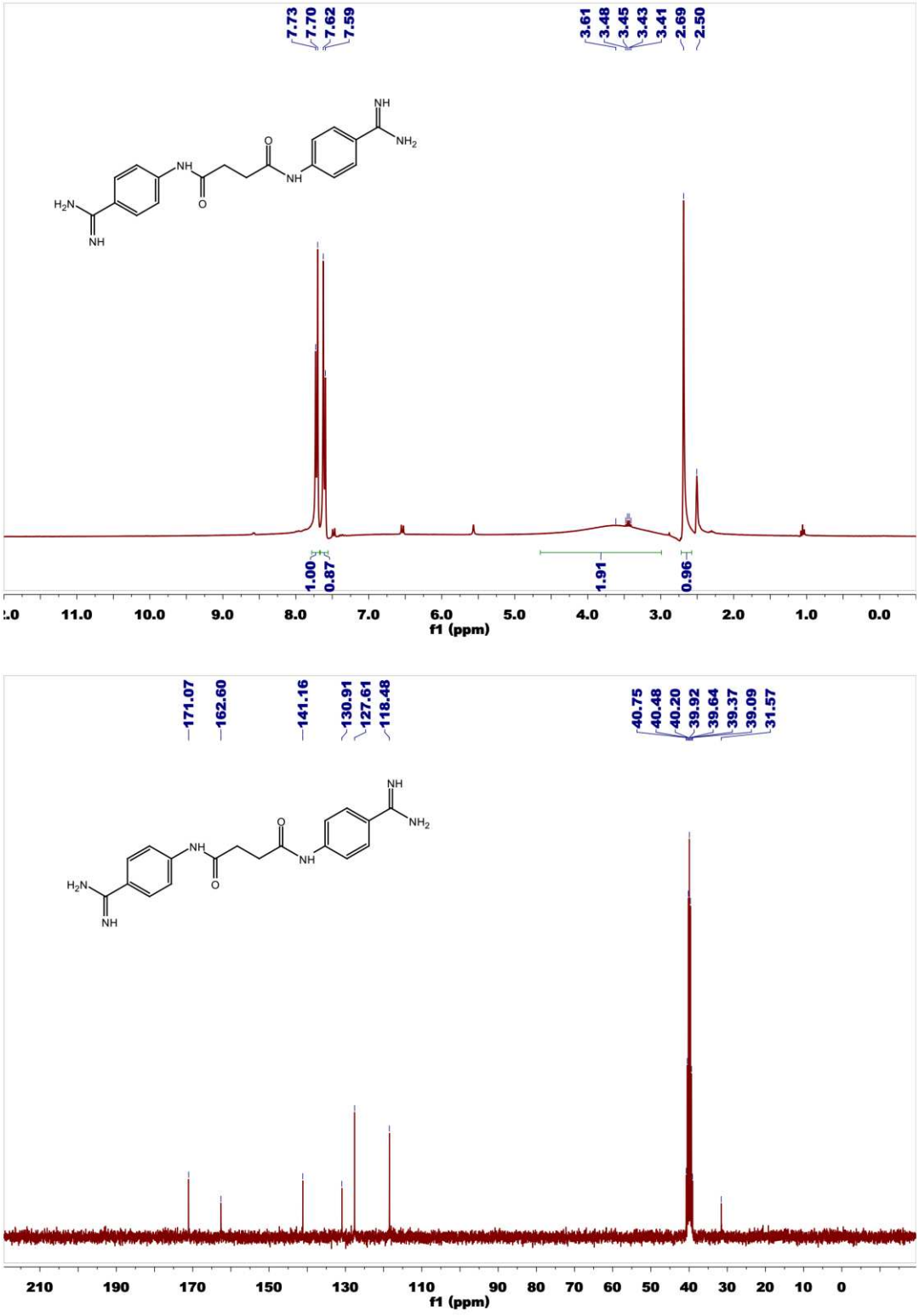


Figure S4. NMR spectra of compound **1**.

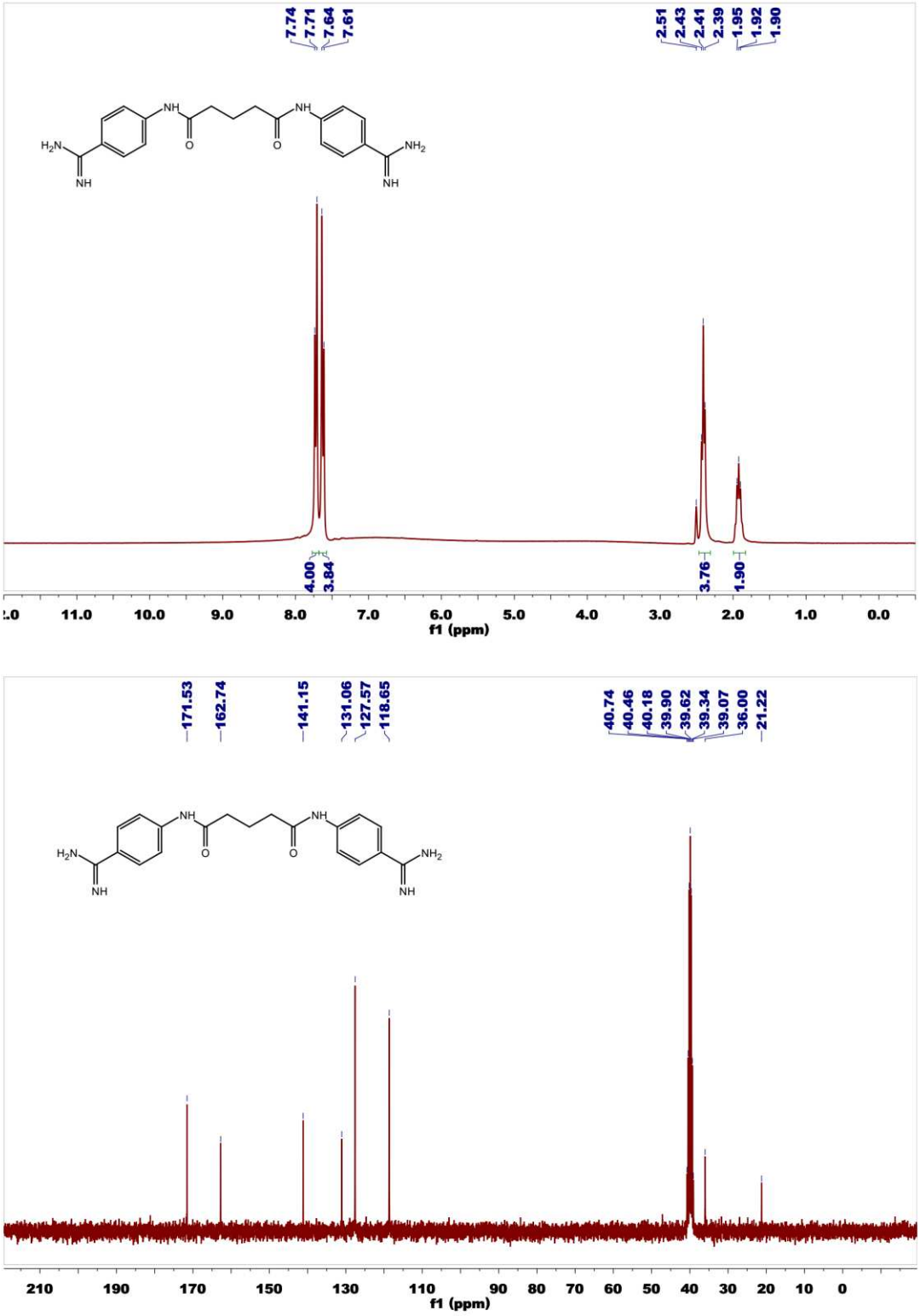


Figure S5. NMR spectra of compound **2.**

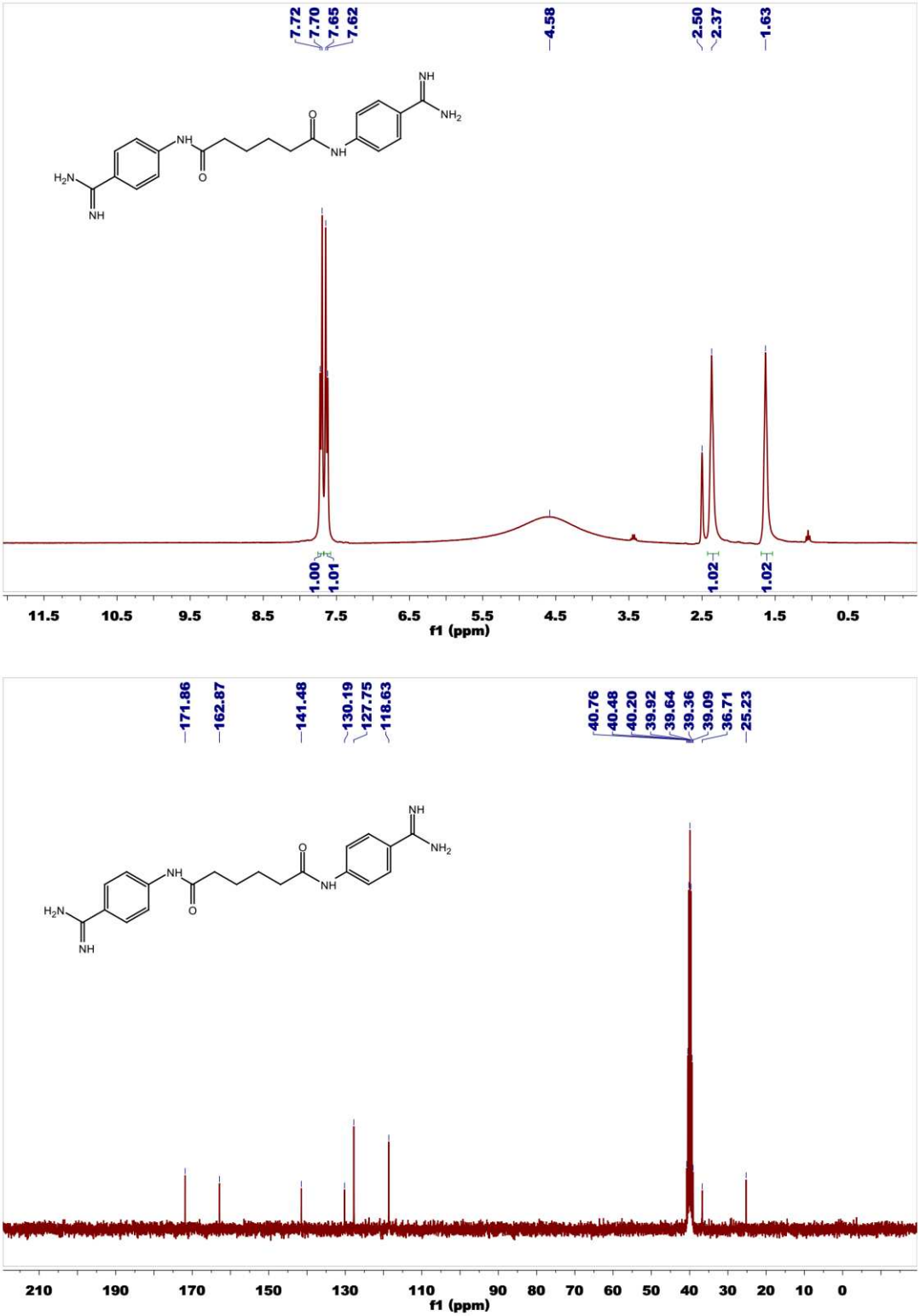


Figure S6. NMR spectra of compound **3.**

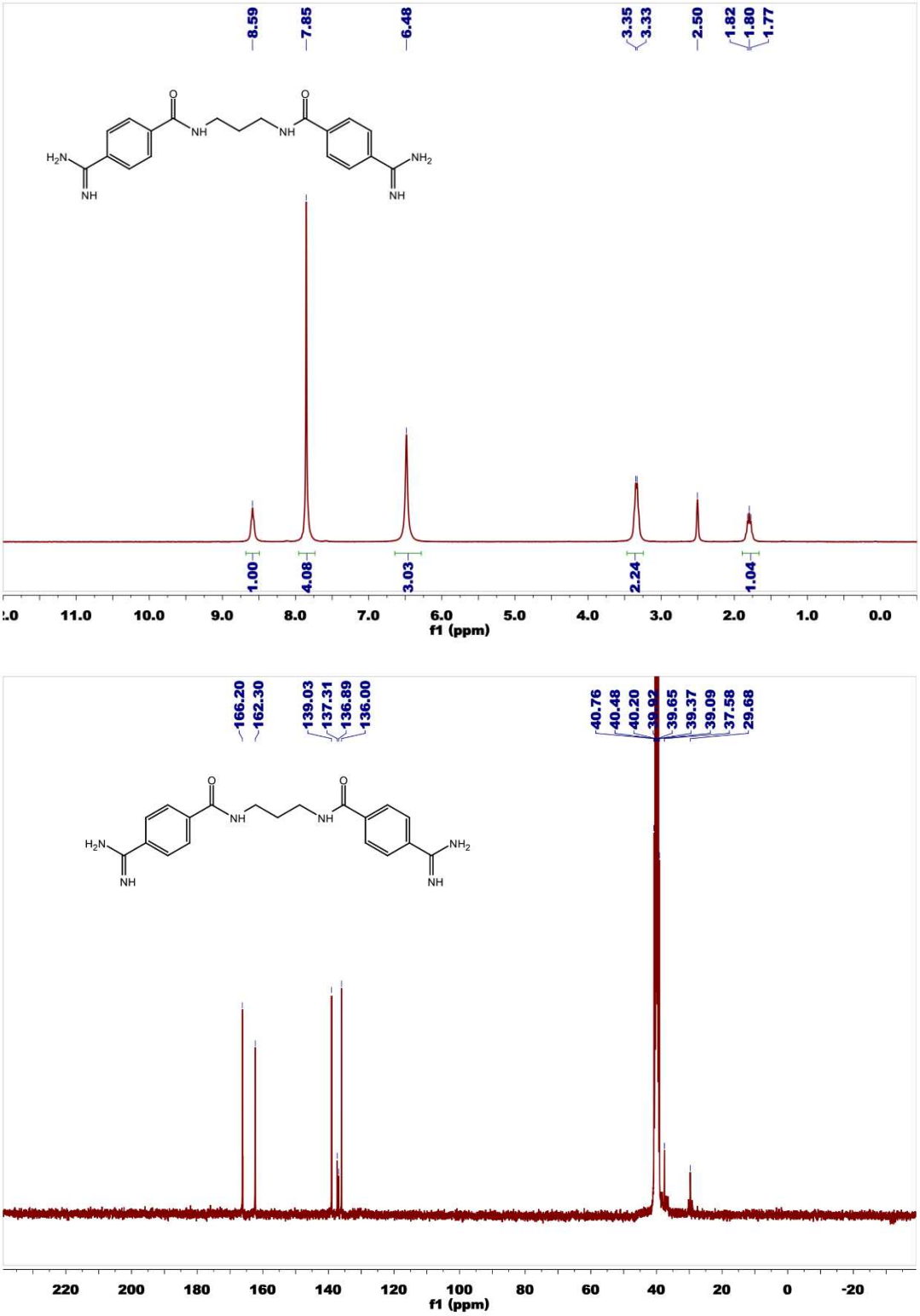


Figure S7. NMR spectra of compound **4.**

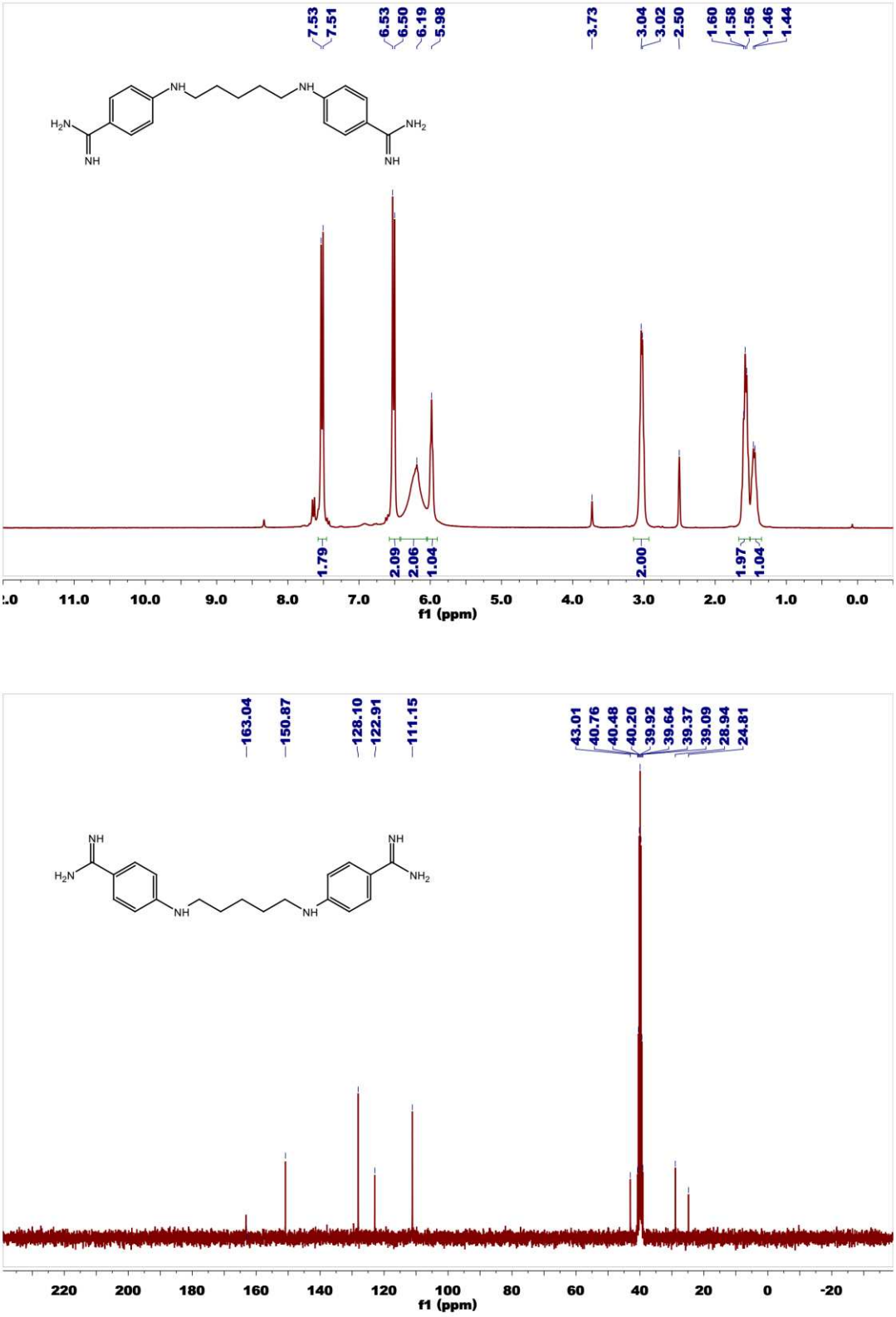


Figure S8. NMR spectra of compound **5**.

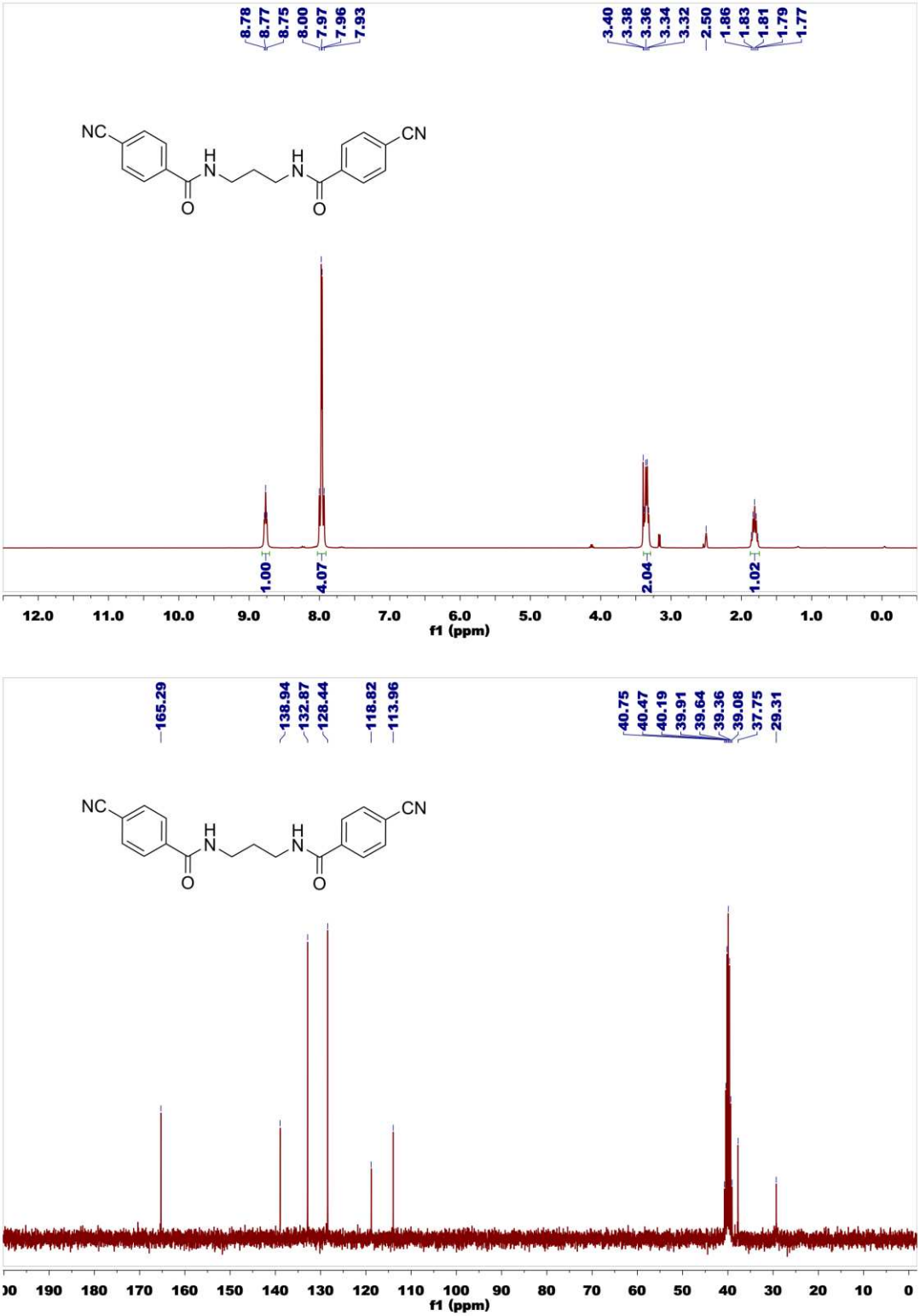


Figure S9. NMR spectra of compound **9**.

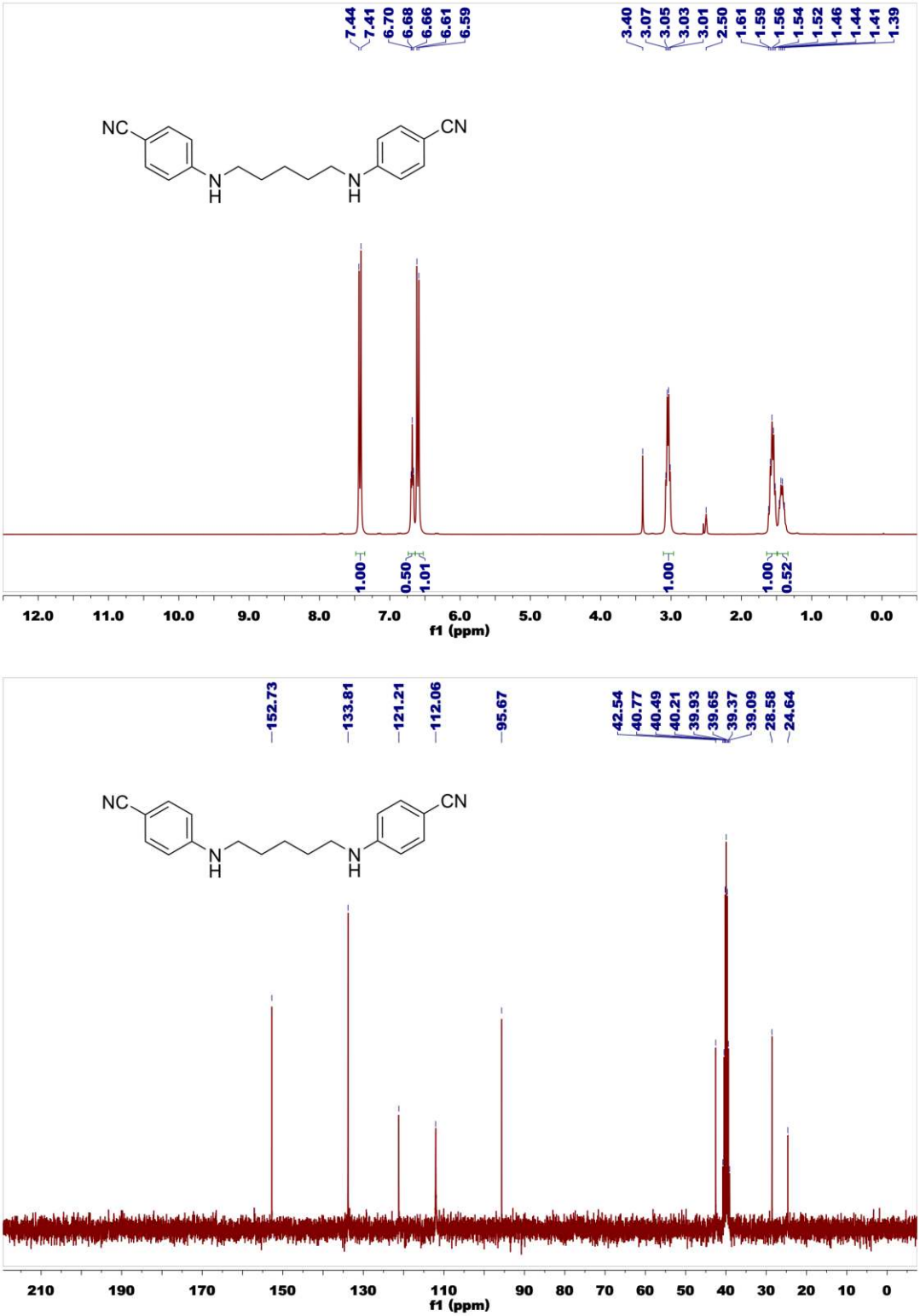


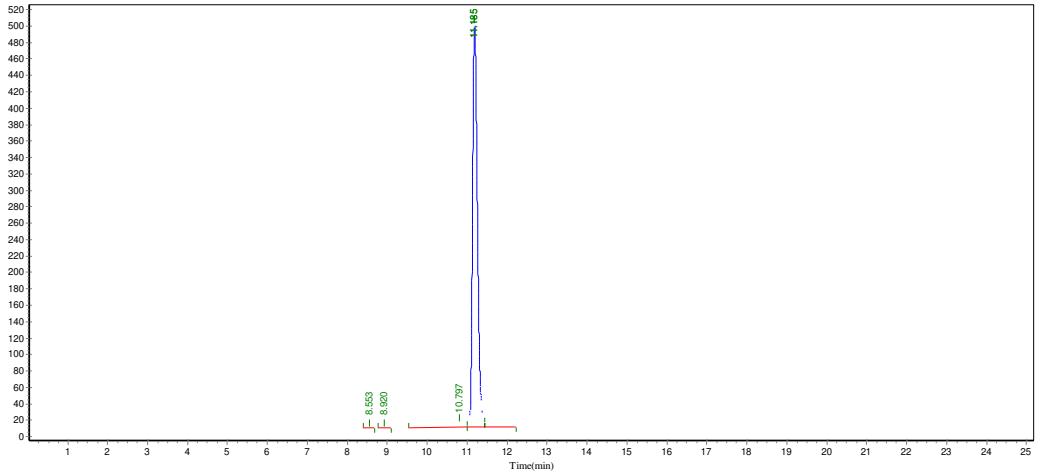
Figure S10. NMR spectra of compound **11.**

Figure S11. HPLC Report for TMD-5

Structure : TMD-5
Column : 4.6×250mm, Venusil MP C18-5
Solvent A : 0.1% trifluoroacetic in 100% acetonitrile
Solvent B : 0.1% trifluoroacetic in 100% water
Gradient :

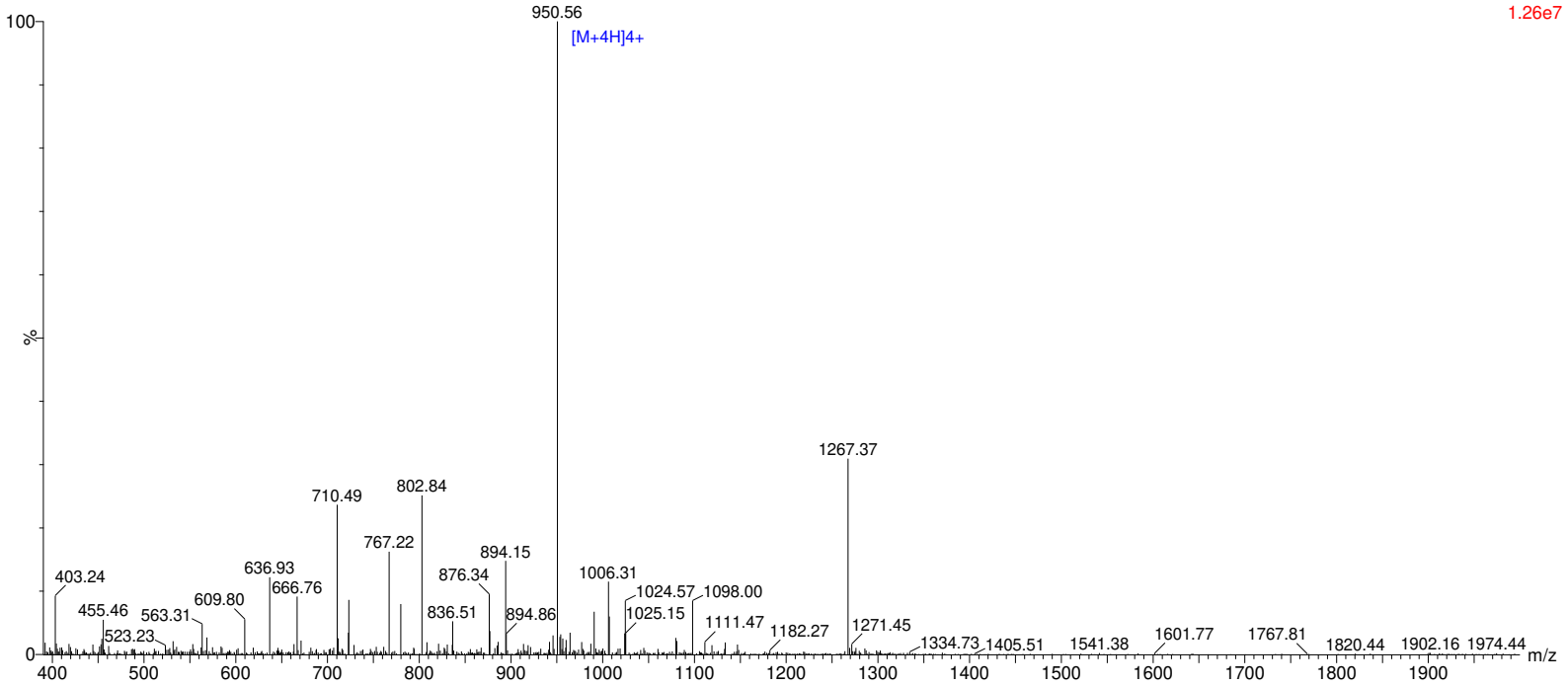
	A	B
0.01min	55%	45%
25min	100%	0%
25.1min	100%	0%
30min	STOP	

Flow rate : 1.0 mL/min
Wavelength : 220nm
Volume : 5ul



Peak No.	Ret Time	Height	Area	Conc..
1	8.553	335.982	2560.503	0.0601
2	8.920	1142.773	8896.888	0.2089
3	10.797	7004.221	75740.398	1.7785
4	11.185	490966.563	4109966.750	96.5070
5	11.185	5274.425	61557.281	1.4454
Total				100.0000

Figure S12. Mass Spectrometry Report for TMD-5



Sample Description		Instrument	Waters ZQ2000		
Analyzed date:	2016-11-15	Probe:	ESI	Probe Bias:	＋4.5kv
Analyst:	YU	Nebulizer Gas Flow:	1.5L/min	Detector:	1.5kv
Sample:	TMD-5	CDL:	-20.0v	T.Flow:	0.2ml/min
M.W.:	3795.91	CDL Temp.:	250 °C	B. Conc.:	50%H2O/50%ACN
Lot. No.:	P161111-SY545400	Block Temp.:	200 °C		