

Figure S1 ¹H NMR spectrum of 2-(4-Boc-piperazine-1-carbonyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3(2*H*)-one in chloroform-*d*. S denotes the residual solvent signal.

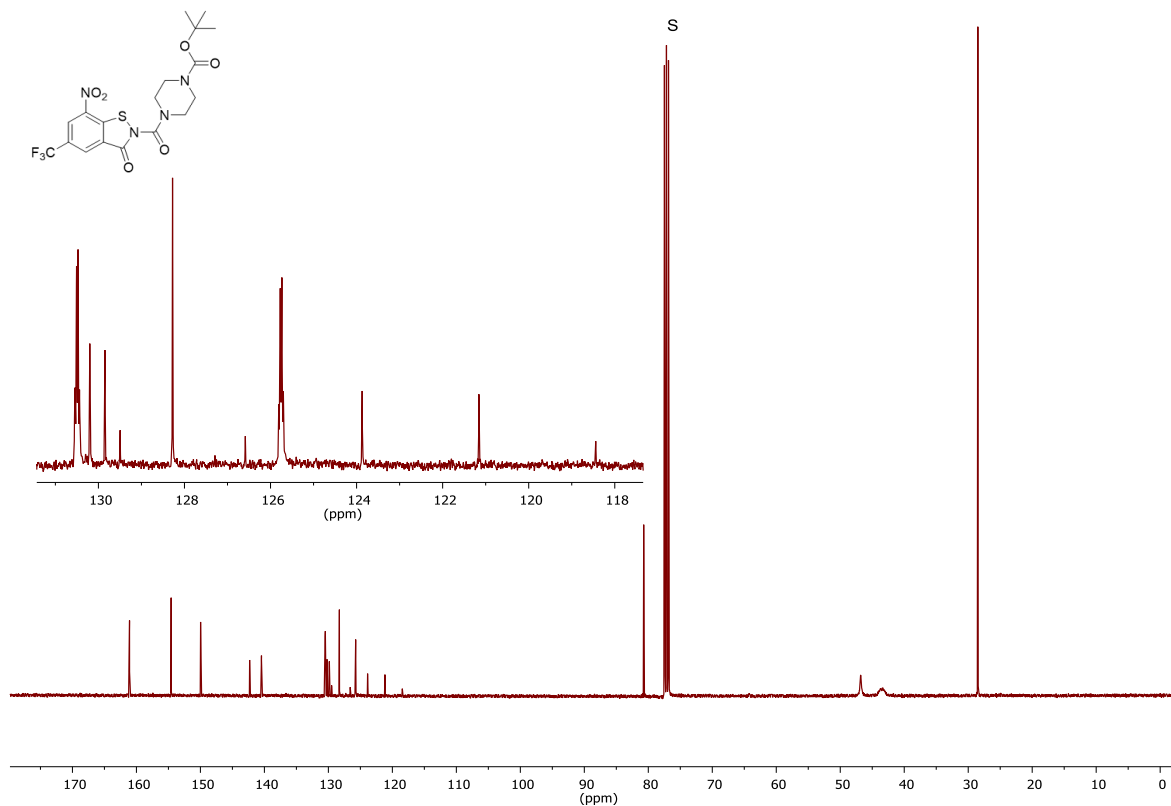


Figure S2 ¹³C NMR spectrum of 2-(4-Boc-piperazine-1-carbonyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3(2*H*)-one in chloroform-*d*. S denotes the residual solvent signal.

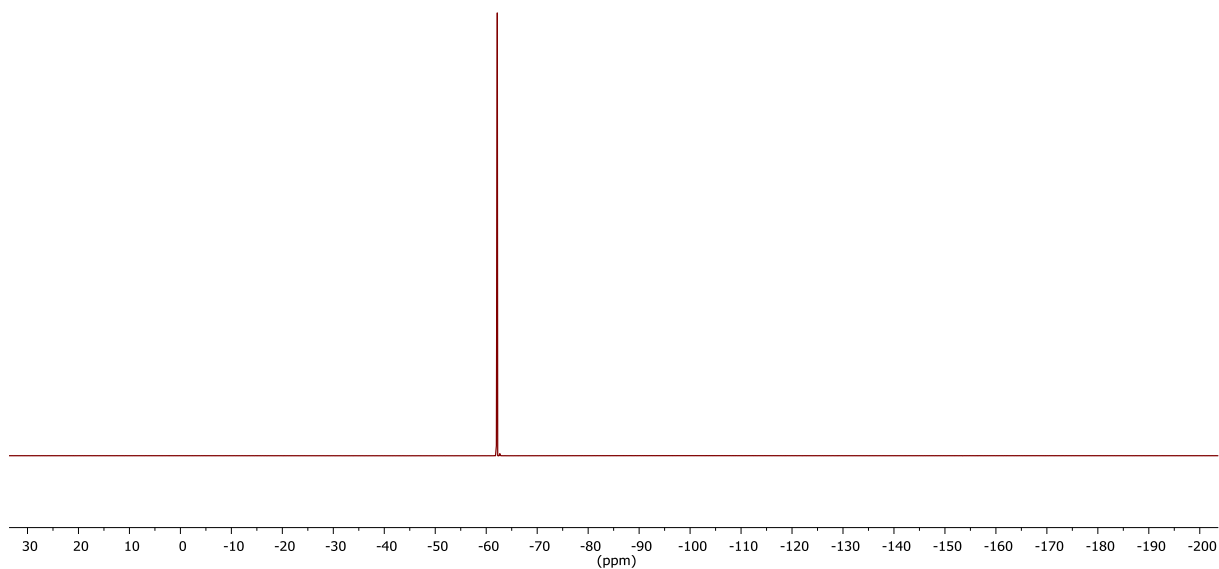
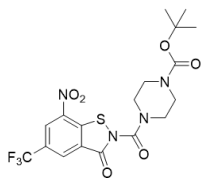


Figure S3 ^{19}F NMR spectrum of 2-(4-Boc-piperazine-1-carbonyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3(2*H*)-one in chloroform-*d*.

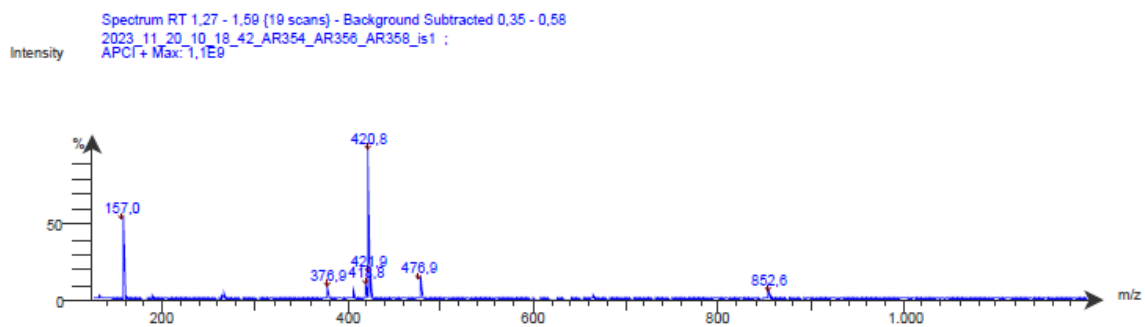


Figure S4 APCI⁺ mass spectrum of 2-(4-Boc-piperazine-1-carbonyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3(2*H*)-one.

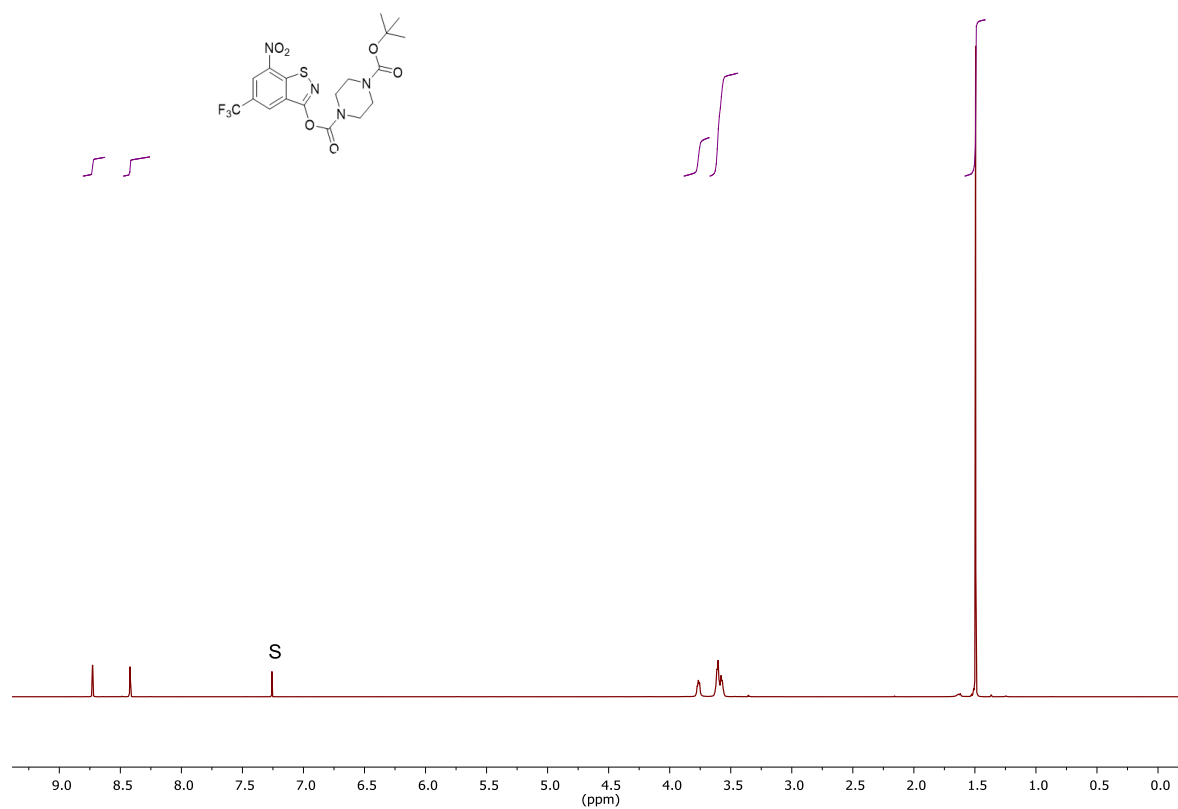


Figure S5 ^1H NMR spectrum of 7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3-yl 4-Boc-piperazine-1-carboxylate in chloroform-*d*. S denotes the residual solvent signal.

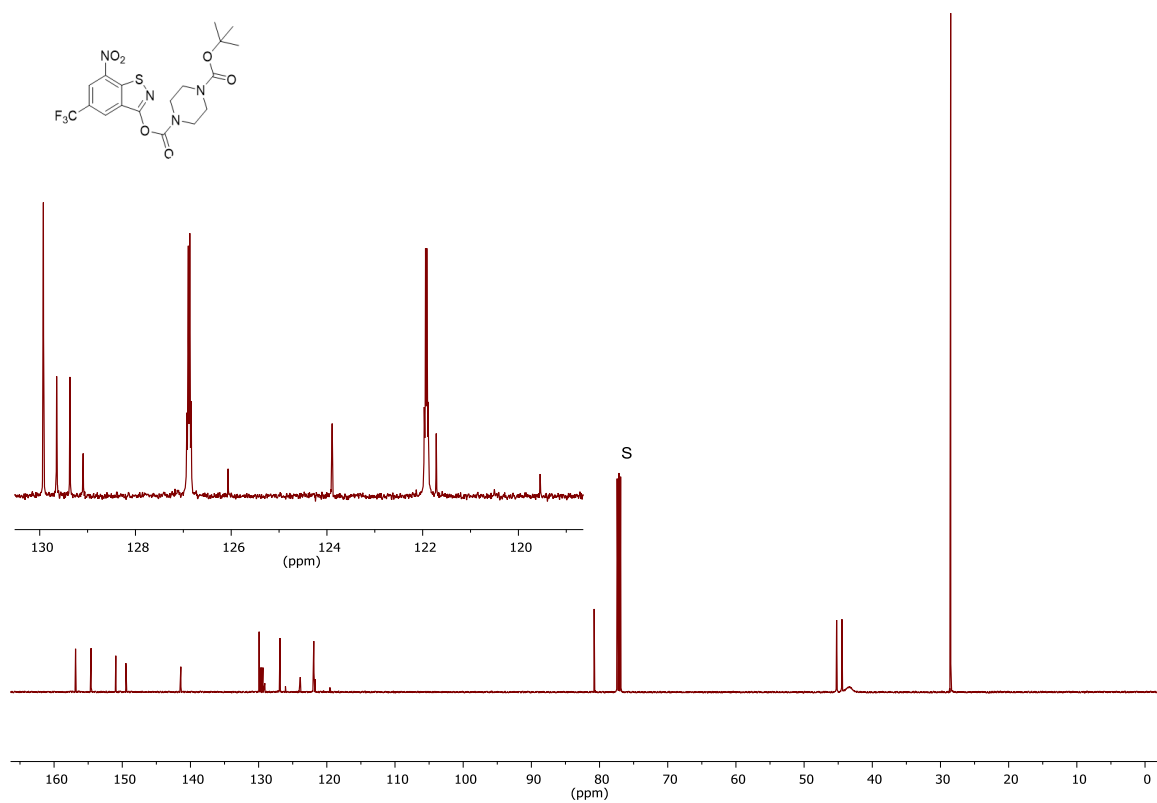


Figure S6 ^{13}C NMR spectrum of 7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3-yl 4-Boc-piperazine-1-carboxylate in chloroform-*d*. S denotes the residual solvent signal.

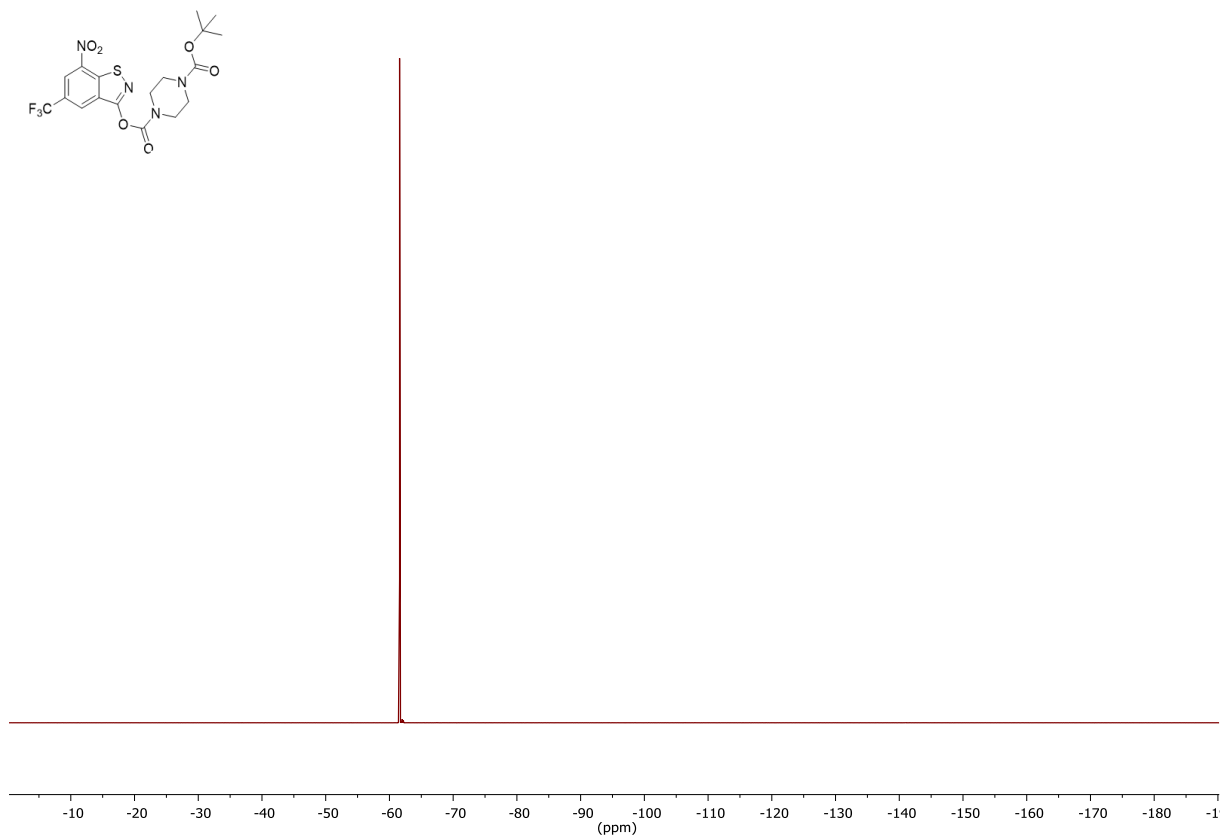


Figure S7 ^{19}F NMR spectrum of 7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3-yl 4-Boc-piperazine-1-carboxylate in chloroform-*d*.

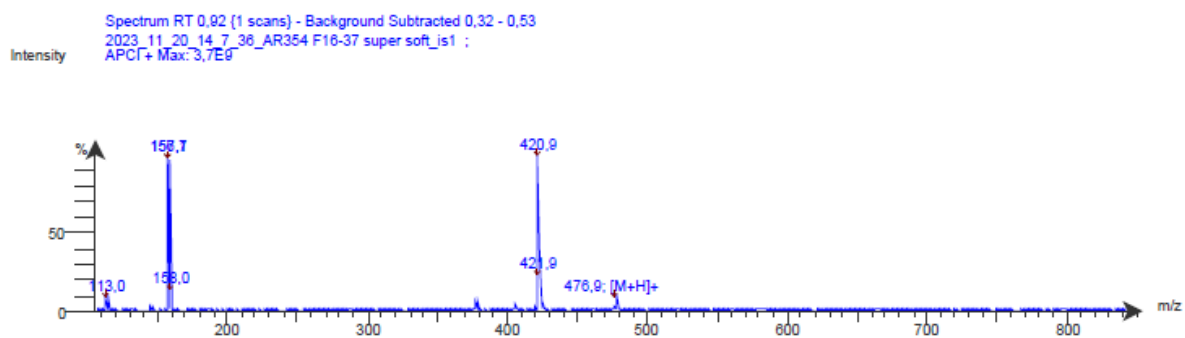


Figure S8 APCI⁺ mass spectrum of 7-nitro-5-(trifluoromethyl)benzo[*d*]isothiazol-3-yl 4-Boc-piperazine-1-carboxylate.

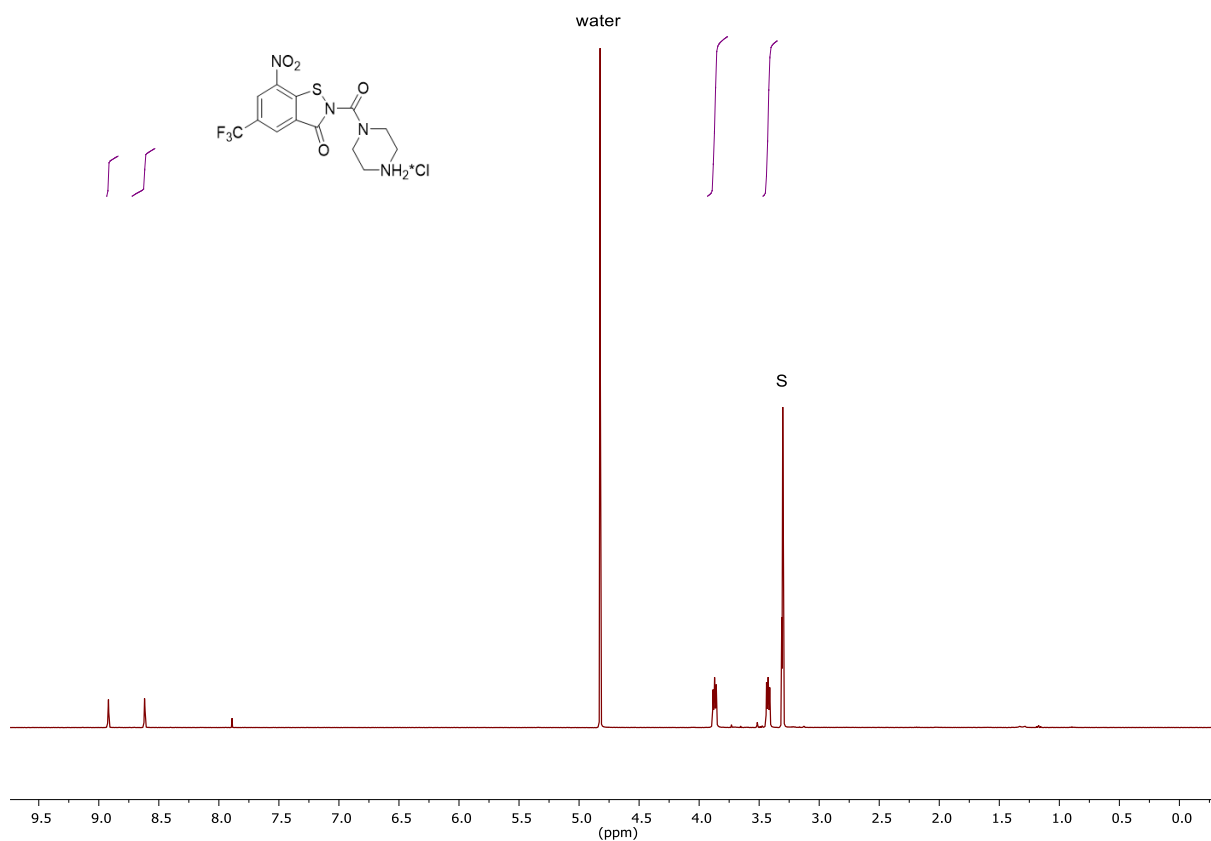


Figure S9 ¹H NMR spectrum of 4-(7-nitro-3-oxo-5-(trifluoromethyl)-2,3-dihydrobenzo[*d*]-isothiazole-2-carbonyl)piperazin-1-ium chloride (**2**) in methanol-*d*₄. S denotes the residual solvent signal.

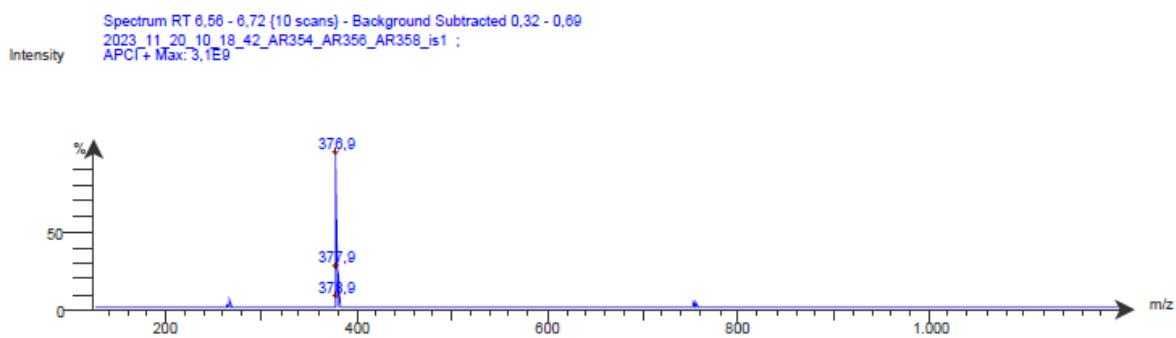


Figure S10 APCI⁺ mass spectrum of 4-(7-nitro-3-oxo-5-(trifluoromethyl)-2,3-dihydrobenzo[*d*]-isothiazole-2-carbonyl)piperazin-1-ium chloride (**2**).

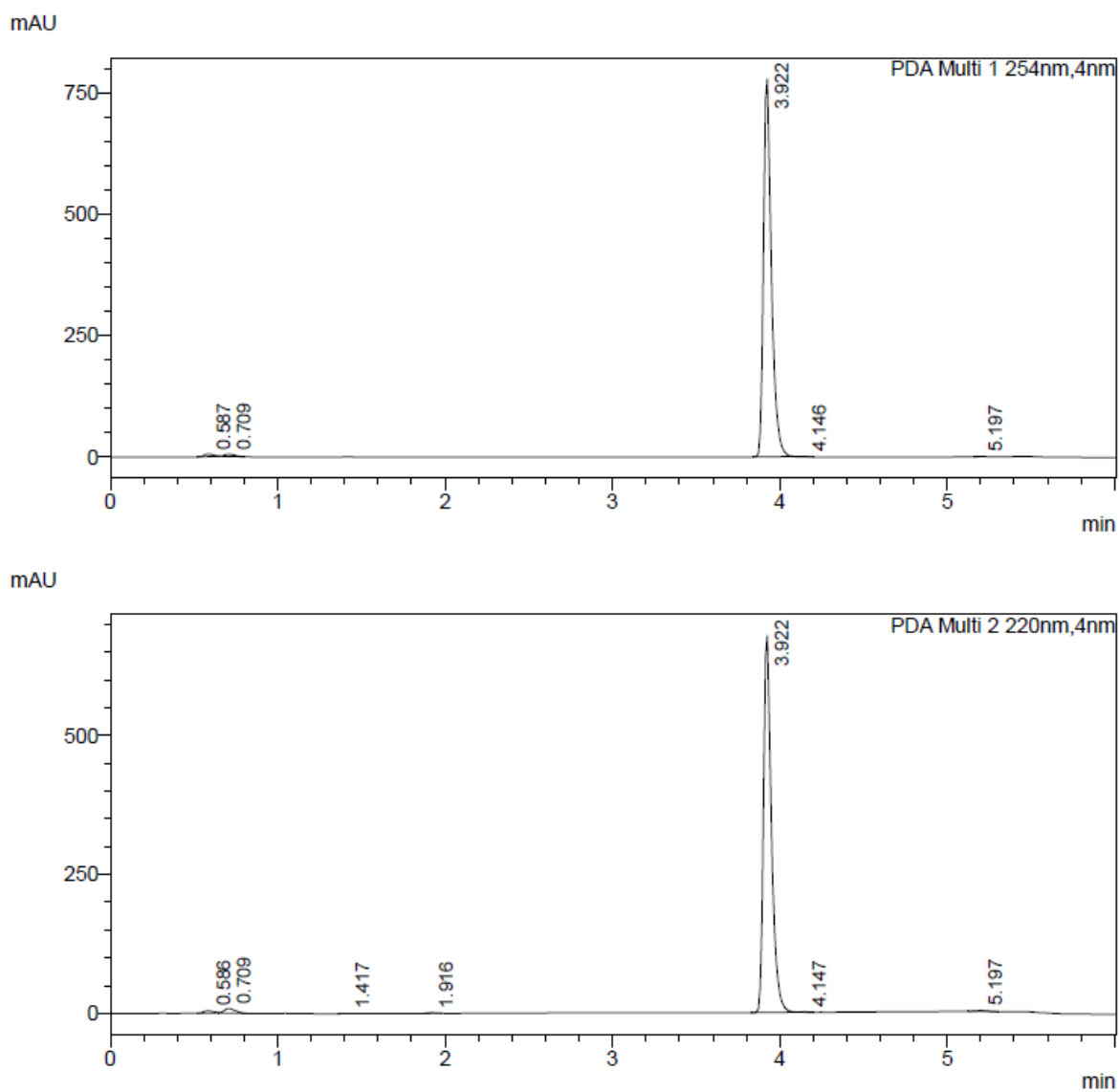


Figure S11 HPLC traces of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(*2H*)-one (**4**) at 254 nm (top) and 220 nm (bottom).

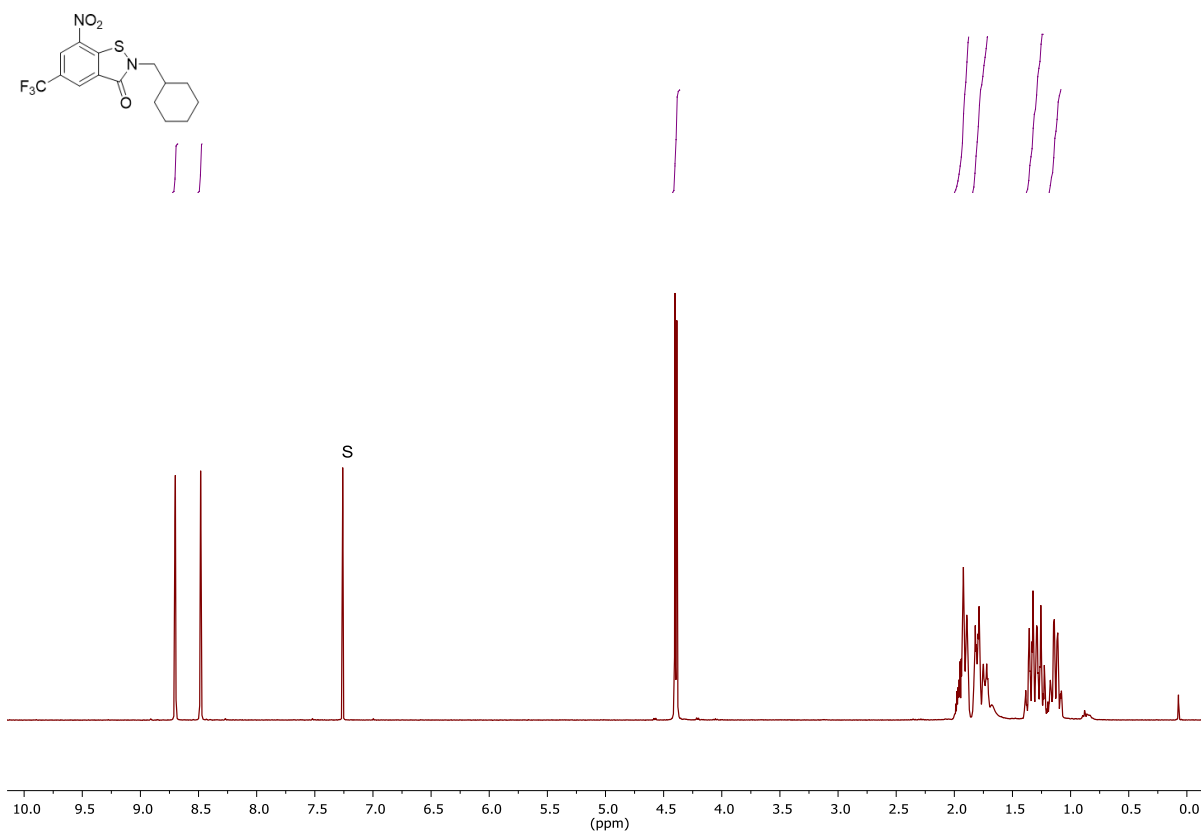


Figure S12 ¹H NMR spectrum of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(2*H*)-one (**4**) in chloroform-*d*. S denotes the residual solvent signal.

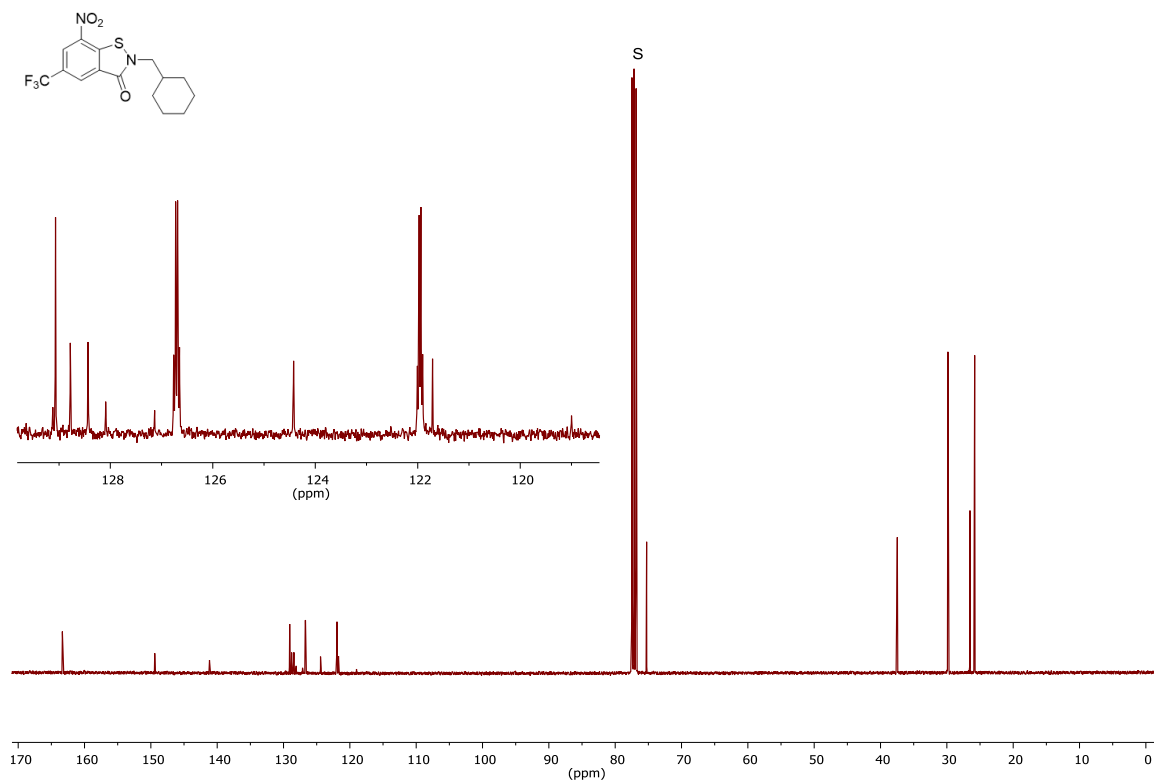
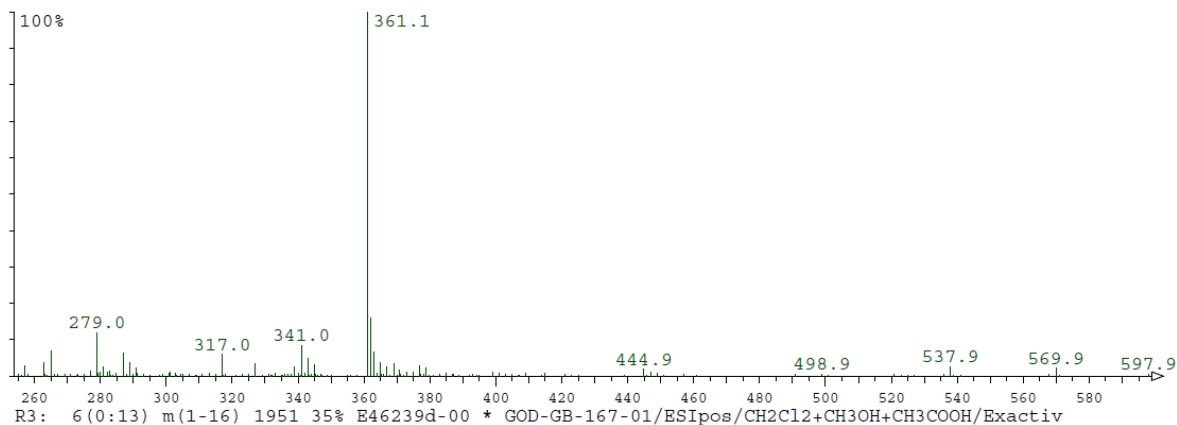


Figure S13 ¹³C NMR spectrum of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(2*H*)-one (**4**) in chloroform-*d*. S denotes the residual solvent signal.



Mass to be matched (m/z): 361.08264 charge: 1

Mass tolerance: ± 0.002

restriction of atom numbers:

C	H	N	O	F	S
1-100	1-100	0-2	0-10	0-3	1-1

Number of calculated formulas: 4

Formula	Diff. (ppm)	theor. m/z
C14 H19 N1 O8 S1	-0.14	361.08259
C15 H16 F3 N2 O3 S1	0.50	361.08282
C18 H15 F2 N2 O2 S1	-2.66	361.08168
C11 H20 F1 N1 O9 S1	3.02	361.08373

Figure S14 High resolution ESI⁺ mass spectrum of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(2*H*)-one (**4**) in dichloromethane/methanol/acetic acid.

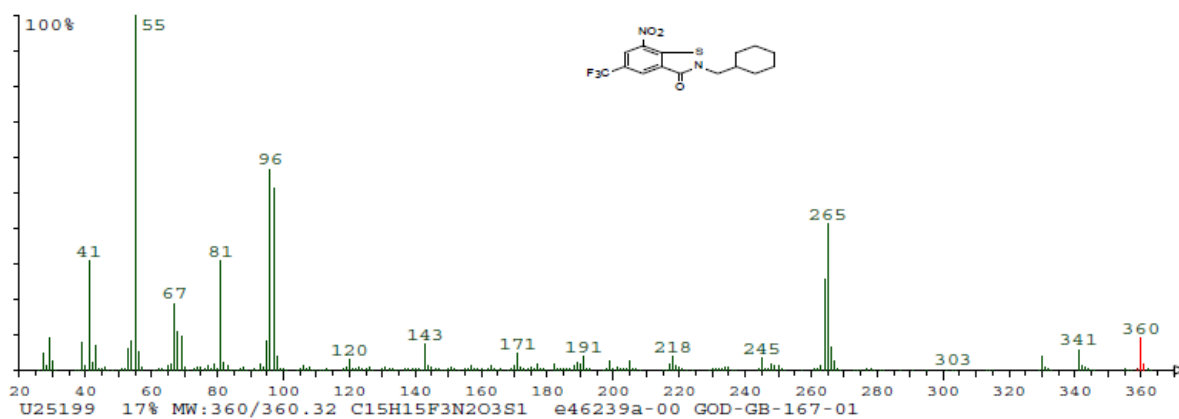


Figure S15 EI mass spectrum of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(2*H*)-one (**4**).

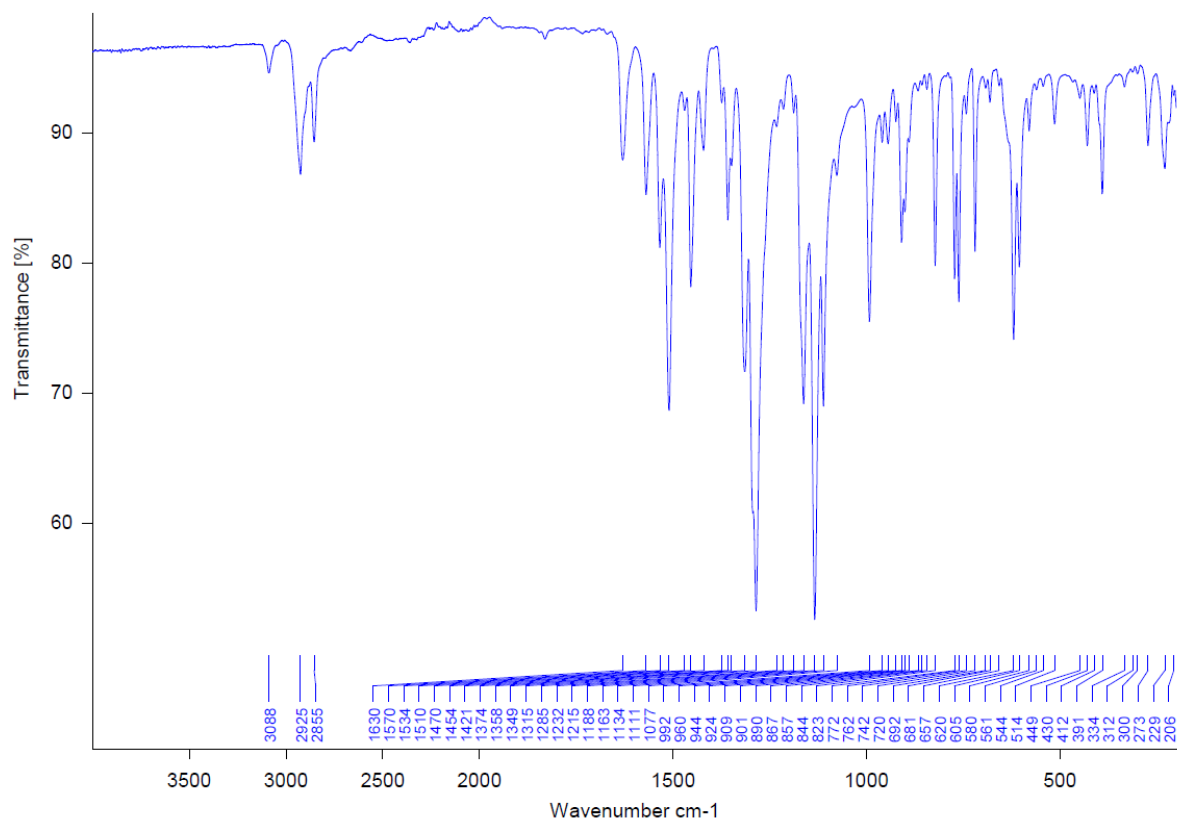


Figure S16 ATR-FT-IR spectrum of 2-(cyclohexylmethyl)-7-nitro-5-(trifluoromethyl)benzo[*d*]-isothiazol-3(2*H*)-one (**4**).