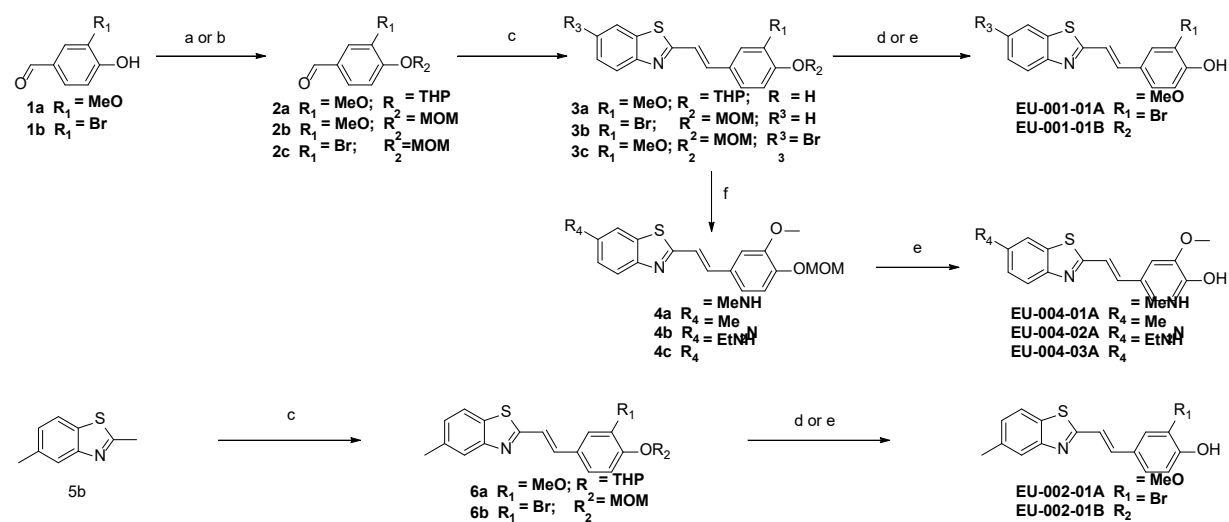


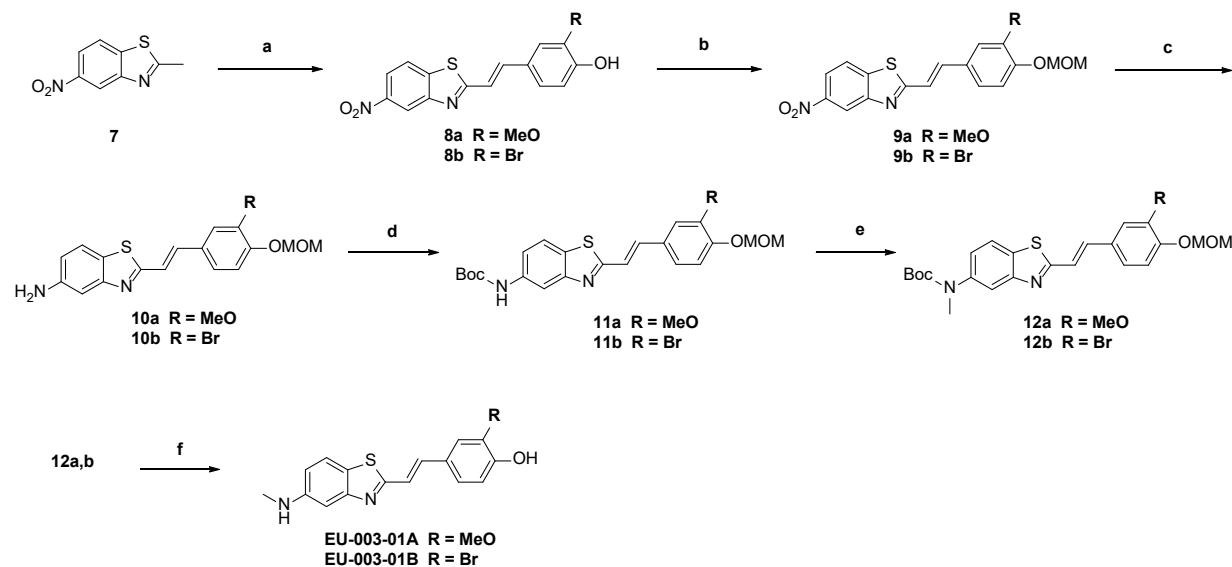
Data S1. Synthetic routes for chemicals, related to Figure 1, 5, 7.

A.) Synthetic routes for EU0201A and EU0201B.



Reagent and conditions: (a) (for **2a**) DHP, PPTs, THF, reflux; (b) (for **2b** and **2c**) MOMBr, TEA, CH_2Cl_2 , rt; (c) benzothiazole, NaH, THF, rt; (d) TsOH, MeOH, rt; (e) TFA, CH_2Cl_2 , 0 °C then rt; (f) EtNH_2 , $\text{Pd}_2(\text{dba})_3$, XantPhos, Cs_2CO_3 , dioxane, 90 °C.

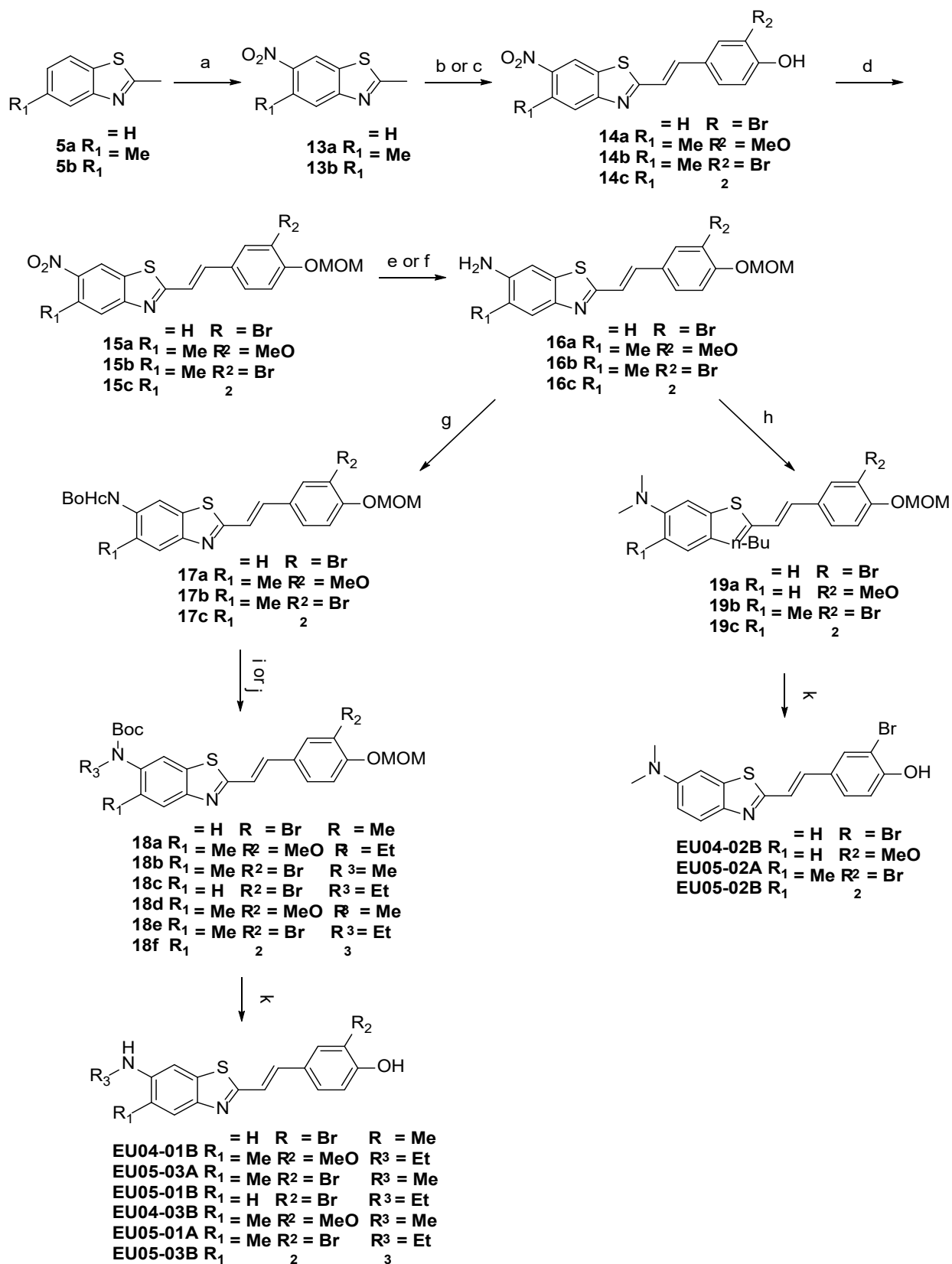
B.) Synthetic routes for EU0201A and EU0201B.



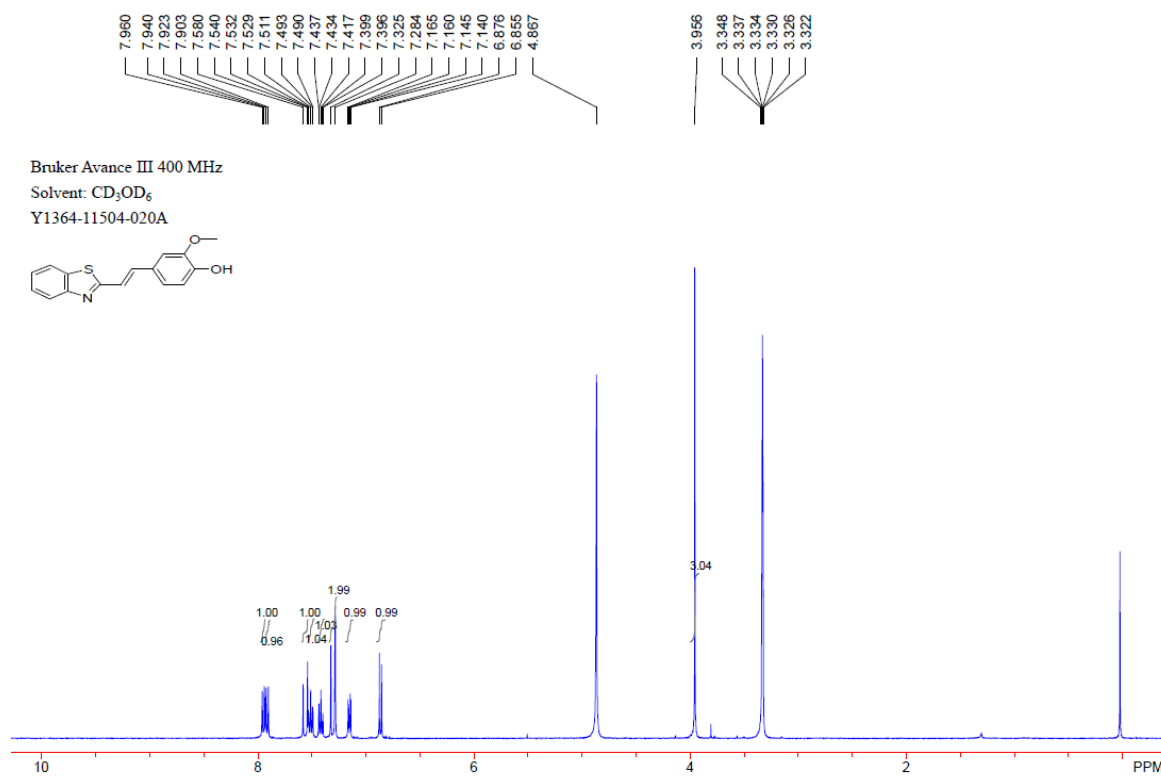
Reagents and conditions: (a) 2-bromo-4-methylphenol, H_2SO_4 , dioxane, 100 °C; (b) MOMBr, TEA, CH_2Cl_2 , rt; (c) Zn, NH_4Cl , MeOH, rt; (d) Boc_2O , 80 °C; (e) MeI, NaH, DMF, rt; (f) TFA, CH_2Cl_2 , rt.

C.) Synthetic routes for EU0401B, EU0403B, EU0503A, EU0503B, EU0501A,

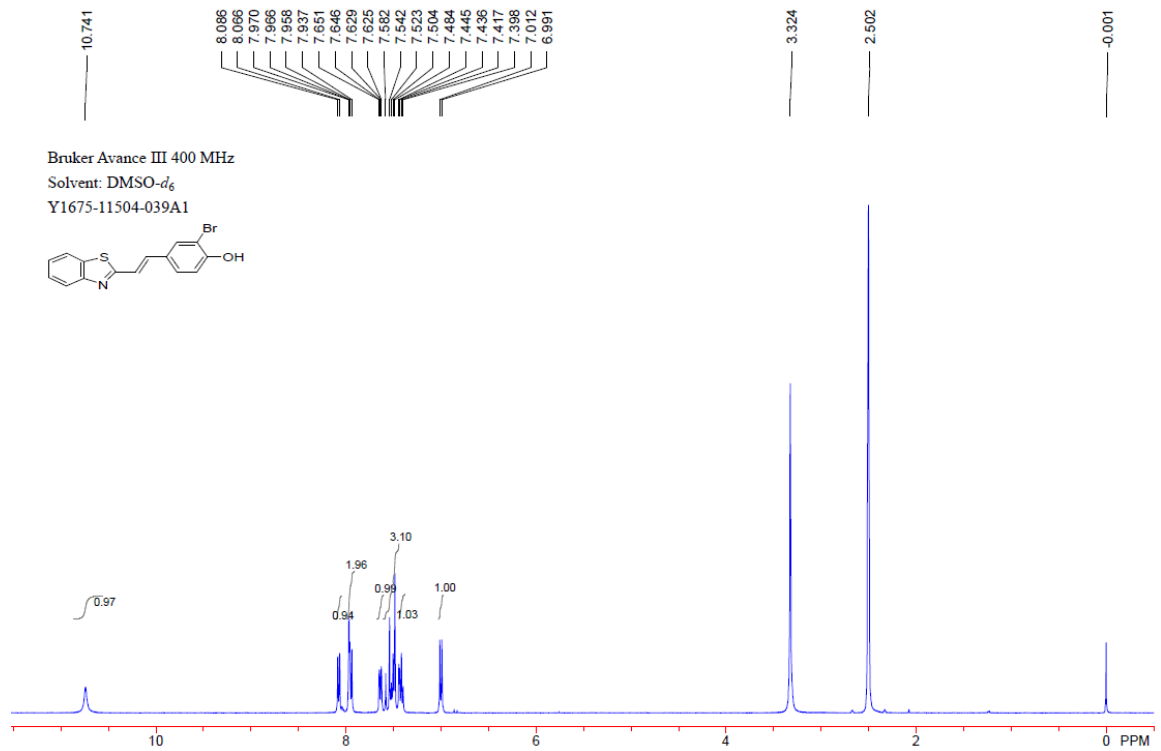
EU0501B.



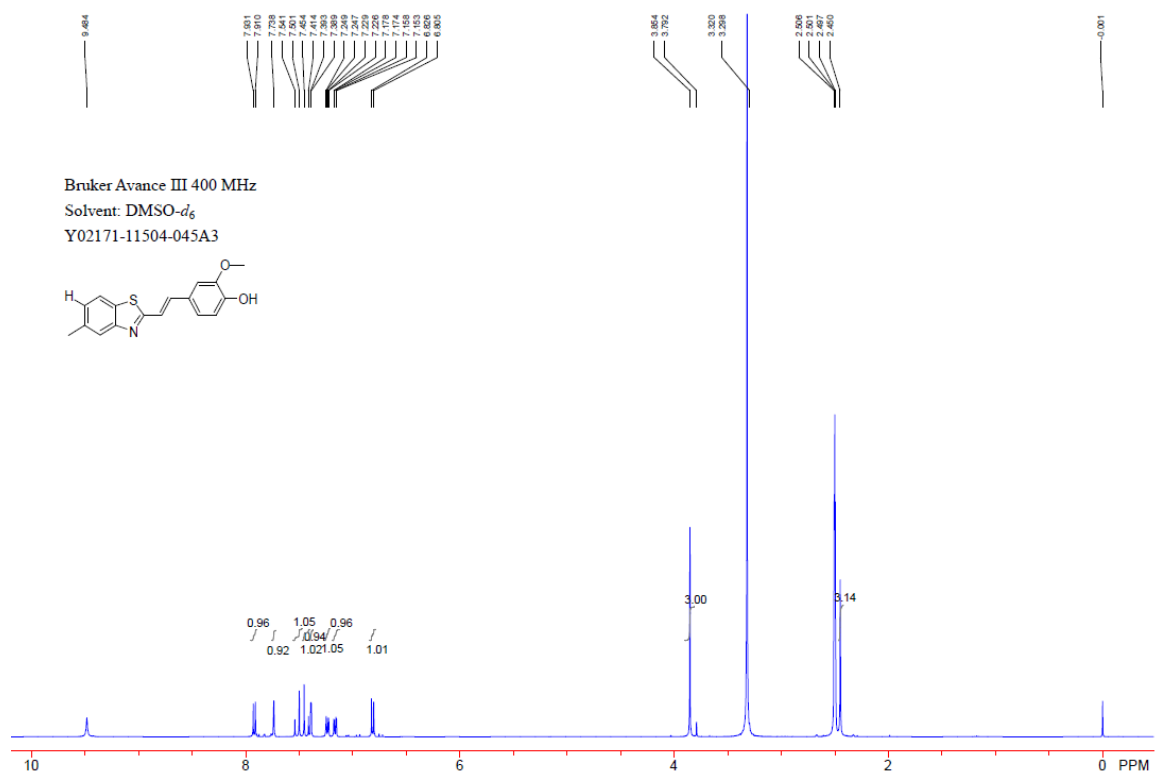
Reagent and conditions: (a) HNO₃, H₂SO₄, 0 °C-rt; (b) (for **14a,c**) H₂SO₄, dioxane, **1b**, rt; (c) (for **14b**) H₂SO₄, dioxane, **1a**, rt; (d) MOMBr, TEA, DCM, rt; (e) (for **16a** and **16b**) Zn, NH₄Cl, EtOH, rt; (f) (for **16c**) Zn, NH₄Cl, MeOH, rt; (g) Boc₂O, 60 °C; (h) aq. HCHO, NaBH₃CN, 0 °C; (i) (for **18a**, **18c** and **18e**) MeI, NaH, 0 °C; (j) (for **18b**, **18d** and **18f**) EtI, NaH, 0 °C; (k) TFA, 0 °C.



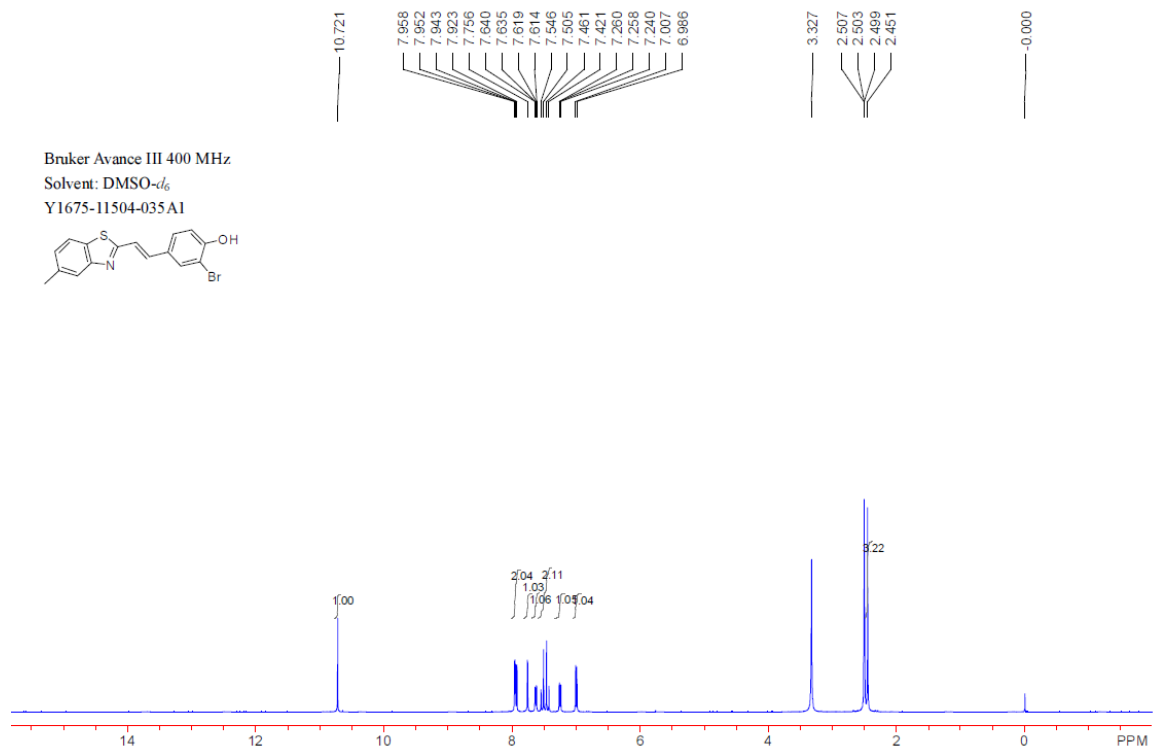
¹H NMR spectrum of EU01-01A



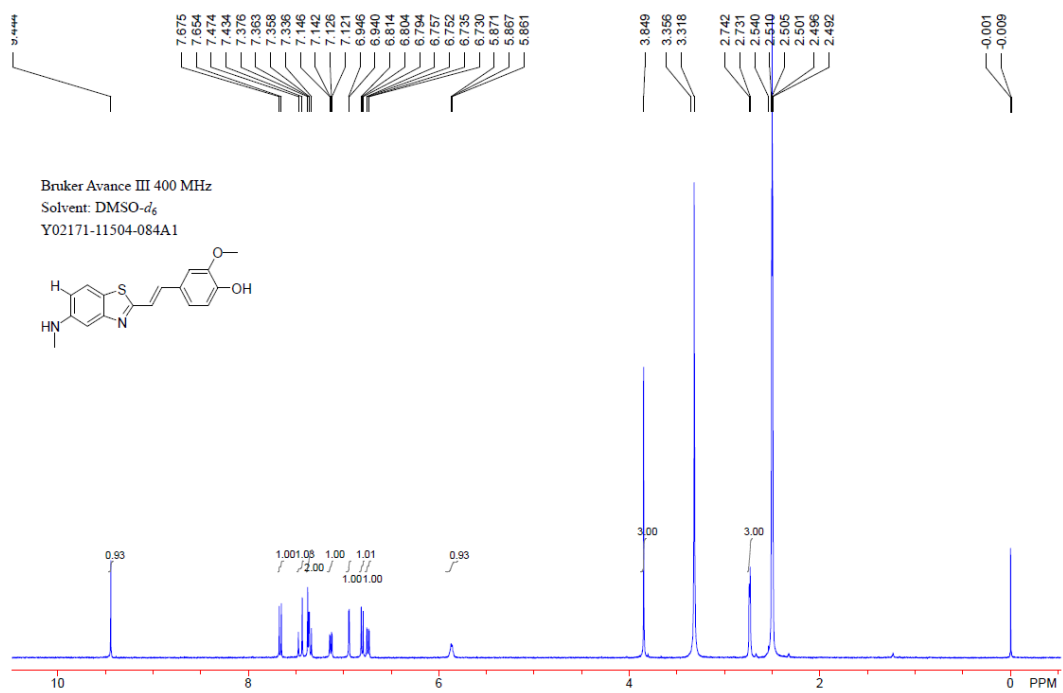
¹H NMR spectrum of EU01-01B



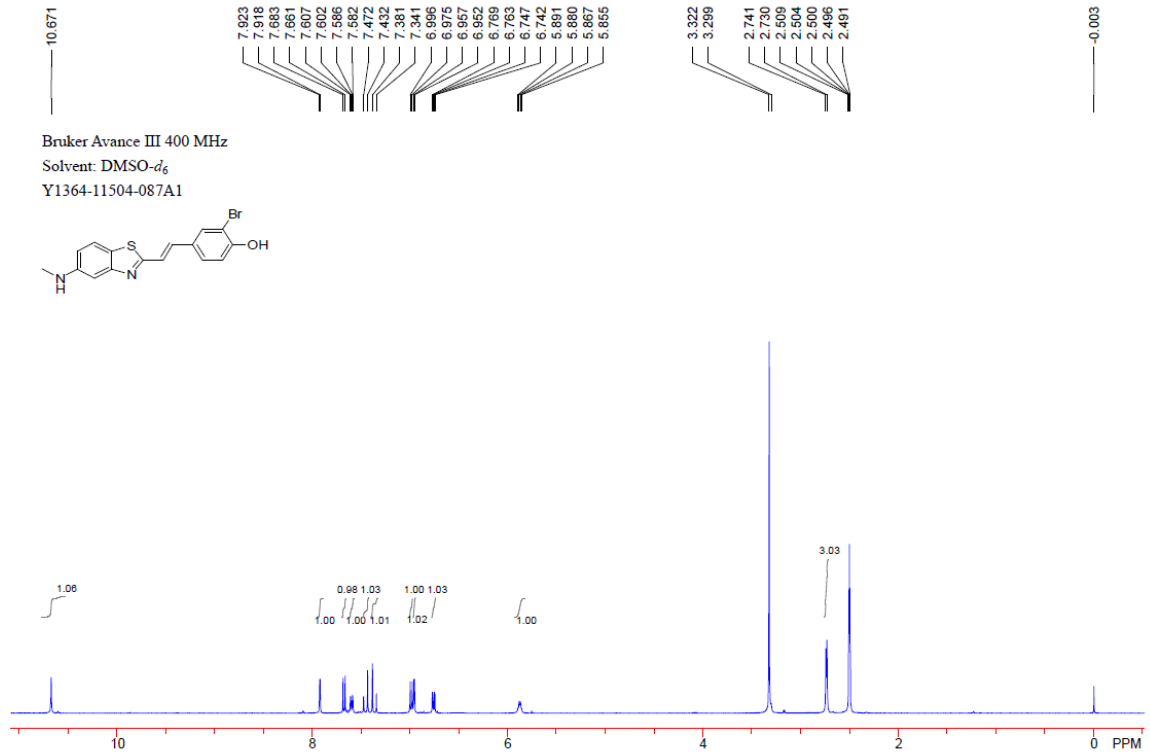
¹H NMR spectrum of EU02-01A



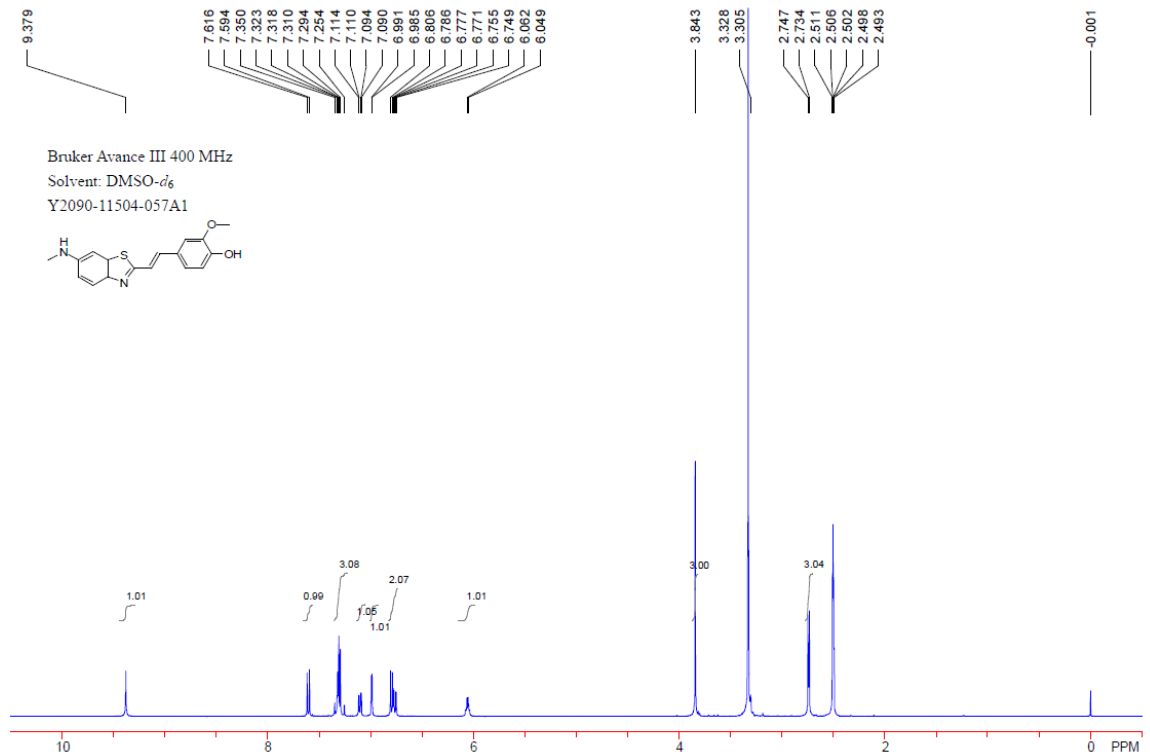
¹H NMR spectrum of EU02-01B



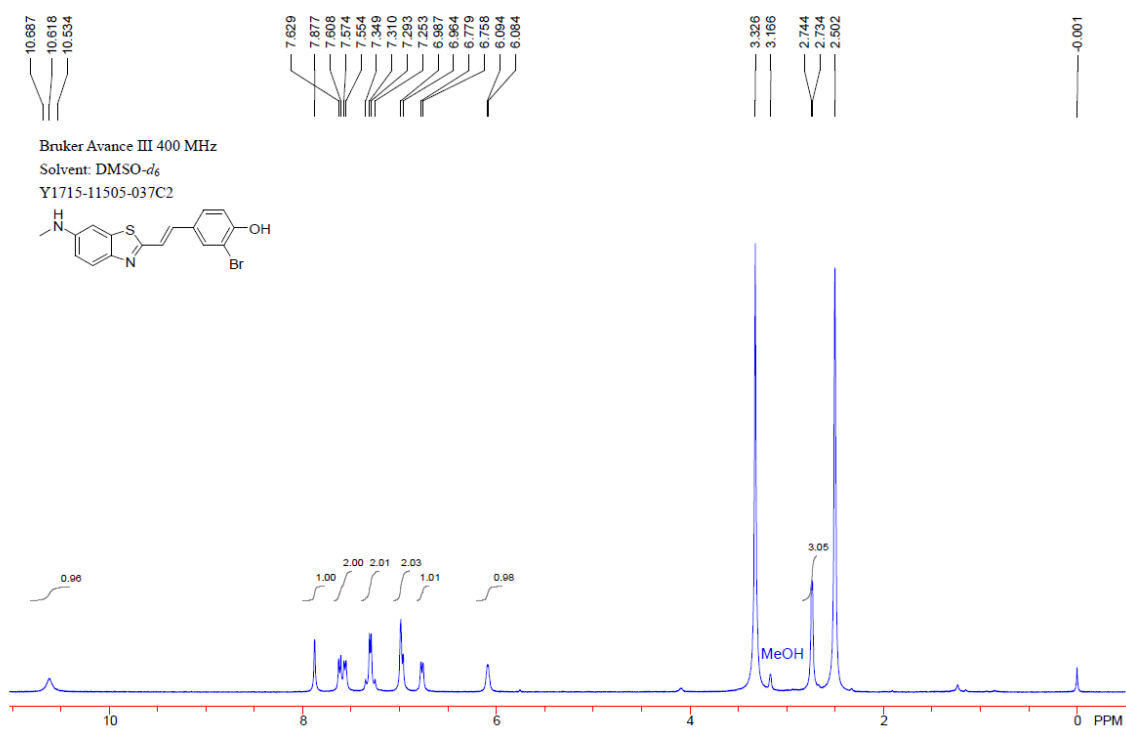
¹H NMR spectrum of EU03-01A



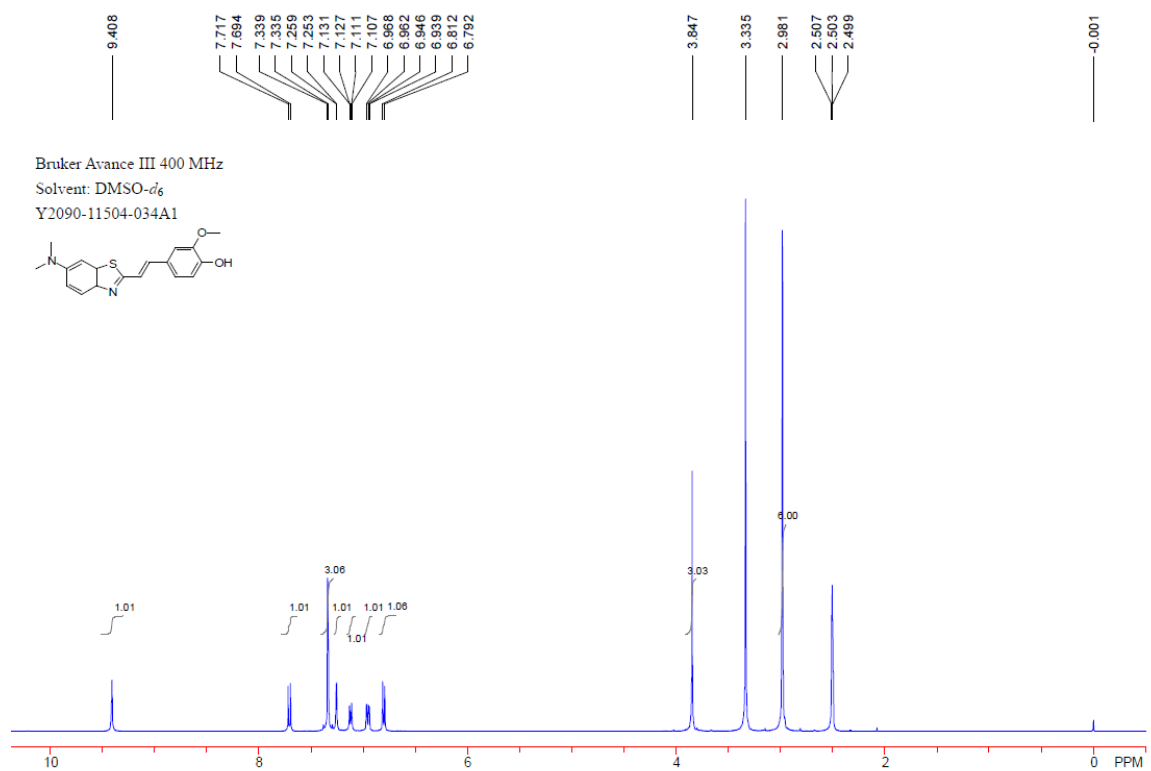
¹H NMR spectrum of EU03-01B



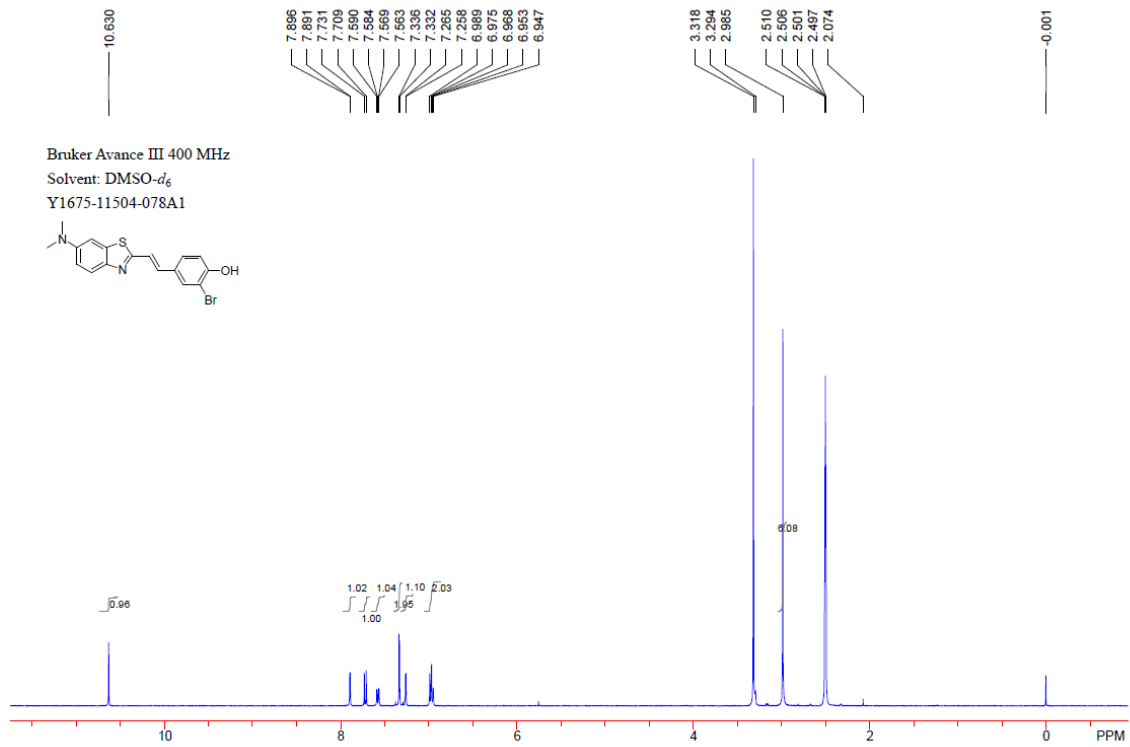
¹H NMR spectrum of EU04-01A



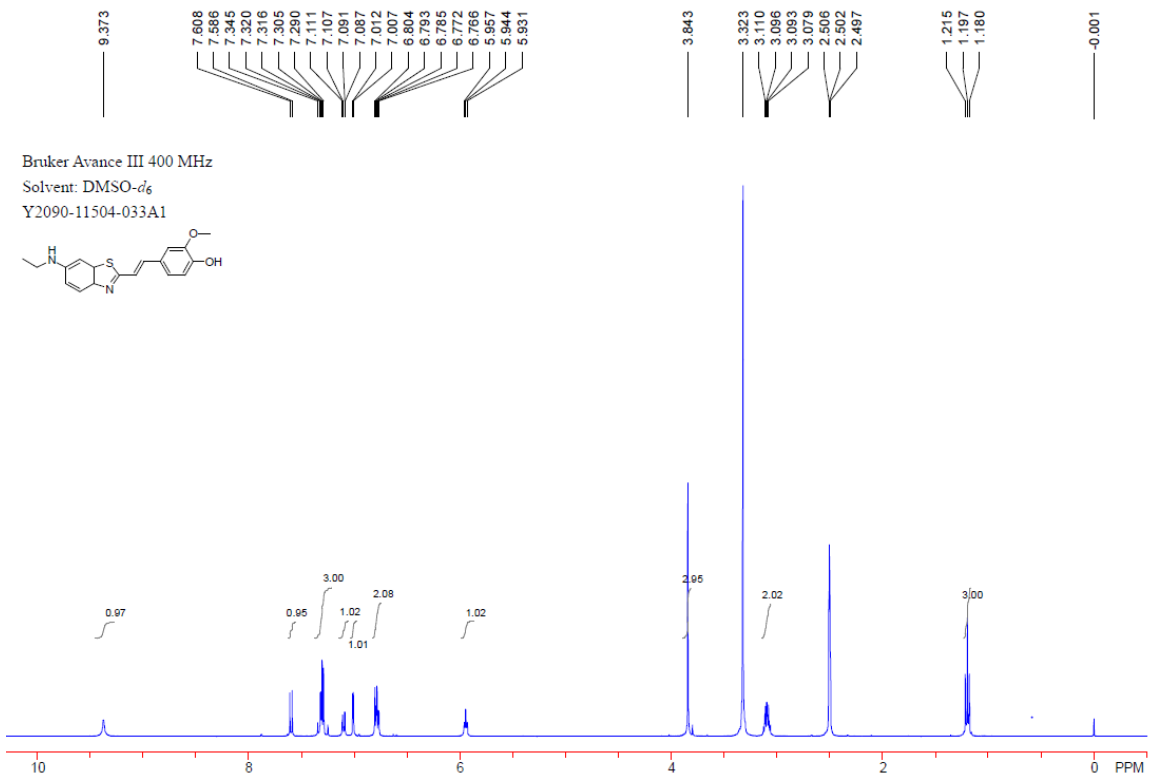
¹H NMR spectrum of EU04-01B



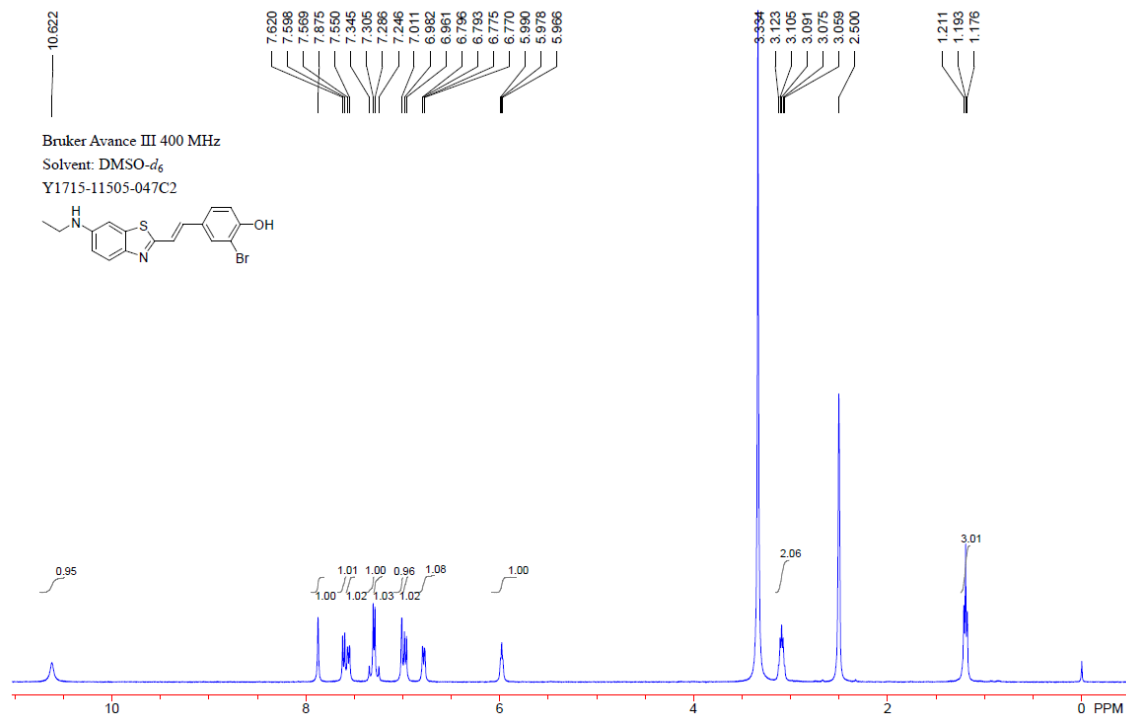
¹H NMR spectrum of EU04-02A



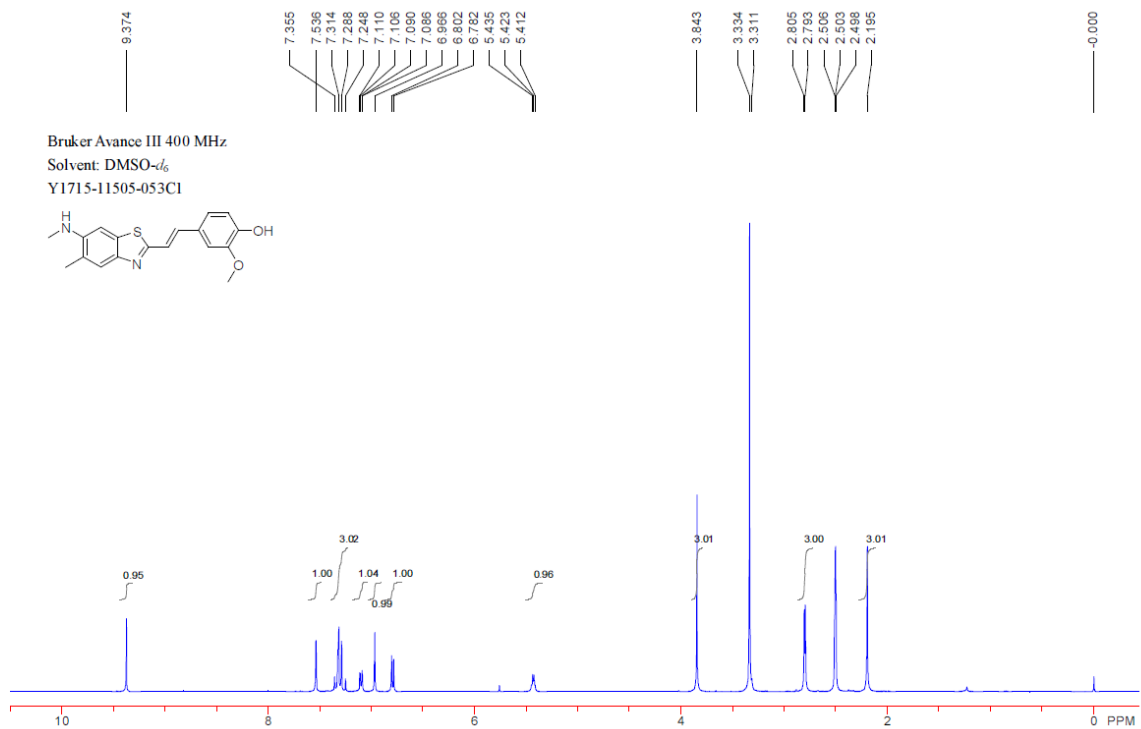
¹H NMR spectrum of EU04-02B



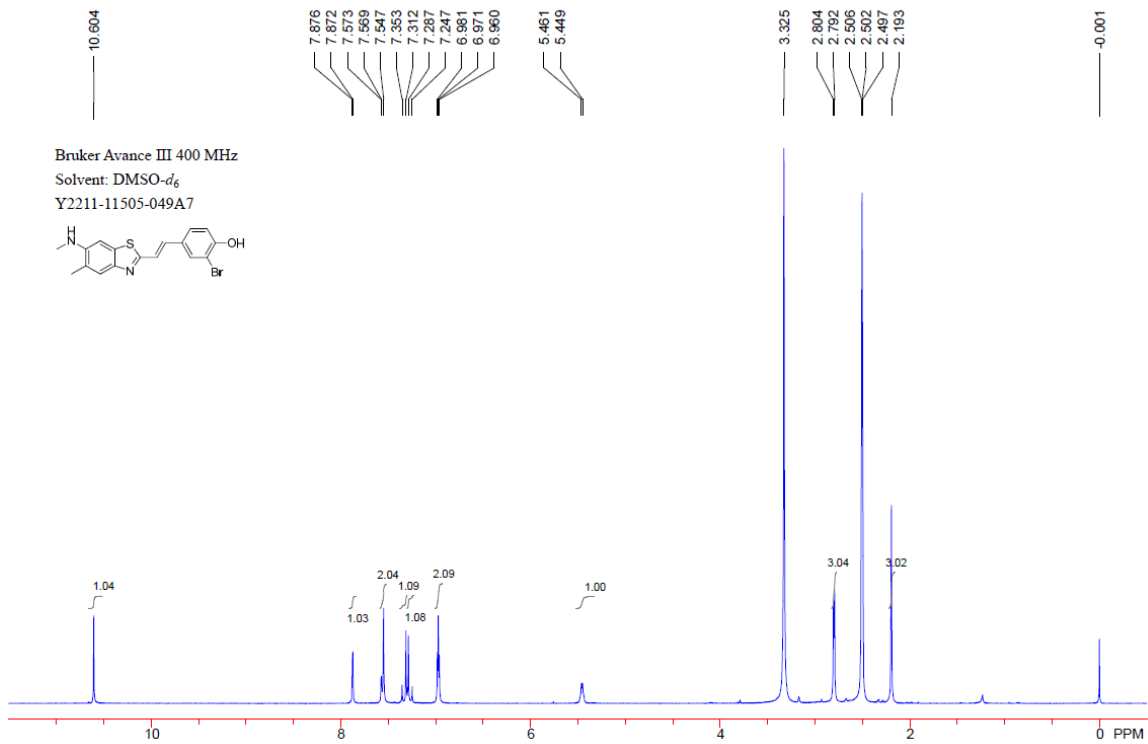
¹H NMR spectrum of EU04-03A



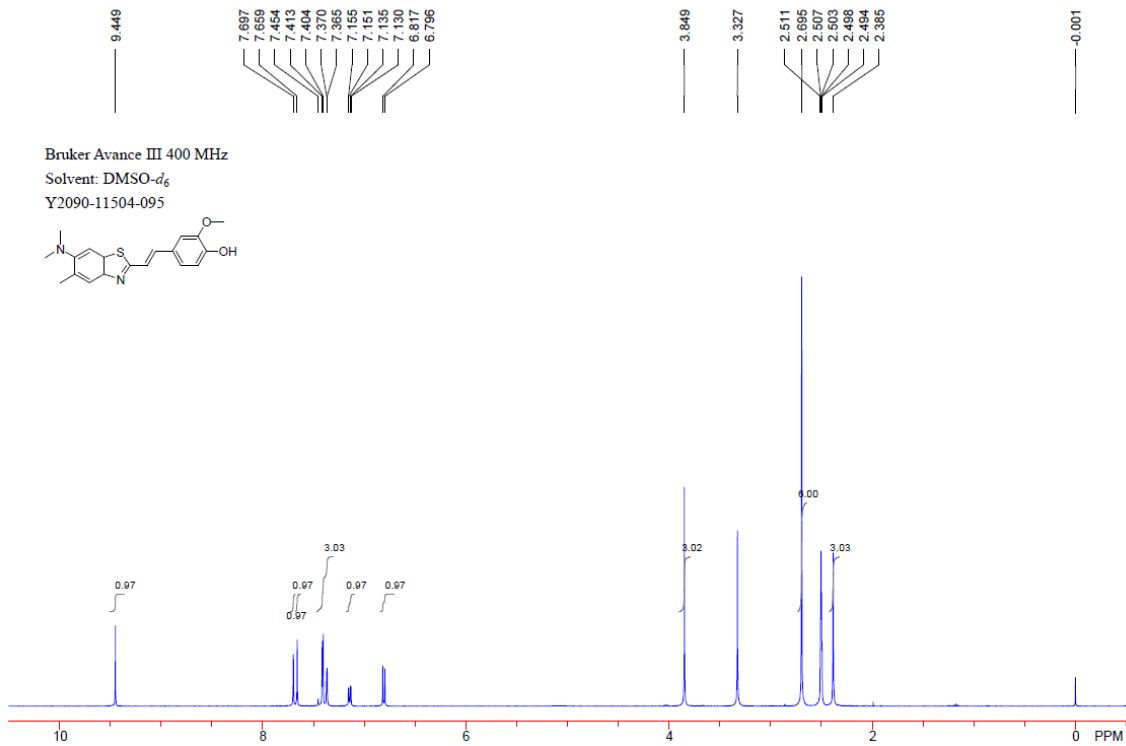
¹H NMR spectrum of EU04-03B



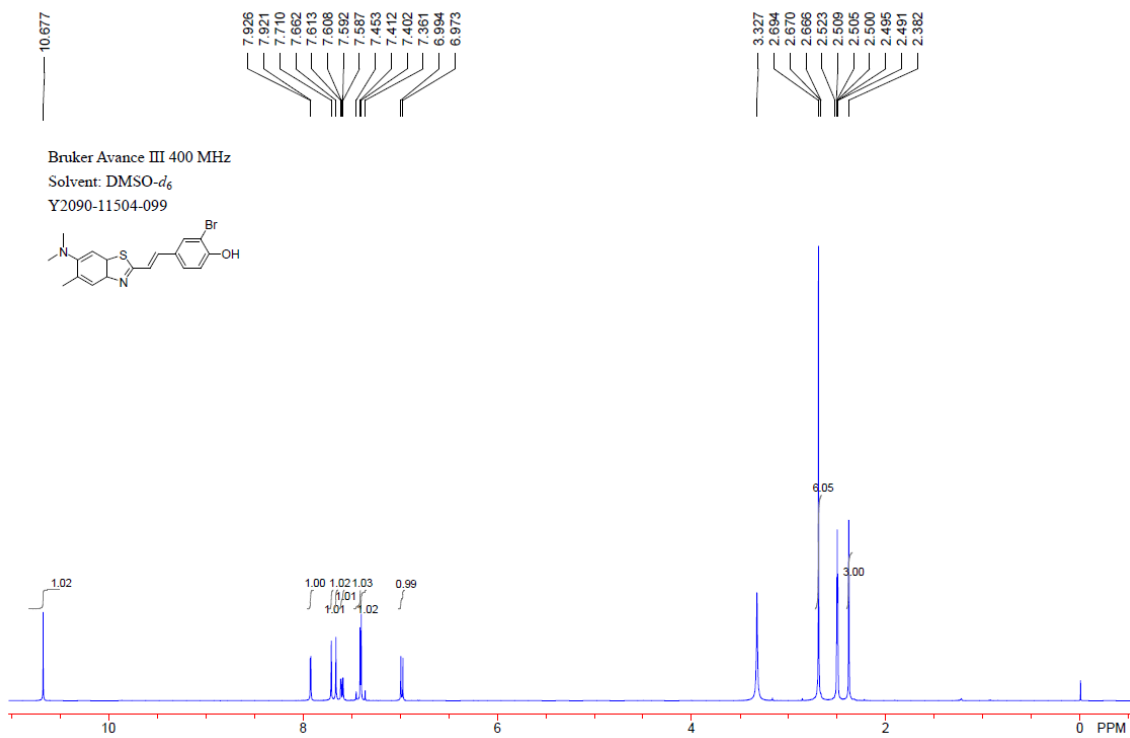
¹H NMR spectrum of EU05-01A



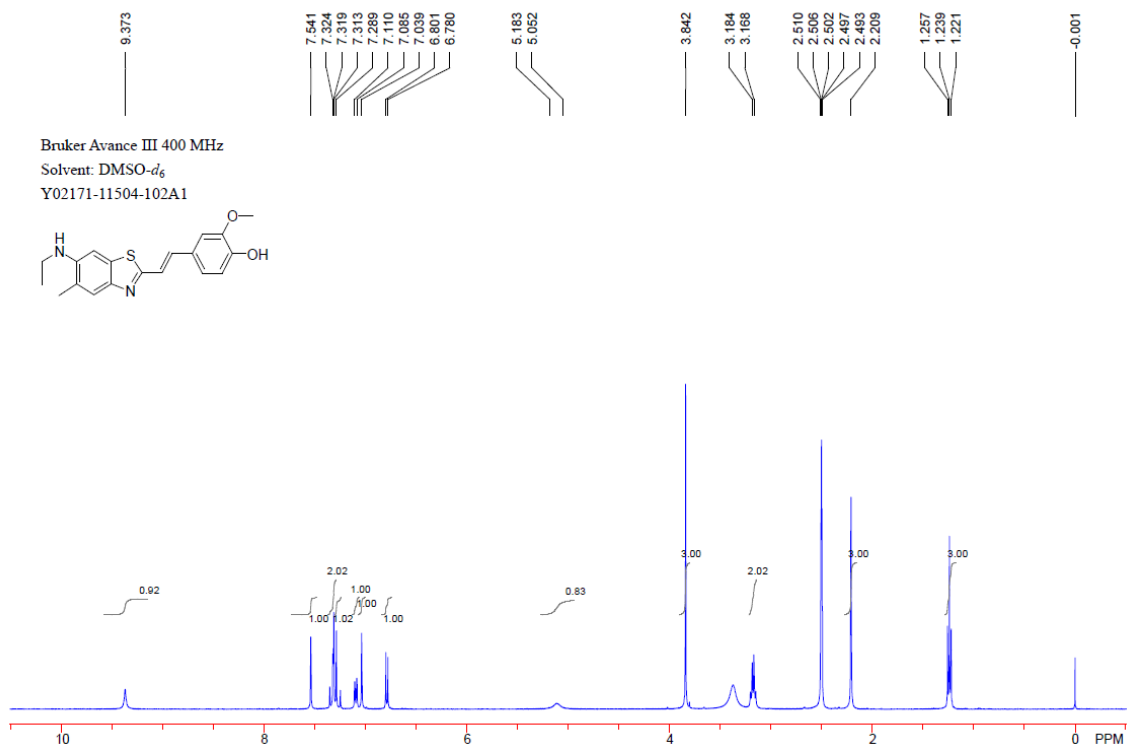
¹H NMR spectrum of EU05-01B



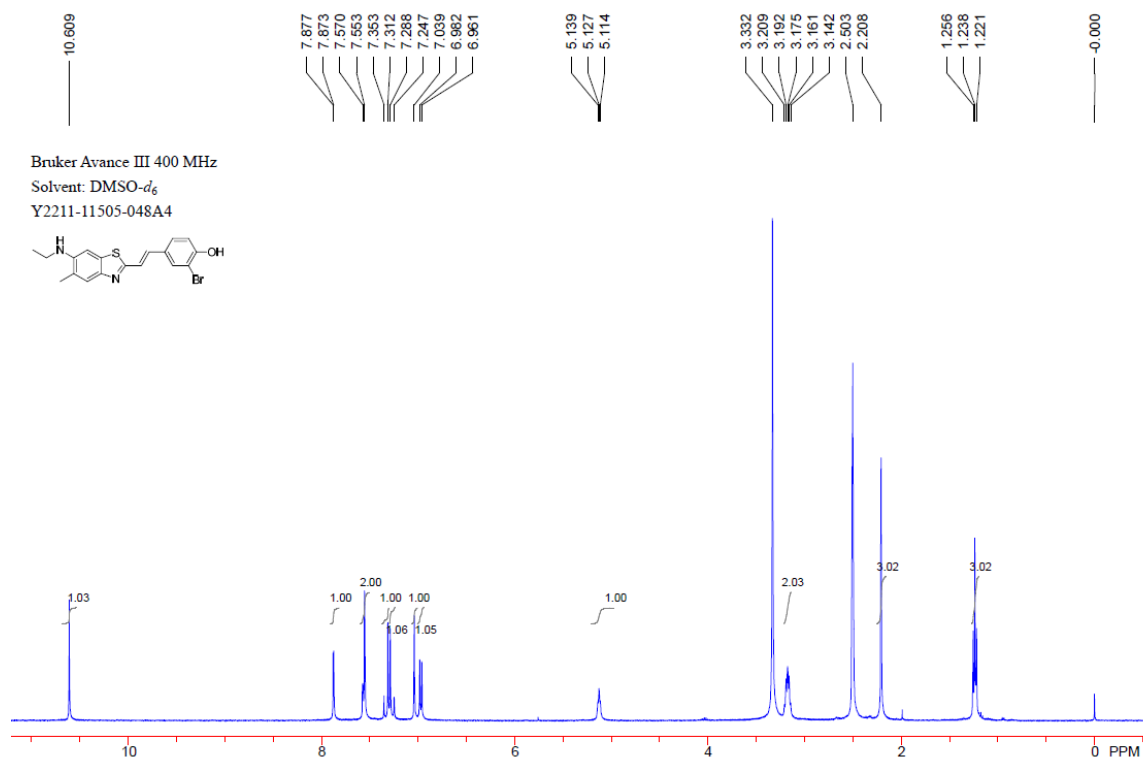
¹H NMR spectrum of EU05-02A



¹H NMR spectrum of EU05-02B

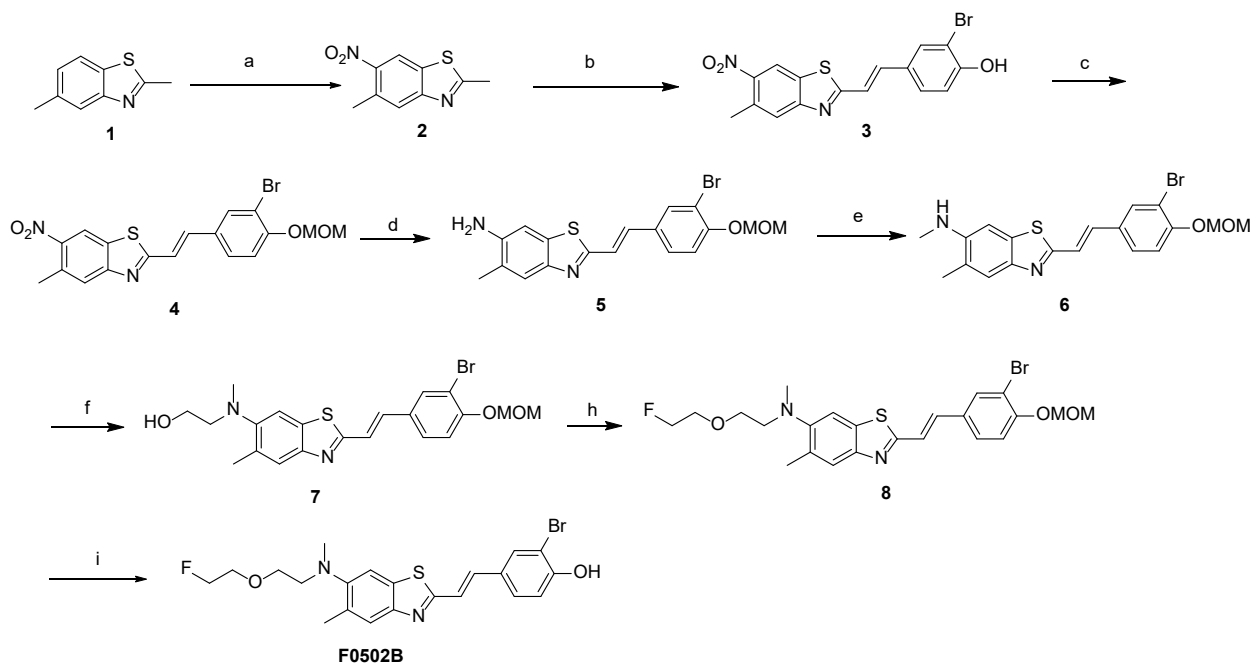


¹H NMR spectrum of EU05-03A



¹H NMR spectrum of EU05-03B

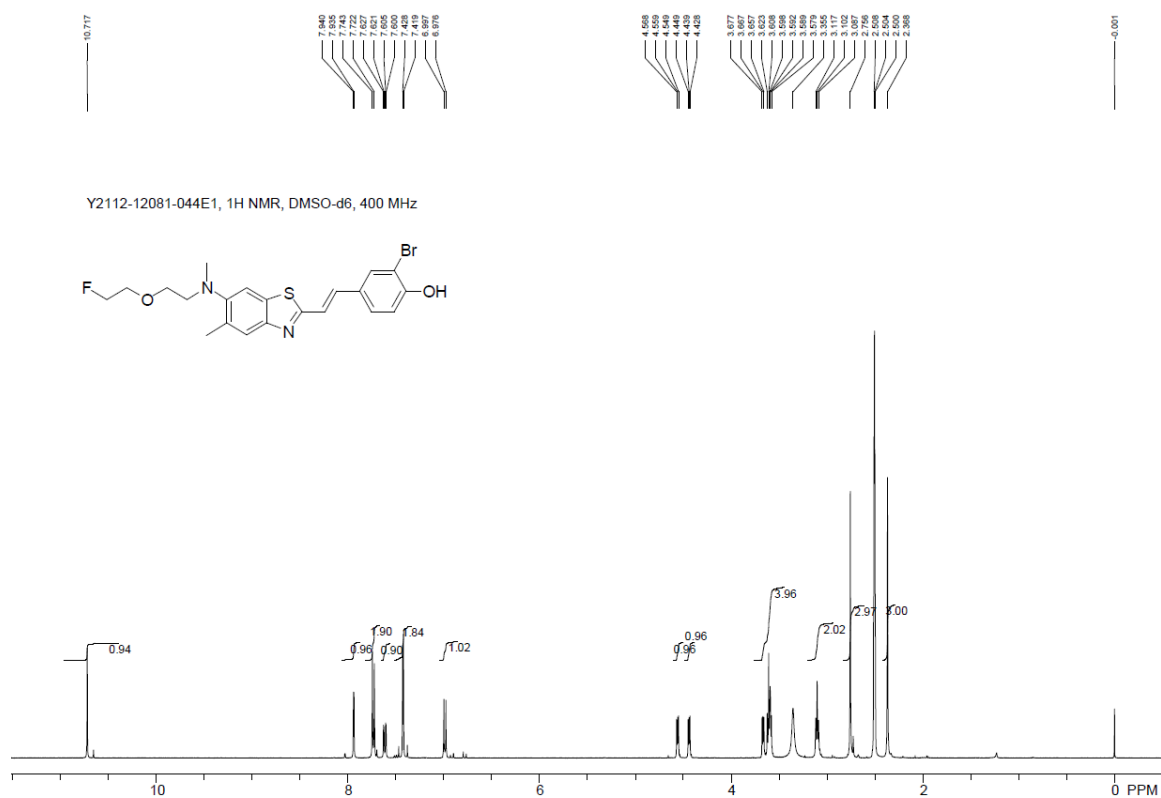
D.) Synthetic routes for F0502B.



Reagent and conditions: (a) HNO₃, H₂SO₄, 0 °C-rt; (b) 3-bromo-4-hydroxybenzaldehyde, H₂SO₄, dioxane, 100 °C; (c) MOMBr, K₂CO₃, DMF, 70 °C; (d)

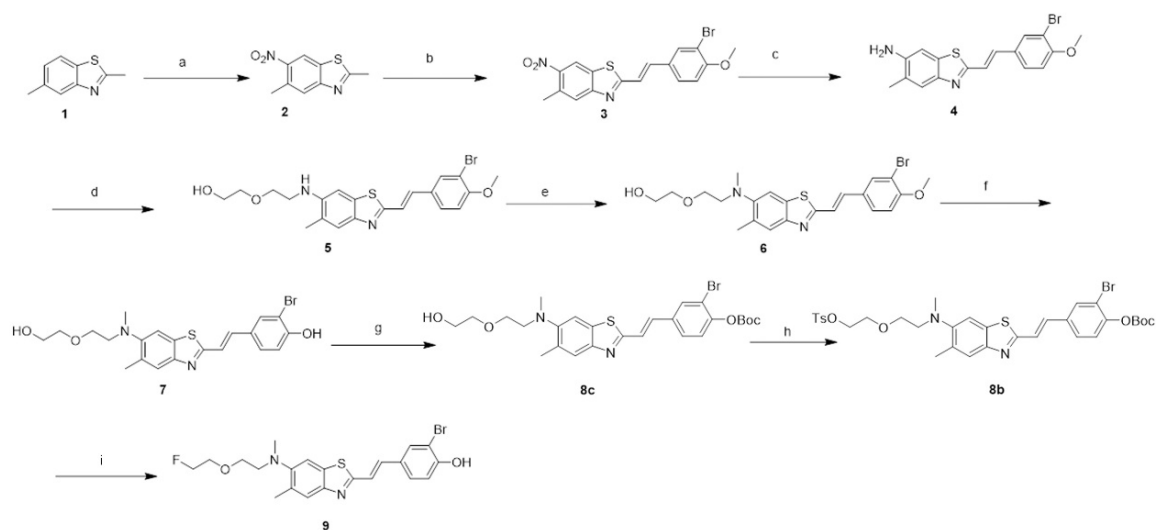
Fe, NH₄Cl, MeOH, rt; (e) MeI, K₂CO₃, DMF, 30 °C; (f) 2-iodoethanol, K₂CO₃, DMF, 60 °C; (h) 1-fluoro-2-iodoethane, NaH, DMF, 70 °C; (i) TFA, DCM, 0 °C.

¹H NMR (400 MHz, DMSO-*d*₆): δ 10.71 (s, 1H), 7.93 (d, *J* = 2.0 Hz, 1H), 7.73 (d, *J* = 8.4 Hz, 2H), 7.61 (d, *J* = 8.8, 2.4 Hz, 1H), 7.42 (d, *J* = 7.6 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 1H), 4.55 (dd, *J* = 8.0, 4.0 Hz, 1H), 4.43 (dd, *J* = 8.0, 4.0 Hz, 1H), 3.68-3.57 (m, 4H), 3.11-3.08 (m, 2H), 2.75 (s, 3H), 2.36 (s, 3H). MS (ESI) *m/z* 466.9, 464.9 [M + H]⁺.



¹H NMR spectrum of F0502B

E.) ^{18}F -labeled synthetic routes for F0502B.



Reagents and conditions: (a) HNO_3 , H_2SO_4 , 0 °C-rt; (b) 3-bromo-4-methoxybenzaldehyde, H_2SO_4 , dioxane, 100 °C; (c) Fe, NH_4Cl , MeOH, 80 °C; (d) 2-(2-iodoethoxy)ethanol, K_2CO_3 , DMF, 85 °C; (e) MeI, K_2CO_3 , DMF, 30 °C; (f) EtSNa, DMF, 130 °C; (g) Boc_2O , THF, 70 °C; (h) TsCl, Et₃N, DCM, rt; (i) 1) K^{18}F /Kryptofix 222, DMSO, 110 °C; 2) 3 M HCl, 100 °C; (3) 0.3 M NaHCO_3 .