

Sonogashira Cross Coupling General Procedure

To a stirred solution of 2,3-dibromothiophene (0.20 g, 0.83 mmol) in Et₃N (1 mL) was added dropwise, a solution of trimethylsilylacetylene (0.08 g, 0.83 mmol) in Et₃N (1 mL), followed by Pd(PPh₃)₂Cl₂ (2.3 mg, 0.003 mmol) and PPh₃ (1.1 mg, 0.004 mmol), and the mixture was heated to 35 °C for 10 min. CuI (1.2 mg, 0.006 mmol) was then added, and the reaction mixture was stirred at 60 °C for 3 h. After cooling down to 25 °C, the mixture was diluted with AcOEt, poured into H₂O and extracted with AcOEt (3x5 mL). The combined organic extracts were dried (Na₂SO₄) and evaporated. Purification by chromatography (SiO₂, hexane) afforded 0.12 g (56%) of 3-bromo-2-(2-trimethylsilylethyn-1-yl)thiophene as a colorless oil.