

2.5.6 Preparation of 1-[4-(azepan-1-yl)but-2-yn-1-yl]-2-methyl-2,3-dihydro-1H-indole (AZ-7)

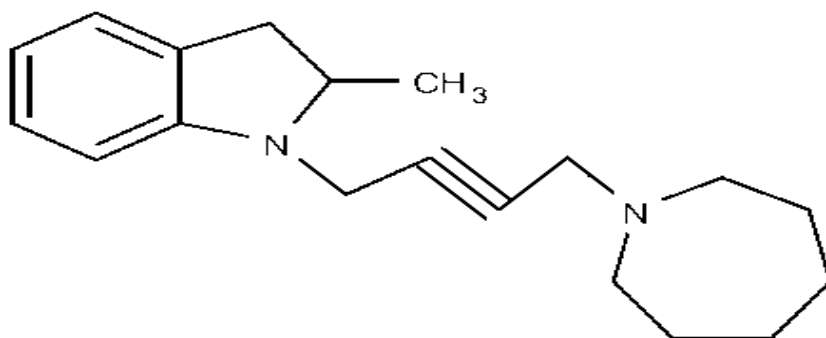


Figure 28: 1-[4-(azepan-1-yl)but-2-yn-1-yl]-2-methyl-2,3-dihydro-1H-indole.

The titled compound was prepared following the general procedure for synthesis of 2-methyl-1-[4-(amino-1-yl)but-2-yn-1-yl]-2,3-dihydro-1H-indole, AZ2-AZ7, yielded 2.3 g 85.1% . **IR (NaCl, Cm^{-1}):** 3048, 2926, 2851 (ArH, stretch), 1607, 1481, 1460 (Ar, C=C, stretch), 1234, 1147 (Ar, C=C, bending), 1088, 749 (ArH, bending). **$^1\text{H-NMR}$ (DMSO- d_6):** δ 1.22 (d, 3H, N-CH- CH_3), 1.18, 1.46, 1.48, 1.62, 2.46, 2.89 (m, various protons of cyclicamine), 3.06 (d, 1H, CH_2 -CH-N), 3.50, 3.89 (d, 2H, $J = 2.4$ Hz, CH_2 -C) due to long range coupling, 3.66 (d, 1H, CH_2 -CH-N), 3.18 (m, 1H, $J = 6.15$ Hz, N- CH - CH_3), 3.73, 4.13 (d, 2H, $J = 2.4$ Hz, C- CH_2 -N) due to long range coupling, , 6.8-7.28 (m, 4H, ArH).