

2.5.4 Preparation of 2-methyl-1-[4-(piperidin-1-yl)but-2-yn-1-yl]-2,3-dihydro-1H-indole (AZ-5)

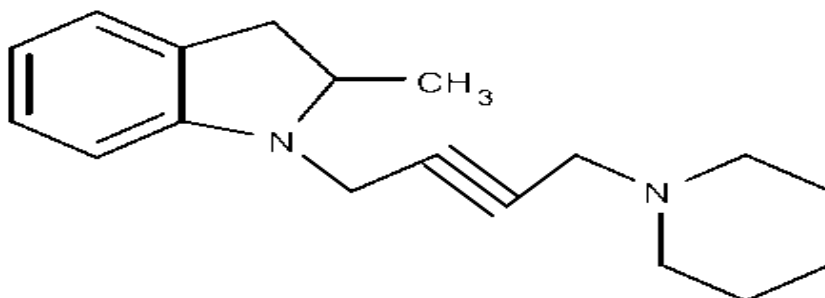


Figure 26: 2-methyl-1-[4-(piperidin-1-yl)but-2-yn-1-yl]-2,3-dihydro-1H-indole.

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 1.4 g 52.2 %. **IR (NaCl, Cm^{-1}):** 3048, 2932, 2849 (ArH, stretch), 1607, 1481, 1460 (Ar, C=C, stretch), 1234, 1186, 1110 (Ar, C=C, bending), 852, 750, 718 (ArH, bending). **$^1\text{H-NMR}$ (DMSO-d_6):** δ 1.22 (d, 3H, C- CH_3), 1.85, 1.96, 2.06, 2.28, 3.49 (m, various protons of cyclicamine), 3.06 (d, 1H, $\text{CH}_2\text{-C-N}$), 3.50, 3.89 (t, 2H, $J = 2.4$ Hz, $\text{CH}_2\text{-C}$) due to long range coupling, 3.66 (d, 1H, $\text{CH}_2\text{-C-N}$), 3.81 (m, 1H, $J = 6.15$ Hz, N- CH-CH_3), 3.73, 4.12 (t, 2H, $J = 2.4$ Hz, C- $\text{CH}_2\text{-N}$) due to long range coupling, 6.81-7.28 (m, 4H, ArH). DSC: melting point= 99 $^\circ\text{C}$.