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

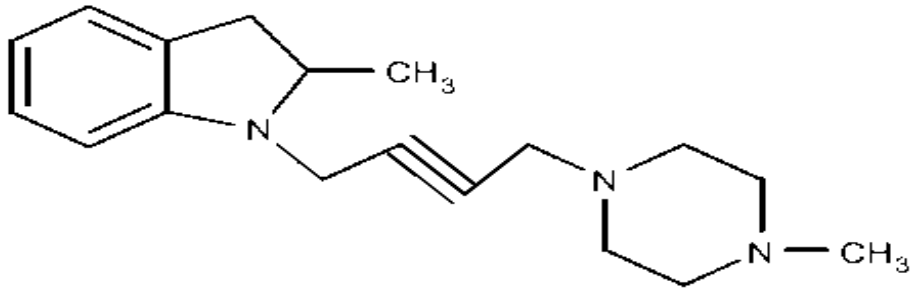

Figure 24: 2-methyl-1-[4-(4-methylpiperizin-1-yl)but-2-yn-1-yl]-2,3-dihydro-1H-indole.

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 2.3 gm 81.2 %. **IR (NaCl, Cm^{-1}):** 3048, 2935, 2795 (ArH, stretch), 1607, 1482, 1456 (Ar, C=C, stretch), 1235, 1165, 1010 (Ar,C=C, bending), 817, 749 (ArH, bending). **^{1}H-NMR (DMSO-d_6):** δ 1.22 (d, 3H, C-CH_3), 2.14, 2.51, 2.82, 3.20 (m, various protons of cyclicamine), 2.24 (s, 3H, *J* = 4.4 Hz N-CH_3), 3.73 (t, 1H, *J* = 2.4 Hz, C-CH_2-N), 4.13 (t, 1H, *J* = 2.4 Hz C-CH_2-N) due to long range coupling, 3.46 (t, 1H, CH_2-C) due to long range coupling, 3.77 (m, *J* = 6.15 Hz, 1H, N-C<u>H</u>-CH_3), 4.13 (t, 2H, *J* = 2.4 Hz, CH_2-C) due to long range coupling, 6.81-7.28 (m,4H, ArH).