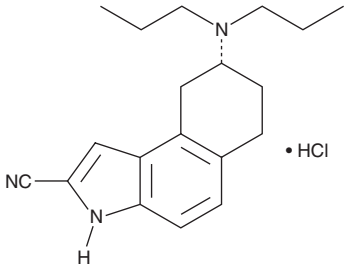
PRODUCT INFORMATION

U-92016A

Item No. 23807

CAS Registry No.:	149654-41-1
Formal Name:	(8R)-8-(dipropylamino)-6,7,8,9-tetrahydro-3H-benz[e]indole-2-carbonitrile, monohydrochloride
MF:	$C_{19}H_{25}N_3$ • HCl
FW:	331.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 287 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

U-92016A is supplied as a crystalline solid. A stock solution may be made by dissolving the U-92016A in the solvent of choice. U-92016A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of U-92016A in these solvents is approximately 1, 20, and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of U-92016A can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of U-92016A in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

U-92016A is an agonist of the serotonin (5-HT) receptor subtype 5-HT_{1A} (K_i = 0.4 nM).[1] It is selective for 5-HT_{1A} over 5-HT_{1D}, 5-HT_2, dopamine D_1 and D_2, and α_1- and α_2-adrenergic receptors (K_is = 7.7, >1,000, >1,000, 36, >1,000, and >1,000 nM, respectively). U-92016A inhibits forskolin-stimulated cAMP synthesis in CHO cells transfected with human 5-HT_{1A}. *In vivo*, U-92016A induces hypothermia in mice (ED_{50} = 0.041 mg/kg). It induces 5-HT syndrome, as measured by increased flat body posture and reciprocal forepaw treading, as well as decreases accumulation of 5-HT and dopamine in rats when administered at a dose of 5 mg/kg. U-92016A also decreases arterial blood pressure and heart rate in a dose-dependent manner in spontaneously hypertensive rats and reverses isolation-induced aggression in mice.

Reference

1. McCall, R.B., Romero, A.G., Bienkowski, M.J., *et al.* Characterization of U-92016A as a selective, orally active, high intrinsic activity 5-hydroxytryptamine$_{1A}$ agonist. *J. Pharmacol. Exp. Ther.* **271(2)**, 875-883 (1994).

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