

PRODUCT INFORMATION

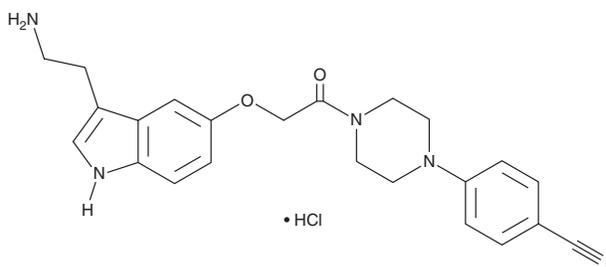


Donitriptan (hydrochloride)

Item No. 44116

CAS Registry No.: 170911-68-9
Formal Name: 4-[4-[2-[[3-(2-aminoethyl)-1H-indol-5-yl]oxy]acetyl]-1-piperazinyl]-benzonitrile, monohydrochloride

Synonym: F 11356
MF: C₂₃H₂₅N₅O₂ • HCl
FW: 439.9
Purity: ≥98%
Supplied as: A 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

Donitriptan (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the donitriptan (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Donitriptan (hydrochloride) is slightly soluble (0.1-1 mg/ml) in acetonitrile.

Donitriptan (hydrochloride) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Donitriptan is an agonist of the serotonin (5-HT) receptor subtypes 5-HT_{1B} and 5-HT_{1D}.¹ It inhibits forskolin-induced cAMP formation in C6 cells expressing the human receptors (pD₂ = 8.91 and 9.57, respectively). Donitriptan is selective for 5-HT_{1B} and 5-HT_{1D} (K_is = 0.36 and 0.15 nM, respectively, for the human receptors) over 5-HT_{1A}, 5-HT_{1E}, and 5-HT_{1F} (K_is = 25, 1,148, and 3,388 nM, respectively) and 5-HT_{2A}, 5-HT_{5A}, 5-HT₆, and 5-HT₇ (K_is = 182, 813, 2,344, and 371 nM, respectively). It induces contractions in rabbit saphenous vein rings (pD₂ = 7.1) and increases outward steady-state hyperpolarizing potassium currents (I_K) in isolated guinea pig trigeminal ganglion cells when used at a concentration of 100 nM. *In vivo*, donitriptan (0.63 and 2.5 mg/kg) decreases total carotid blood flow and increases vascular resistance but does not affect mean arterial pressure or heart rate in anesthetized pigs.

Reference

1. John, G.W., Pauwels, P.J., Perez, M., *et al.* F 11356, a novel 5-hydroxytryptamine (5-HT) derivative with potent, selective, and unique high intrinsic activity at 5-HT_{1B/1D} receptors in models relevant to migraine. *J. Pharmacol. Exp. Ther.* **290**(1), 83-95 (1999).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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