

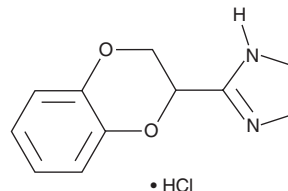
PRODUCT INFORMATION



Idazoxan (hydrochloride)

Item No. 41310

CAS Registry No.: 79944-56-2
Formal Name: 2-(2,3-dihydro-1,4-benzodioxin-2-yl)-4,5-dihydro-1H-imidazole, monohydrochloride
Synonym: RX 781094
MF: $C_{11}H_{12}N_2O_2 \cdot HCl$
FW: 240.7
Purity: $\geq 95\%$
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Idazoxan (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the idazoxan (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Idazoxan (hydrochloride) is soluble in organic solvents such as ethanol and DMSO. Idazoxan (hydrochloride) is sparingly soluble (1-10 mg/ml) in ethanol and soluble (≥ 10 mg/ml) in DMSO.

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 idazoxan (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. Idazoxan (hydrochloride) is soluble (≥ 10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Idazoxan is an antagonist of α_2 -adrenergic receptors (α_2 -ARs) and imidazoline I_1 and I_2 receptors (IC_{50} s = 69, 66, and 61 nM, respectively).¹ It selectively binds to α_{2A} - and α_{2C} -ARs over α_{2B} -ARs (K_d s = 67, 69, and 407 nM, respectively), as well as α_2 -ARs over α_1 -ARs (IC_{50} s = 0.7 and 4,000 μM , respectively).^{2,3} Idazoxan (0.1-5 mg/kg) increases mean arterial pressure and decreases heart rate in rabbits.³ It reverses the anti-hyperalgesic activity of 2-BFI (Item No. 42338) in rat models of inflammatory and neuropathic pain and the antidepressant-like activity of 2-BFI in the tail suspension test in mice.^{4,5} Idazoxan (7.5 and 10 mg/kg) reduces L-DOPA-induced dyskinesia in a cynomolgus monkey model of MPTP-induced Parkinson's disease.⁶

References

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3. Hannah, J.A.M., Hamilton, C.A., and Reid, J.L. RX781094, a new potent α_2 adrenoceptor antagonist. In vivo and in vitro studies in the rabbit. *Naunyn Schmiedeberg's Arch. Pharmacol.* **322**(3), 221-227 (1983).
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5. Tonello, R., Villarinho, J.G., da Silva Sant'Anna, G., et al. The potential antidepressant-like effect of imidazoline I_2 ligand 2-BFI in mice. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **37**(1), 15-21 (2012).
6. Grondin, R., Tahar, A.H., Doan, V.D., et al. Noradrenoceptor antagonism with idazoxan improves L-dopa-induced dyskinesias in MPTP monkeys. *Naunyn Schmiedeberg's Arch. Pharmacol.* **361**(2), 181-186 (2000).

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.

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