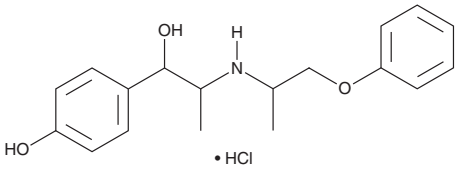
PRODUCT INFORMATION

Isoxsuprine (hydrochloride)

Item No. 20688

CAS Registry No.: 579-56-6
Formal Name: 4-hydroxy-α-[1-[(1-methyl-2-phenoxyethyl) amino]ethyl]-benzenemethanol, monohydrochloride
MF: $C_{18}H_{23}NO_3$ • HCl
FW: 337.8
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 269, 275 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

Isoxsuprine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the isoxsuprine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Isoxsuprine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of isoxsuprine (hydrochloride) in these solvents is approximately 0.16, 5, and 10 mg/ml, respectively.

Isoxsuprine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isoxsuprine (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Isoxsuprine (hydrochloride) has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Isoxsuprine is an adrenergic receptor modulator that has α-adrenergic receptor (α-AR) antagonist and β-AR agonist properties.[1,2] It induces vasodilation of isolated equine common digital artery strips precontracted with norepinephrine, indicating an α-AR effect, and induces relaxation of isolated fowl cecum, an effect that can be blocked by the β-AR antagonist propranolol (Item Nos. 23349 | 17291).[2,3] Isoxsuprine has antinociceptive effects in an acetic acid writhing test in mice.[4] It also inhibits oxytocin-induced contractions in isolated rat uterus (IC_{50} = 9.15 µM).[5] It delays labor onset in rats by 31.63 hours when administered at a dose of 10 mg/kg per day on days 13 to 21 of gestation but increases heart rate with increasing concentration.

References

1. Cook, P. and James, I. *N. Engl. J. Med.* **305(26)**, 1560-1564 (1981).
2. Belloli, C., Carcano, R., Arioli, F., *et al. Equine Vet. J.* **32(2)**, 119-124 (2000).
3. Ekert, R.S. and Macallister, C.G. *J. Vet. Pharmacol. Ther.* **25(2)**, 81-87 (2002).
4. Bentley, G.A. and Starr, J. *Br. J. Pharmacol.* **88(3)**, 515-521 (1988).
5. Viswanathan, C.L., Kodgule, M.M., and Chaudhari, A.S. *Bioorg. Med. Chem. Lett.* **15(15)**, 3532-3535 (2005).

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