

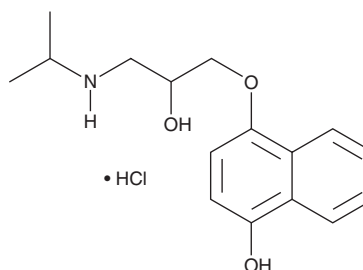
PRODUCT INFORMATION



(±)-4-hydroxy Propranolol (hydrochloride)

Item No. 18630

CAS Registry No.: 14133-90-5
Formal Name: 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-1-naphthalenol, monohydrochloride
MF: C₁₆H₂₁NO₃ • HCl
FW: 311.8
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 208, 243, 319 nm



Laboratory Procedures

For long term storage, we suggest that (±)-4-hydroxy propranolol (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

(±)-4-hydroxy Propranolol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-4-hydroxy propranolol (hydrochloride) in the solvent of choice. (±)-4-hydroxy Propranolol (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (±)-4-hydroxy propranolol (hydrochloride) in DMSO and ethanol is approximately 30 mg/ml and approximately 50 mg/ml in DMF.

(±)-4-hydroxy Propranolol (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)-4-hydroxy propranolol (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (±)-4-hydroxy Propranolol (hydrochloride) has a solubility of approximately 0.05 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Propranolol inhibits β_1 -, β_2 -, and β_3 -adrenergic receptors with log K_D values of -8.16, -9.08, and -6.93, respectively.^{1,2} (±)-4-hydroxy Propranolol is an active metabolite of propranolol, inhibiting β_1 - and β_2 -adrenergic receptors with K_D values of 2.4 and 5.8 nM, respectively.^{3,4} It is comparable to propranolol in potency in antagonizing the effects of isoprenaline on heart rate and blood pressure in cats and dogs.^{3,5} (±)-4-hydroxy propranolol also has antioxidant properties at micromolar concentrations.⁶

References

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4. Nelson, W.L., Bartels, M.J., Bednarski, P.J., et al. *J. Med. Chem.* **27**(7), 857-861 (1984).
5. Fitzgerald, J.D. and O'Donnell, S.R. *Br. J. Pharmacol.* **45**(2), 207-217 (1972).
6. Mak, I.T. and Weglicki, W.B. *J. Pharmacol. Exp. Ther.* **308**(1), 85-90 (2004).

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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