(S)-(-)-Propranolol hydrochloride

Product Number  P 8688
Storage Temperature  2-8 °C

Product Description
Molecular Formula: C16H21NO2 • HCl
Molecular Weight: 295.8
CAS Number: 3506-09-0
pKₐ: 9.5 (24 °C)¹
Melting point: 163-164 °C²
Extinction coefficient: E1% = 222 (288 nm, acidified H₂O); 240 (290 nm, methanol); 143 (306 nm, methanol); 86 (319 nm, methanol)¹

Propranolol is a non-cardioselective β blocker that is reported to have membrane-stabilizing properties, but does not possess intrinsic sympathomimetic activity.³

This product is a purified S(-) isomer. The pharmacological properties of the optical isomers have been reported in experiments with animals. The (-)-isomer is 60-100 times more active than the (+)-isomer in blocking the inotropic, chronotropic, and vasodepressor actions of isoprenaline.⁴ The (-)-isomer is much more active at blocking β-adrenergic stimulation.⁵ A review of the pharmacokinetics has been published.⁶

Propranolol is also an inhibitor of Protein Kinase C.⁷

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
Propranolol HCl is soluble in water and alcohol (10 mg/ml). It is slightly soluble in chloroform and practically insoluble in ether, benzene, and ethyl acetate.²³

Storage/Stability
In aqueous solutions, propranolol decomposes with oxidation of the isopropylamine side-chain, accompanied by a reduction in pH and discoloration of the solution. Solutions of propranolol are most stable at pH 3. Propranolol decomposes rapidly in alkaline solutions.³

References
2. The Merck Index, 12th ed., Entry# 8025.

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