

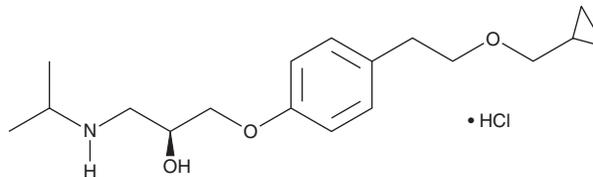
PRODUCT INFORMATION



Levobetaxolol (hydrochloride)

Item No. 33435

CAS Registry No.: 116209-55-3
Formal Name: (2S)-1-[4-[2-(cyclopropylmethoxy)ethyl]phenoxy]-3-[(1-methylethyl)amino]-2-propanol, monohydrochloride
Synonym: (S)-Betaxolol
MF: C₁₈H₂₉NO₃ • HCl
FW: 343.9
Purity: ≥98%
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

Levobetaxolol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the levobetaxolol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Levobetaxolol (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of levobetaxolol (hydrochloride) in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

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 levobetaxolol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of levobetaxolol (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Levobetaxolol is an isomer of betaxolol (Item No. 18625) and antagonist of the β_1 -adrenergic receptor (β_1 -AR; $K_i = 0.76$ nM for the human receptor).¹ It is selective for β_1 -ARs over β_2 -ARs ($K_i = 32.6$ nM), as well as a panel of 89 additional receptors (IC_{50} s = >1 μ M). Levobetaxolol inhibits cAMP production induced by isoproterenol (Item No. 15592) in human non-pigmented ciliary epithelial cells ($K_i = 16.4$ nM). Topical application of levobetaxolol (150 μ g/eye) reduces intraocular pressure in a cynomolgus monkey model of ocular hypertension. Formulations containing levobetaxolol have been used in the treatment of glaucoma.

Reference

1. Sharif, N.A., Xu, S.X., Crider, J.Y., *et al.* Levobetaxolol (Betaxon™) and other β -adrenergic antagonists: Preclinical pharmacology, IOP-lowering activity and sites of action in human eyes. *J. Ocul. Pharmacol. Ther.* **17**(4), 305-317 (2001).

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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