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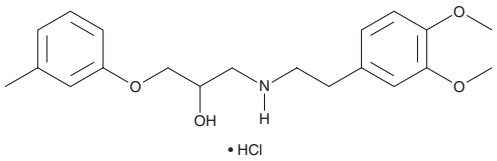
PRODUCT INFORMATION

Bevantolol (hydrochloride)

Item No. 29792

CAS Registry No.: 42864-78-8
Formal Name: 1-[[2-(3,4-dimethoxyphenyl)ethyl]amino]-3-(3-methylphenoxy)-2-propanol, monohydrochloride
Synonyms: CI-755, DL-Bevantolol, NC-1400
MF: $C_{20}H_{27}NO_4 \bullet HCl$
FW: 381.9
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Bevantolol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the bevantolol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Bevantolol (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of bevantolol (hydrochloride) in these solvents is approximately 30 mg/ml.

Bevantolol (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bevantolol (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bevantolol (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Bevantolol is an antagonist of the β_1-adrenergic receptor (β_1-AR; K_i = 14.79 nM in rat cortical membranes).[1] It is selective for β_1- over β_2-ARs (K_i = 588.84 nM), as well as α_2-ARs up to 100 µM, but is an antagonist of α_1-ARs (K_i = 125.89 nM). Bevantolol inhibits low voltage-activated calcium currents (LVA-I_{Ca}) in dissociated rat ventro-medial hypothalamic neurons (IC_{50} = 40 µM).[2] It inhibits norepinephrine-induced contraction of isolated rabbit thoracic aorta (pA_2 = 4.77), isoprenaline-induced inotropic effects in isolated guinea pig right atria (pA_2 = 7.74), and isoprenaline-induced relaxation of isolated guinea pig trachea (pA_2 = 6.69).[3] Bevantolol (250 mg/kg per day) prevents immobilization stress-induced increases in systolic blood pressure in a rat model of stress-induced hypertension.[4]

References

1. Takita, M., Kigoshi, S., and Muramatsu, I. Selectivity of bevantolol hydrochloride towards *a* and *β*-adrenoceptor subtypes in rat cerebral cortex. *Jpn. J. Pharmacol.* **58(2)**, 193-196 (1992).
2. T., O., Kobayashi, T., Nishioka, K., *et al.* Ca^{2+}-antagonistic action of bevantolol on hypothalamic neurons in vitro: Its comparison with those of other *β*-adrenoceptor antagonists, a local anesthetic and a Ca^{2+}-antagonist. *Brain Res.* **706(2)**, 289-292 (1996).
3. Takayanagi, I., Kizawa, Y., Iwasaki, S., *et al.* (+/-)-1-[[2-(3,4-dimethoxphenyl)ethyl]amino]-3-(3-methylphenoxy)-2-propanol hydrochloride (bevantolol, NC-1400) as a β_1-selective adrenoceptor blocker With a_1-adrenoceptor Blocking Activity. *Gen. Pharmacol.* **18(1)**, 87-90 (1987).
4. Takita, M., Kigoshi, S., and Muramatsu, I. Effects of bevantolol HCl on immobilization stress-induced hypertension and central *β*-adrenoceptors in rats. *Pharmacol. Biochem. Behav.* **45**, 623-627 (1993).

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.

WARRANTY AND LIMITATION OF REMEDY
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