

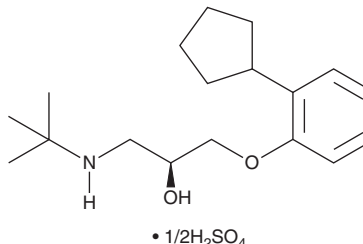
PRODUCT INFORMATION



Penbutolol (hemisulfate)

Item No. 29524

CAS Registry No.: 38363-32-5
Formal Name: (2S)-1-(2-cyclopentylphenoxy)-3-[(1,1-dimethylethyl)amino]-2-propanol, hemisulfate
Synonym: HOE 39-893d
MF: $C_{18}H_{29}NO_2 \cdot 1/2H_2SO_4$
FW: 340.5
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 217 nm
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Penbutolol (hemisulfate) is supplied as a solid. Aqueous solutions of penbutolol (hemisulfate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of penbutolol (hemisulfate) in PBS, pH 7.2, is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Penbutolol is an antagonist of β -adrenergic receptors (β -ARs; $IC_{50} = 2.8$ nM) and the serotonin (5-HT) receptor subtype 5-HT_{1A} ($IC_{50} = 9.9$ nM).¹ It inhibits adenylate cyclase activity induced by the β -AR agonist isoprenaline (isoproterenol; Item No. 15592) in guinea pig myocardial membranes with a K_i value of 2.4 nM.² Penbutolol reduces basal renin activity and blood pressure in spontaneously hypertensive rats.³ It decreases isolation-induced aggressive behavior in mice ($ED_{50} = 56$ μ mol/kg) and reverses reductions in aggression induced by 8-hydroxy-DPAT (Item No. 22608) and TFMPP with ED_{50} values of 8.1 and 2.1 μ mol/kg, respectively.¹ Formulations containing penbutolol were previously used in the treatment of arterial hypertension.

References

1. Sánchez, C., Arnt, J., and Moltzen, E.K. The antiaggressive potency of (-)-penbutolol involves both 5-HT_{1A} and 5-HT_{1B} receptors and β -adrenoceptors. *Eur. J. Pharmacol.* **297**(1-2), 1-8 (1996).
2. Krawietz, W., Poppert, D., Erdmann, E., et al. β -adrenergic receptors in guinea-pig myocardial tissue. *Naunyn Schmiedeberg's Arch. Pharmacol.* **295**(3), 215-224 (1976).
3. Kaiser, J., Härtfelder, G., Lindner, E., et al. Pharmacology of the β -receptor blocker penbutolol. *Arzneimittelforschung* **30**(3), 420-427 (1980).

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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