

PRODUCT INFORMATION



Oxprenolol (hydrochloride)

Item No. 16080

CAS Registry No.: 6452-73-9

Formal Name: 1-[(1-methylethyl)amino]-3-[2-(2-propen-1-yloxy)phenoxy]-2-propanol, monohydrochloride

Synonyms: dl-Alprenolol, dl-Oxprenolol

MF: $C_{15}H_{23}NO_3 \cdot HCl$

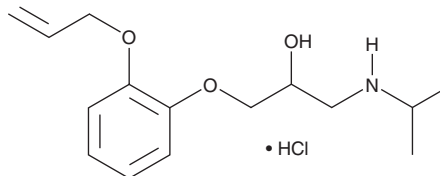
FW: 301.8

Purity: $\geq 98\%$

Supplied as: A crystalline 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

Oxprenolol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the oxprenolol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Oxprenolol (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of oxprenolol (hydrochloride) is approximately 33 mg/ml in ethanol and DMF and approximately 25 mg/ml in DMSO.

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 oxprenolol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of oxprenolol (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

Oxprenolol is an orally bioavailable β -adrenergic receptor (β -AR) antagonist ($K_i = 7.10$ nM in a radioligand binding assay using rat heart tissue).¹ It is non-selective and binds to both β_1 - and β_2 -ARs (K_d s = 2.09 and 1.35 nM in isolated rat heart and uterus, respectively).² Oxprenolol is selective for β -ARs over serotonin (5-HT) receptors in rat sarcolemmal membrane preparations (IC_{50} s = 4.13 and 23,300 nM, respectively), but it binds to 5-HT_{1A} receptors in rat hippocampus and 5-HT_{1B} in rat striatum (K_i s = 94.2 and 642 nM, respectively).^{3,4} Formulations containing oxprenolol have been used to treat hypertension and angina pectoris.⁵

References

1. Nagatomo, T., Sasaki, M., Tsuchihashi, H., *et al.* *Jpn. J. Pharmacol.* **33**(4), 851-857 (1983).
2. Abrahamsson, T. *Br. J. Pharmac.* **87**(4), 657-664 (1986).
3. Moretti-Rojas, I., Ezrailson, E.G., Birnbaumer, L., *et al.* *J. Biol. Chem.* **258**(20), 12499-12508 (1983).
4. Langlois, M., Brémont, B., Rousselle, D., *et al.* *Eur. J. Pharmacol.* **244**(1), 77-87 (1993).
5. Russo, M.E., and Covinsky, J.O. *Pharmacotherapy* **3**(2), 68-81 (1983).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM