

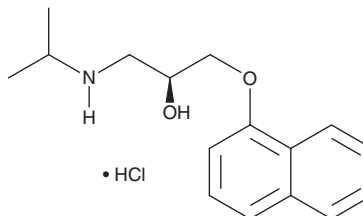
PRODUCT INFORMATION



(S)-(-)-Propranolol (hydrochloride)

Item No. 17291

CAS Registry No.: 4199-10-4
Formal Name: 1-[(1-methylethyl)amino]-3-(1-naphthalenyloxy)-2S-propanol, monohydrochloride
MF: C₁₆H₂₁NO₂ • HCl
FW: 295.8
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 229, 290, 319 nm
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

(S)-(-)-Propranolol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-(-)-propranolol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. (S)-(-)-Propranolol (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (S)-(-)-propranolol (hydrochloride) in these solvents is approximately 11, 16, and 14 mg/ml, respectively.

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 (S)-(-)-propranolol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (S)-(-)-propranolol (hydrochloride) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(S)-(-)-Propranolol is the active enantiomer of propranolol, a β-adrenergic receptor antagonist with log K_d values of -8.16, -9.08, and -6.93 for β₁, β₂, and β₃, respectively.^{1,2} It is also a non-specific serotonin receptor antagonist.³ Propranolol was one of the first β-adrenergic receptor blockers to be widely used in clinical practice for the treatment of hypertension, angina pectoris, and cardiac ischemia.^{1,4}

References

1. Baker, J.G. The selectivity of β-adrenoceptor antagonists at the human β₁, β₂ and β₃ adrenoceptors. *Br. J. Pharmacol.* **144**(3), 317-322 (2005).
2. Mehvar, R. and Brocks, D.R. Stereospecific pharmacokinetics and pharmacodynamics of β-adrenergic blockers in humans. *J. Pharm. Pharm. Sci.* **4**(2), 185-200 (2001).
3. Costain, D.W. and Green, A.R. β-Adrenoceptor antagonists inhibit the behavioural responses of rats to increased brain 5-hydroxytryptamine. *Br. J. Pharmacol.* **64**(2), 193-200 (1978).
4. Gerber, J.G., Freed, C.R., and Nies, A.S. Antihypertensive pharmacology. *West. J. Med.* **132**(5), 430-439 (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.

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, 10/05/2022

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