

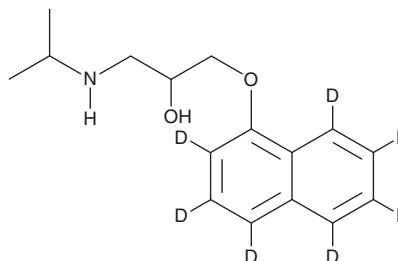
PRODUCT INFORMATION



(±)-Propranolol-d₇

Item No. 25282

CAS Registry No.: 344298-99-3
Formal Name: 1-[(1-methylethyl)amino]-3-(1-naphthalenyl-2,3,4,5,6,7,8-d₇-oxy)-2-propanol
MF: C₁₆H₁₄D₇NO₂
FW: 266.4
Chemical Purity: ≥98% (Propranolol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀
Supplied as: A 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

(±)-Propranolol-d₇ is intended for use as an internal standard for the quantification of propranolol (Item Nos. 23349 | 17291) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

(±)-Propranolol-d₇ is supplied as a solid. A stock solution may be made by dissolving the (±)-propranolol-d₇ in the solvent of choice. (±)-Propranolol-d₇ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (±)-propranolol-d₇ in ethanol and DMSO is approximately 30 mg/ml and approximately 50 mg/ml in DMF.

Description

(±)-Propranolol is a β-adrenergic receptor (β-AR) antagonist (K_ds = 6.91, 0.832, and 117.49 nM for human β₁-, β₂-, and β₃-ARs, respectively).¹ It reduces mean blood pressure, resting heart rate, and contractility and increases AV conduction time in dogs.² (±)-Propranolol restores normal sinus rhythm in dogs with ouabain-induced arrhythmias (ED₅₀ = 3.8 mg/kg).³ It also acts as a non-specific serotonin receptor antagonist, reducing tranlycypromine/L-tryptophan-induced hyperactivity in rats.⁴ Formulations containing (±)-propranolol have been used for the treatment of hypertension, angina pectoris, and cardiac ischemia.

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. Fitzgerald, J.D. and O'Donnell, S.R. A comparison of the haemodynamic effects of propranolol, 4-hydroxypropranolol and practolol in anaesthetized dogs. *Br. J. Pharmacol.* **45**(2), 207-217 (1972).
3. Basil, B., Jordan, R., Loveless, A.H., et al. A comparison of the experimental anti-arrhythmic properties of acebutolol (M and B 17,803), propranolol and practolol. *Br. J. Pharmacol.* **50**(3), 323-333 (1974).
4. 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).

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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