

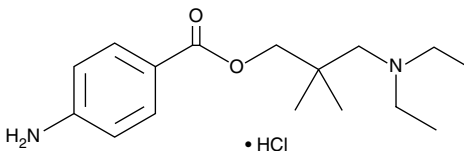
Product Information



Dimethocaine (hydrochloride)

Item No. 11159

CAS Registry No.: 553-63-9
Formal Name: 3-(diethylamino)-2,2-dimethyl-1-(4-aminobenzoate)-1-propanol, monohydrochloride
MF: C₁₆H₂₆N₂O₂ • HCl
FW: 314.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 222, 297 nm



Laboratory Procedures

For long term storage, we suggest that dimethocaine (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Dimethocaine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the dimethocaine (hydrochloride) in the solvent of choice. Dimethocaine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of dimethocaine (hydrochloride) in these solvents is approximately 16, 14, and 20 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 dimethocaine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of dimethocaine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Dimethocaine is a local anesthetic that, because of its similarity in action to cocaine, has potential for abuse. This compound completely inhibits dopamine uptake in rat striatal synaptosomes with an IC₅₀ value of 1.2 μM comparable to that of cocaine (IC₅₀ = 0.7 μM).¹ As a result, dimethocaine dose-dependently substitutes for cocaine in drug discrimination tests in rats and rhesus monkeys.^{2,3} This product is intended for forensic and research purposes.

References

1. Woodward, J.J., Compton, D.M., Balster, R.L., *et al.* *In vitro* and *in vivo* effects of cocaine and selected local anesthetics on the dopamine transporter. *Eur. J. Pharmacol.* **277**(1), 7-13 (1995).
2. Graham, J.H. and Balster, R.L. Cocaine-like discriminative stimulus effects of procaine, dimethocaine and lidocaine in rats. *Psychopharmacology (Berl)* **110**(3), 287-294 (1993).
3. Wilcox, K.M., Kimmel, H.L., Lindsey, K.P., *et al.* *In vivo* comparison of the reinforcing and dopamine transporter effects of local anesthetics in rhesus monkeys. *Synapse* **58**(4), 220-228 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11159

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com