

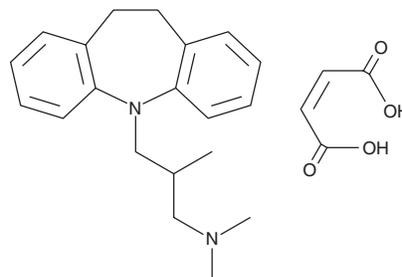
PRODUCT INFORMATION



Trimipramine (maleate)

Item No. 15921

CAS Registry No.: 521-78-8
Formal Name: 10,11-dihydro-N,N,β-trimethyl-5H-dibenz[b,f]azepine-5-propanamine, (2Z)-2-butenedioate
MF: C₂₀H₂₆N₂ • C₄H₄O₄
FW: 410.5
Purity: ≥95%
UV/Vis.: λ_{max}: 211, 248 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

Trimipramine (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the trimipramine (maleate) in the solvent of choice, which should be purged with an inert gas. Trimipramine (maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of trimipramine (maleate) in these solvents is approximately 3 mg/ml in ethanol and 30 mg/ml in DMSO and DMF.

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 trimipramine (maleate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of trimipramine (maleate) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Trimipramine is a tricyclic antidepressant.¹⁻³ It selectively binds the serotonin (5-HT) transporter (SERT) over the norepinephrine transporter (NET) and dopamine transporter (DAT; K_ds = 149, 2,450, and 3,780 nM, respectively) and acts as a histamine H₁ receptor antagonist (K_i = 0.02 μM) that is selective for histamine H₁ over H₂, H₃, and H₄ receptors (K_is = 0.04, >100, and 43.6 μM, respectively).^{1,2} Trimipramine binds to muscarinic acetylcholine and α₁- and α₂-adrenergic receptors (K_ds = 58, 24, and 580 nM, respectively), as well as dopamine D₁ and D₂ receptors and 5-HT receptor subtypes 5-HT_{1C} and 5-HT₂ (K_is = 346.7, 57.5, 537, and 19.5 nM, respectively).^{1,3} It reduces immobility time in the forced swim test in rats when administered at a dose of 10 mg/kg.⁴ Formulations containing trimipramine have previously been used in the treatment of depression.

References

1. Richelson, E. and Nelson, A. *J. Pharmacol. Exp. Ther.* **230**(1), 94-102 (1984).
2. Appl, H., Holzammer, T., Dove, S., et al. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **385**(2), 145-170 (2012).
3. Gross, G., Xin, X., and Gastpar, M. *Neuropharmacology* **30**(11), 1159-1166 (1991).
4. Delini-Stula, A., Radeke, E., and van Riezen, H. *Neuropharmacology* **27**(9), 943-947 (1988).

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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