

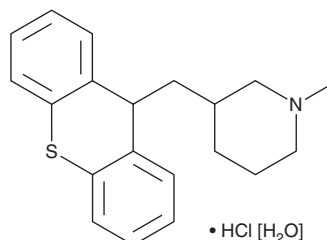
PRODUCT INFORMATION



Metixene (hydrochloride hydrate)

Item No. 39825

CAS Registry No.: 7081-40-5
Formal Name: 1-methyl-3-(9H-thioxanthen-9-ylmethyl)-piperidine, monohydrochloride, monohydrate
Synonym: Methixine
MF: C₂₀H₂₃NS • HCl [H₂O]
FW: 363.9
Purity: ≥95%
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

Metixene (hydrochloride hydrate) is supplied as a solid. A stock solution may be made by dissolving the metixene (hydrochloride hydrate) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Metixene is an antagonist of muscarinic acetylcholine receptors (mAChRs; K_i = 15 nM for the rat receptor).¹ It also inhibits bovine acetylcholinesterase (AChE) by 43% when used at the concentration 10 μM and butyrylcholinesterase (BChE; IC₅₀ = 1.6 μM for the horse enzyme) in cell-free assays.² Metixene reduces the proliferation of P388 leukemia and doxorubicin-resistant P388 (P388/ADR) cells (EC₅₀s = 10 and 12 μM, respectively).³ It induces apoptosis in BT474 and MDA-MB-231 breast cancer cells when used at a concentration of 15 μM and induces autophagy in the same cells at 10 μM.⁴ *In vivo*, metixene (1 mg/kg three times per week) decreases tumor weight and volume and improves survival in an MDA-MB-231 breast cancer mouse xenograft model.

References

1. Syvälahti, E.K., Kunelius, R., and Laurén, L. Effects of antiparkinsonian drugs on muscarinic receptor binding in rat brain, heart and lung. *Pharmacol. Toxicol.* **62**(2), 90-94 (1988).
2. Tasso, B., Catto, M., Nicolotti, O., et al. Quinolizidinyl derivatives of bi- and tricyclic systems as potent inhibitors of acetyl- and butyrylcholinesterase with potential in Alzheimer's disease. *Eur. J. Med. Chem.* **46**(4), 2170-2184 (2011).
3. Ramu, A. and Ramu, N. Reversal of multidrug resistance by phenothiazines and structurally related compounds. *Cancer Chemother. Pharmacol.* **30**(3), 165-173 (1992).
4. Fares, J., Petrosyan, E., Konojia, D., et al. Metixene is an incomplete autophagy inducer in preclinical models of metastatic cancer and brain metastases. *J. Clin. Invest.* e161142 (2023).

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, 11/15/2023

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