

PRODUCT INFORMATION



Chlorprothixene (hydrochloride)

Item No. 20772

CAS Registry No.: 6469-93-8

Formal Name: (3Z)-3-(2-chloro-9H-thioxanthen-9-ylidene)-N,N-dimethyl-1-propanamine, monohydrochloride

Synonyms: *cis*-Chlorprothixene, NSC 169899

MF: C₁₈H₁₈ClNS • HCl

FW: 352.3

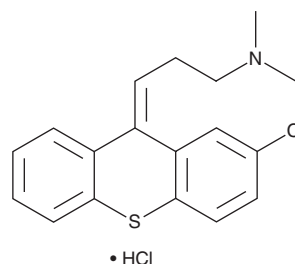
Purity: ≥98%

UV/Vis.: λ_{max}: 230, 270, 329 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

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

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 chlorprothixene (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of chlorprothixene (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Chlorprothixene is a thioxanthine antipsychotic that functions by antagonizing dopamine D₂ receptors.¹ It can block a subset of GABA_A receptors in rat cortex that is also blocked by clozapine (Item No. 12059).² It has also been shown to be effective against *P. falciparum* growth with an EC₅₀ value of 1.7 μM.³

References

1. Froimowitz, M., and Cody, V. Biologically active conformers of phenothiazines and thioxanthenes. Further evidence for a ligand model of dopamine D₂ receptor antagonists. *J. Med. Chem.* **36**(15), 2219-2227 (1993).
2. Squires, R.F., and Saederup, E. Clozapine and several other antipsychotic/antidepressant drugs preferentially block the same 'core' fraction of GABA_A receptors. *Neurochem. Res.* **23**(10), 1283-1290 (1998).
3. Weisman, J.L., Liou, A.P., Shelat, A.A., et al. Searching for new antimalarial therapeutics amongst known drugs. *Chem. Biol. Drug Des.* **67**(6), 409-416 (2006).

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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