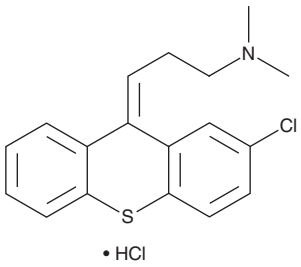
PRODUCT INFORMATION

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:	$C_{18}H_{18}ClNS \bullet HCl$
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 D_2 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 EC_{50} 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 D_2 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).

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