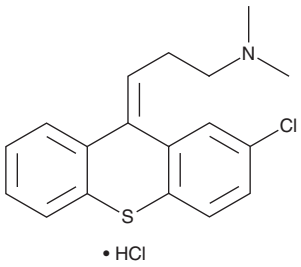
PRODUCT INFORMATION

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:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

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, which should be purged with an inert gas. Chlorprothixene (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. 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).

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