

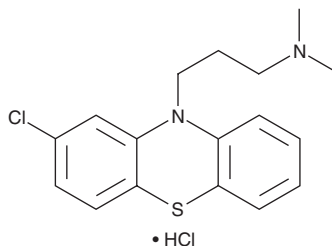
PRODUCT INFORMATION



Chlorpromazine (hydrochloride)

Item No. 16129

CAS Registry No.: 69-09-0
Formal Name: 2-chloro-N,N-dimethyl-10H-phenothiazine-10-propanamine, monohydrochloride
Synonym: CPZ
MF: C₁₇H₁₉ClN₂S • HCl
FW: 355.3
Purity: ≥98%
UV/Vis.: λ_{max}: 256, 308 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

Chlorpromazine (CPZ) (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the CPZ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. CPZ (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CPZ (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 CPZ (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CPZ (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

CPZ is a typical antipsychotic and an antagonist of dopamine D₂, D₃, and D₄ receptors (K_is = 0.66, 0.84, and 1.2 nM, respectively) as well as the serotonin (5-HT) receptor subtype 5-HT_{2A} (K_i = 1.8 nM).^{1,2} It is also an antagonist of histamine H₁, α_{1a}-, α_{2b}-, and α_{2c}-adrenergic, and M₃ muscarinic acetylcholine receptors (K_is = 6, 0.28, 27, 46, and 47 nM, respectively).³ CPZ (10 mg/kg per day) increases latency to find the platform in a repeated acquisition water maze task and decreases vertical activity and stereotypic movements in the open field test in rats.⁴ CPZ (0.3, 1, and 3 mg/kg, s.c.) also reduces emesis induced by cisplatin (Item No. 13119) in dogs.⁵

References

1. Seeman, P. and Tallerico, T. *Mol. Psychiatry* **3**(2), 123-134 (1998).
2. Seeman, P., Corbett, R., and Van Tol, H.H. *Neuropsychopharmacology* **16**(2), 93-110 (1997).
3. Kroeze, W.K., Hufeisen, S.J., Popadak, B.A., et al. *Neuropsychopharmacology* **28**(3), 519-526 (2003).
4. Terry, A.V., Jr., Warner, S.E., Vandenhuerc, L., et al. *Neuroscience* **156**(4), 1005-1016 (2008).
5. Gyls, J.A., Doran, K.M., and Buyniski, J.P. *Res. Commun. Chem. Pathol. Pharmacol.* **23**(1), 61-68 (1979).

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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