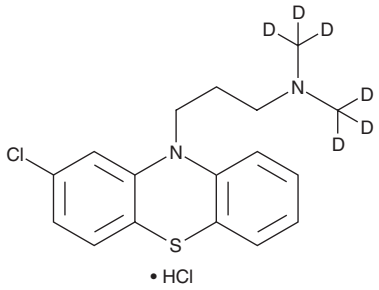
PRODUCT INFORMATION

Chlorpromazine-d_6 (hydrochloride)

Item No. 25636

CAS Registry No.: 1228182-46-4
Formal Name: 2-chloro-N,N-di(methyl-d_3)-10H-phenothiazine-10-propanamine, monohydrochloride
Synonym: CPZ-d_6
MF: $C_{17}H_{13}ClD_6N_2S \bullet HCl$
FW: 361.4
Chemical Purity: ≥98% (Chlorpromazine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_6); ≤1% d_0
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

Chlorpromazine-d_6 (CPZ-d_6) (hydrochloride) is intended for use as an internal standard for the quantification of CPZ (Item No. 16129) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

CPZ-d_6 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the CPZ-d_6 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. CPZ-d_6 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CPZ-d_6 (hydrochloride) in these solvents is approximately 30 mg/ml.

Description

CPZ is a typical antipsychotic and an antagonist of dopamine D_2, D_3, and D_4 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 H_1, α_{1A}-, α_{2B}-, and α_{2C}-adrenergic, and M_3 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= 6, 0.28, 27, 46, and 47 nM, respectively).[3] CPZ (10 mg/kg per day) increases latency to find the platform in a repealed acquisition water maze task and decreases vertical activity and stereotypic movements in the open field test in rats.[4] CPZ (0.3, 1, and 3 mg/kg, s.c.) also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., Vandenhuerk, L., *et al. Neuroscience* **156(4)**, 1005-1016 (2008).
5. Gylys, J.A., Doran, K.M., and Buyniski, J.P. *Res. Commun. Chem. Pathol. Pharmacol.* **23(1)**, 61-68 (1979).

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