



# SZABO SCANDIC

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## Produktinformation



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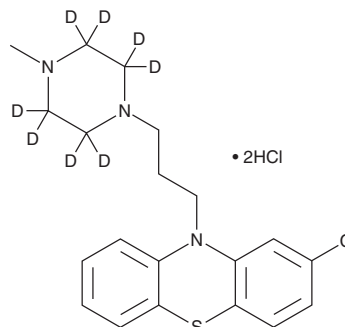
# PRODUCT INFORMATION



## Prochlorperazine-d<sub>8</sub> (hydrochloride)

Item No. 31916

**Formal Name:** 2-chloro-10-[3-(4-methyl-1-piperazinyl-d<sub>8</sub>) propyl]-10H-phenothiazine, dihydrochloride  
**MF:** C<sub>20</sub>H<sub>16</sub>ClD<sub>8</sub>N<sub>3</sub>S • 2HCl  
**FW:** 454.9  
**Chemical Purity:** ≥98% (Prochlorperazine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>8</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Prochlorperazine-d<sub>8</sub> (hydrochloride) is intended for use as an internal standard for the quantification of prochlorperazine (Item No. 20742) 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).

Prochlorperazine-d<sub>8</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the prochlorperazine-d<sub>8</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Prochlorperazine-d<sub>8</sub> (hydrochloride) is soluble in DMSO.

### Description

Prochlorperazine is a dopamine D<sub>2</sub> receptor antagonist with K<sub>i</sub> values of 4.7 and 2.9 nM for rat recombinant D<sub>2</sub> receptors in CHO cells and rat striatal membranes, respectively.<sup>1,2</sup> It also binds to rat recombinant D<sub>3</sub> receptors expressed in CHO cells (K<sub>i</sub> = 35 nM) and to the serotonin (5-HT) receptor subtype 5-HT<sub>3</sub> in N1E-115 mouse neuroblastoma cell membranes (K<sub>i</sub> = 1,200 nM).<sup>1,3</sup> Prochlorperazine (2 mg/kg) increases the latency to paw licking in a hot plate test, indicating analgesia, an effect that is blocked by antisense oligonucleotides against the M<sub>1</sub> muscarinic receptor.<sup>4</sup> It also inhibits emesis induced by apomorphine (Item No. 16094) in dogs (ED<sub>50</sub> = 0.34 mg/kg).<sup>5</sup> Formulations containing prochlorperazine have been used in the treatment of psychotic disorders and as antiemetics.

### References

1. Sokoloff, P., Giros, B., Martres, M.P., *et al.* Molecular cloning and characterization of a novel dopamine receptor (D<sub>3</sub>) as a target for neuroleptics. *Nature* **137(6289)**, 146-151 (1990).
2. Tsuchihashi, H., Sasaki, T., Kojima, S., *et al.* Binding of [<sup>3</sup>H]haloperidol to dopamine D<sub>2</sub> receptors in the striatum. *J. Pharm. Pharmacol.* **44(11)**, 911-914 (1992).
3. Lummis, S.C. and Baker, J. Radioligand binding and photoaffinity labelling studies show a direct interaction of phenothiazines at 5-HT<sub>3</sub> receptors. *Neuropharmacology* **36(4-5)**, 665-670 (1997).
4. Ghelardini, C., Galeotti, N., Uslenghi, C., *et al.* Prochlorperazine induces central antinociception mediated by the muscarinic system. *Pharmacol. Res.* **50(3)**, 351-358 (2004).
5. Niemegeers, C.J.E. Antiemetic specificity of dopamine antagonists. *Psychopharmacology (Berl)*. **78(3)**, 210-213 (1982).

#### 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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