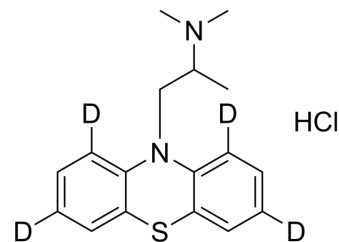


## Promethazine-d4 hydrochloride

<b>Cat. No.:</b>	HY-B0781S
<b>CAS No.:</b>	1173018-74-0
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>17</sub> D <sub>4</sub> ClN <sub>2</sub> S
<b>Molecular Weight:</b>	324.9
<b>Target:</b>	Histamine Receptor
<b>Pathway:</b>	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### BIOLOGICAL ACTIVITY

<b>Description</b>	Promethazine-d <sub>4</sub> (hydrochloride) is the deuterium labeled Promethazine hydrochloride. Promethazine hydrochloride is the first-generation antihistamine; strong antagonist of the H <sub>1</sub> receptor and moderate mACh receptor antagonist, moderate affinity for 5-HT <sub>2A</sub> , 5-HT <sub>2C</sub> , D <sub>2</sub> and α <sub>1</sub> -adrenergic receptors.
<b>IC<sub>50</sub> &amp; Target</b>	H <sub>1</sub> Receptor
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Strenkoski-Nix LC, et al. Pharmacokinetics of promethazine hydrochloride after administration of rectal suppositories and oral syrup to healthy subjects. *Am J Health Syst Pharm.* 2000 Aug 15;57(16):1499-505.
- [3]. Fiorella D, et al. The role of the 5-HT<sub>2A</sub> and 5-HT<sub>2C</sub> receptors in the stimulus effects of hallucinogenic drugs. I: Antagonist correlation analysis. *Psychopharmacology (Berl).* 1995 Oct;121(3):347-56.
- [4]. Seeman P, et al. Dopamine D<sub>2</sub> receptor binding sites for agonists. A tetrahedral model. *Mol Pharmacol.* 1985 Nov;28(5):391-9.
- [5]. Burt DR, et al. Antischizophrenic drugs: chronic treatment elevates dopamine receptor binding in brain. *Science.* 1977 Apr 15;196(4287):326-8.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA