

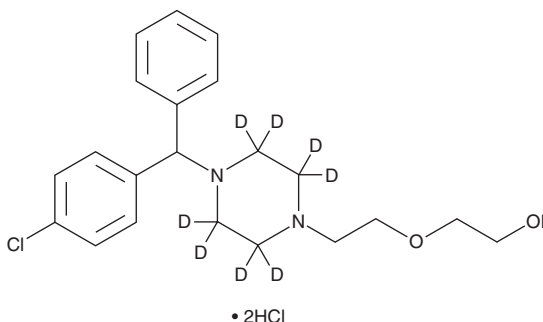
PRODUCT INFORMATION



Hydroxyzine-d₈ (hydrochloride)

Item No. 30739

CAS Registry No.: 1808202-93-8
Formal Name: 2-[2-[4-[(4-chlorophenyl)phenylmethyl]-1-piperazinyl-d₈]ethoxy]-ethanol, dihydrochloride
MF: C₂₁H₁₉ClD₈N₂O₂ • 2HCl
FW: 455.9
Chemical Purity: ≥95% (Hydroxyzine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
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

Hydroxyzine-d₈ (hydrochloride) is intended for use as an internal standard for the quantification of hydroxyzine (Item No. 24039) 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).

Description

Hydroxyzine is a histamine H₁ receptor antagonist (K_i = 1.9 nM).¹ It binds competitively with the H₁ receptor inverse agonist mepyramine (Item No. 20978) with an IC₅₀ value of 80 μM in polymorphonuclear leukocytes.² *In vivo*, it is metabolized to the H₁ receptor antagonist cetirizine (Item No. 19686).³ *In situ*, hydroxyzine (10 μM) prevents recruitment of rolling leukocytes induced by histamine in rat mesentery post-capillary venules.⁴ Hydroxyzine also decreases anxiety-like behavior in mice, increasing the time spent in the open arms of the elevated plus maze and in the light side of the light-dark exploration test.⁵ Formulations containing hydroxyzine have been used in the treatment of anxiety and as antihistamines in the treatment of allergic rhinitis.

References

1. Gillard, M., Van Der Perren, C., Moguilevsky, N., *et al.* Binding characteristics of cetirizine and levocetirizine to human H₁ histamine receptors: Contribution of Lys¹⁹¹ and Thr¹⁹⁴. *Mol. Pharmacol.* **61**(2), 391-399 (2002).
2. Wescott, S. and Kaliner, M. Histamine H₁ binding site on human polymorphonuclear leukocytes. *Inflammation* **7**(3), 291-300 (1983).
3. Obach, R.S. Pharmacologically active drug metabolites: Impact on drug discovery and pharmacotherapy. *Pharmacol. Rev.* **65**(2), 578-640 (2013).
4. Asako, H., Kurose, I., Wolf, R., *et al.* Role of H₁ receptors and P-selectin in histamine-induced leukocyte rolling and adhesion in postcapillary venules. *J. Clin. Invest.* **93**(4), 1508-1515 (1994).
5. Sawantdesai, N.S., Kale, P.P., and Savai, J. Evaluation of anxiolytic effects of aripiprazole and hydroxyzine as a combination in mice. *J. Basic Clin. Pharm.* **7**(4), 97-104 (2016).

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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