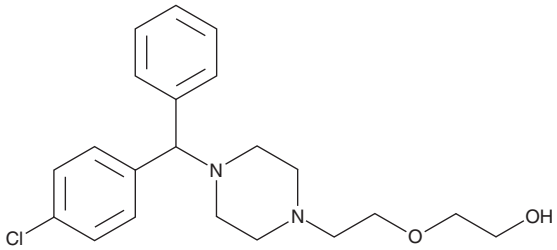
PRODUCT INFORMATION

Hydroxyzine

Item No. 24039

CAS Registry No.: 68-88-2
Formal Name: 2-[2-[4-[(4-chlorophenyl) phenylmethyl]-1-piperazinyl] ethoxy]-ethanol
Synonyms: NSC 169188, U.C.B 4492
MF: $C_{21}H_{27}ClN_2O_2$
FW: 374.9
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 260 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Hydroxyzine is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and methanol purged with an inert gas can be used. Hydroxyzine is slightly soluble in DMSO and methanol.

Description

Hydroxyzine is a histamine H_1 receptor antagonist (K_i = 1.9 nM).[1] It binds competitively with the H_1 receptor inverse agonist mepyramine (Item No. 20978) with an IC_{50} value of 80 µM in polymorphonuclear leukocytes.[2] *In vivo*, it is metabolized to the H_1 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 H_1 histamine receptors: Contribution of Lys^{191} and Thr^{194}. *Mol. Pharmacol.* **61(2)**, 391-399 (2002).
2. Wescott, S. and Kaliner, M. Histamine H_1 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 H_1 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM