
Product Data Sheet

Product Name: Hydroxyzine D8

Cat. No.: GC60924

Chemical Properties

Cas. No. 1189480-47-4

SMILES C1C1=CC=C(C(N2C([2H])([2H])C([2H])([2H])N(CCOCCO)C([2H])([2H])C2([2H])([2H])C3=CC=CC=C3)C=C1Formula C₂₁H₁₉D₈ClN₂O₂

M.Wt 382.95

Solubility Ethanol : ≥ 10 mg/mL (26.11 mM)

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Hydroxyzine-d₈ is intended for use as an internal standard for the quantification of hydroxyzine by GC- or LC-MS. Hydroxyzine is a histamine H₁ receptor antagonist (K_i = 1.9 nM).¹ It binds competitively with the H₁ receptor inverse agonist mepyramine with an IC₅₀ value of 80 μM in polymorphonuclear leukocytes.² *In vivo*, it is metabolized to the H₁ receptor antagonist cetirizine.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.

1. Gillard, M., Van Der Perren, C., Moguelevsky, 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

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

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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)

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