Hydroxyzine

Cat. No.: HY-B0548

CAS No.: 68-88-2

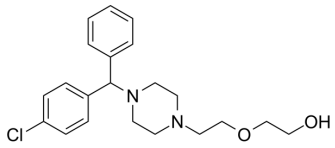
Molecular Formula: $C_{21}H_{27}ClN_2O_2$

Molecular Weight: 374.9

Target: Histamine Receptor

Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (266.74 mM; Need ultrasonic)
H_2O : 5 mg/mL (13.34 mM; ultrasonic and warming and adjust pH to 4 with HCl and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6674 mL	13.3369 mL	26.6738 mL
5 mM	0.5335 mL	2.6674 mL	5.3348 mL
10 mM	0.2667 mL	1.3337 mL	2.6674 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.67 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Hydroxyzine, a benzodiazepine antihistamine agent, acts as an orally active histamine H1-receptor and serotonin antagonist. Hydroxyzine has anxiolytic effect and can be used for the research of generalised anxiety disorder[1].

IC_{50} & Target

H_1 Receptor

In Vitro

Hydroxyzine dihydrochloride inhibits carbachol (10 μM)-induced serotonin release by 34% at 10 μM, by 25% 1 μM and by 17% 0.1 μM in pretreated bladder slices for 60 min[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Hydroxyzine dihydrochloride (12.5 mg/kg, 25 mg/kg and 50 mg/kg i.p.) shows little direct analgesic activity but markedly

	potentiates only the effect of morphine on the vocalization after-discharge which represents the affective component of pain in rats. Hydroxyzine dihydrochloride (50 mg/kg i.p.) potentiates morphine on the tail-flick test, while Hydroxyzine (12.5 mg/kg i.p.) decreases morphine antinociception in rats[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Minogiannis, P., et al., Hydroxyzine inhibits neurogenic bladder mast cell activation. Int J Immunopharmacol, 1998. 20(10): p. 553-63.

[2]. Morichi, R. and G. Pepeu, A study of the influence of hydroxyzine and diazepam on morphine antinociceptoion in the rat. Pain, 1979. 7(2): p. 173-80.

[3]. Nikita Shekhar Sawantdesai, et al. Evaluation of anxiolytic effects of aripiprazole and hydroxyzine as a combination in mice. J Basic Clin Pharm. 2016 Sep;7(4):97-104.

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