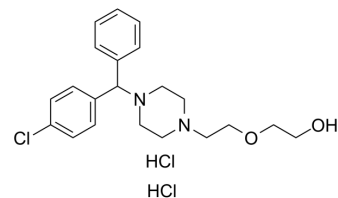


## Hydroxyzine dihydrochloride

<b>Cat. No.:</b>	HY-B0548A
<b>CAS No.:</b>	2192-20-3
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>29</sub> Cl <sub>3</sub> N <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	447.83
<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 and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : ≥ 150 mg/mL (334.95 mM) * "≥" means soluble, but saturation unknown.																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>2.2330 mL</td> <td>11.1650 mL</td> <td>22.3299 mL</td> </tr> <tr> <td>5 mM</td> <td>0.4466 mL</td> <td>2.2330 mL</td> <td>4.4660 mL</td> </tr> <tr> <td>10 mM</td> <td>0.2233 mL</td> <td>1.1165 mL</td> <td>2.2330 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	2.2330 mL	11.1650 mL	22.3299 mL	5 mM	0.4466 mL	2.2330 mL	4.4660 mL	10 mM	0.2233 mL	1.1165 mL	2.2330 mL
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Please refer to the solubility information to select the appropriate solvent.																						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (223.30 mM); Clear solution; Need ultrasonic																					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Hydroxyzine dihydrochloride, a benzodiazepine antihistamine agent, acts as a orally active histamine H1-receptor and serotonin antagonist. Hydroxyzine dihydrochloride has anxiolytic effect and can be used for the research of generalised anxiety disorder <sup>[1][2]</sup> .
<b>In Vitro</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	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 <sup>[3]</sup> .

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## REFERENCES

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

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