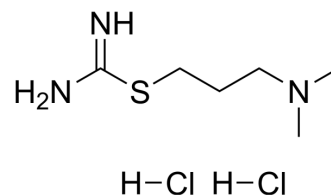


Dimaprit dihydrochloride

Cat. No.:	HY-B1478
CAS No.:	23256-33-9
Molecular Formula:	C ₆ H ₁₇ Cl ₂ N ₃ S
Molecular Weight:	234.19
Target:	Histamine Receptor; NO Synthase
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
Storage:	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

In Vitro	DMSO : 125 mg/mL (533.75 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		4.2700 mL	21.3502 mL	42.7004 mL
		5 mM		0.8540 mL	4.2700 mL	8.5401 mL
	10 mM		0.4270 mL	2.1350 mL	4.2700 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: ≥ 2.08 mg/mL (8.88 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (8.88 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (8.88 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Dimaprit dihydrochloride is a selective histamine H ₂ receptor agonist, it also inhibits nNOS with an IC ₅₀ of 49 μM. Dimaprit dihydrochloride can stimulate gastric acid secretion ^{[1][2]} .	
IC₅₀ & Target	H ₂ Receptor	nNOS 49 μM (IC ₅₀)
In Vitro	Dimaprit has less than 0.0001% the activity of histamine on H ₁ -receptors ^[1] . Dimaprit (0.1 nM-100 μM) inhibits nNOS concentration dependently with an IC ₅₀ of 49±14 μM ^[2] .	

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Dimaprit stimulates gastric acid secretion in rats (1.25 $\mu\text{M}/\text{kg}/\text{min}$; rapid i.v. injection), cats (2-64 $\mu\text{M}/\text{h}$; i.v.) and dogs (1-100 nM/kg/min; i.v.)^[1].

Dimaprit (0.01-1 $\mu\text{M}/\text{kg}$; i.v. at intervals of 5 min) causes dose-dependent falls in blood pressure in cats. Dimaprit (1-100 nM; intra-arterial injection) causes vasodilatation in the femoral vascular bed, and it (1 $\mu\text{M}/\text{kg}$; bolus or intravenous injection) has no effect on heart rate^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Parsons ME, et, al. Dimaprit -(S-[3-(N,N-dimethylamino)propyl]isothiourea) - a highly specific histamine H₂-receptor agonist. Part 1. Pharmacology. Agents Actions. 1977 Mar; 7(1): 31-7.

[2]. Paquay JB, et, al. Nitric oxide synthase inhibition by dimaprit and dimaprit analogues. Br J Pharmacol. 1999 May; 127(2): 331-4.

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

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