Dimaprit dihydrochloride

Cat. No.: HY-B1478

CAS No.: 23256-33-9

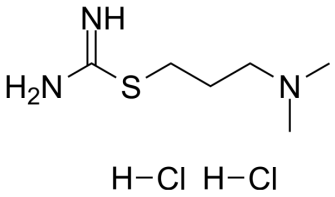
Molecular Formula: $C_6H_{17}Cl_2N_3S$

Molecular Weight: 234.19

Target: Histamine Receptor; NO Synthase

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 : 125 mg/mL (533.75 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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 H2 receptor agonist, it also inhibits nNOS with an IC_{50} of 49 μM. Dimaprit dihydrochloride can stimulate gastric acid secretion[1][2].

IC_{50} & Target

H_2 Receptor	nNOS
	49 μM (IC_{50})

In Vitro

Dimaprit has less than 0.0001% the activity of histamine on H1-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 μM/kg/min; rapid i.v. injection), cats (2-64 μM/h; i.v.) and dogs (1-100 nM/kg/min; i.v.)[1]. Dimaprit (0.01-1 μM/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 μM/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)prophyl]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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA