Dibenamine hydrochloride

Cat. No.: HY-128380

CAS No.: 55-43-6

Molecular Formula: $C_{16}H_{19}Cl_2N$

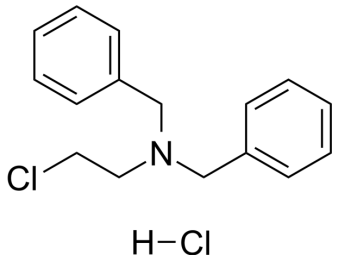
Molecular Weight: 296.23

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (421.97 mM; Need ultrasonic)

H_2O : 33.33 mg/mL (112.51 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3758 mL	16.8788 mL	33.7575 mL
	5 mM	0.6752 mL	3.3758 mL	6.7515 mL
	10 mM	0.3376 mL	1.6879 mL	3.3758 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 9.09 mg/mL (30.69 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.02 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.02 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.02 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dibenamine hydrochloride is a competitive and irreversible adrenergic blocking agent and is known to modify the pharmacological effects of epinephrine. Dibenamine hydrochloride cause a significant increase in the rate of destruction of I-epinephrine in the mouse[1][2].

IC_{50} & Target

IC50: Adrenergic receptor[1]

In Vitro	Dibenamine (100 nM-10 μM) attenuates the degree of cocaine-induced increase in sensitivity to acetylcholine without any effect on acetylcholine-contraction in isolated vas deferens of guinea pig. Additionally, the degree of dibenamine-induced inhibition dependent on the concentration of dibenamine and inversely related to the concentration of cocaine[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Dibenamine hydrochloride (subcutaneous injection; 25 mg/kg; 48 and 24 hr before the administration of CCl4) decreases the CHCl3, levels at 2 and 6 hr by 30-50 percent, but did not appreciably affect the half-life of CHCl3, in the liver.Pretreatment with Dibenamine apparently slows the conversion of Ccl4 to CHCL3[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. R W SCHAYER, et al. Effect of dibenamine (N-(2-chloroethyl) dibenzylamine) on the metabolism of radioactive epinephrine.J Biol Chem. 1953 May;202(1):39-43.

[2]. H M Maling,et al. Nature of the protection against carbon tetrachloride-induced hepatotoxicity produced by pretreatment with dibenamine (N-(2-chloroethyl)dibenzylamine). Biochem Pharmacol. 1974 May 15;23(10):1479-91.

[3]. K Araki, et al. Pharmacological studies on supersensitization. VII. Inhibitory effect of dibenamine on cocaine-induced supersensitivity of isolated vas deferens of guinea pig. J Pharmacobiodyn. 1982 Oct;5(10):789-95.

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