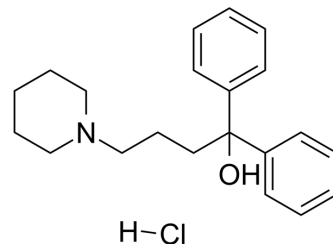


Diphenidol hydrochloride

Cat. No.:	HY-A0082		
CAS No.:	3254-89-5		
Molecular Formula:	C ₂₁ H ₂₈ ClNO		
Molecular Weight:	345.91		
Target:	mAChR; Sodium Channel		
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 46 mg/mL (132.98 mM)
 H₂O : 16.67 mg/mL (48.19 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.8909 mL	14.4546 mL	28.9093 mL
	5 mM	0.5782 mL	2.8909 mL	5.7819 mL
	10 mM	0.2891 mL	1.4455 mL	2.8909 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (7.23 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (7.23 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Diphenidol hydrochloride (Difenidol hydrochloride) is a non-selective muscarinic M₁-M₄ receptor antagonist, has anti-arrhythmic activity. Diphenidol hydrochloride is also a potent non-specific blocker of voltage-gated ion channels (Na⁺, K⁺, and Ca²⁺) in neuronal cells^{[1][2]}.

REFERENCES

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- [1]. Leung YM, et al. Inhibition of voltage-gated K⁺ channels and Ca²⁺ channels by diphenidol. *Pharmacol Rep.* 2012;64(3):739-44.
- [2]. Leung YM, et al. Diphenidol inhibited sodium currents and produced spinal anesthesia. *Neuropharmacology.* 2010 Jun;58(7):1147-52.
- [3]. Andersson M, et al. Muscarinic receptor subtypes involved in urothelium-derived relaxatory effects in the inflamed rat urinary bladder. *Auton Neurosci.* 2012 Sep 25;170(1-2):5-11.
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Caution: Product has not been fully validated for medical applications. For research use only.

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