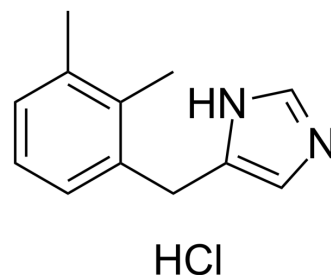


Detomidine hydrochloride

Cat. No.:	HY-B0163A
CAS No.:	90038-01-0
Molecular Formula:	C ₁₂ H ₁₅ ClN ₂
Molecular Weight:	222.71
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 : ≥ 100 mg/mL (449.01 mM)
 H₂O : 20 mg/mL (89.80 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM	4.4901 mL	22.4507 mL	44.9014 mL
	5 mM	0.8980 mL	4.4901 mL	8.9803 mL	
	10 mM	0.4490 mL	2.2451 mL	4.4901 mL	

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 140 mg/mL (628.62 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (11.23 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (11.23 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (11.23 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Detomidine hydrochloride, an imidazole derivative, is a potent α₂-adrenergic agonist. Detomidine hydrochloride produces dose-dependent analgesic effects^{[1][2]}.

In Vitro

Currently, detomidine is only licenced for use in horses. α₂-adrenergic agonists produce dose-dependent analgesic effects, mediated by activation of α₂ catecholamine receptors, thus inducing a negative feedback response, reducing production

of excitatory neurotransmitters. Due to inhibition of the sympathetic nervous system, detomidine also has cardiac and respiratory effects and an antidiuretic action.

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

REFERENCES

[1]. Virtanen R, et al. Pharmacological evidence for the involvement of alpha-2 adrenoceptors in the sedative effect of detomidine, a novel sedative-analgesic. J Vet Pharmacol Ther. 1985 Mar;8(1):30-7.

[2]. J Still, et al. Cardiovascular and respiratory effects of detomidine in isoflurane-anaesthetised horses. J S Afr Vet Assoc. 1996 Dec;67(4):199-203.

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

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