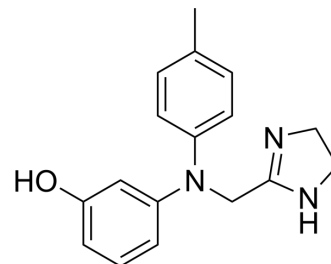


Phentolamine

Cat. No.:	HY-12717
CAS No.:	50-60-2
Molecular Formula:	C ₁₇ H ₁₉ N ₃ O
Molecular Weight:	281.35
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	<div>Powder -20°C 3 years</div> <div>In solvent -80°C 6 months</div> <div>-20°C 1 month</div>



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (444.29 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM	3.5543 mL	17.7715 mL	35.5429 mL	
		5 mM	0.7109 mL	3.5543 mL	7.1086 mL	
		10 mM	0.3554 mL	1.7771 mL	3.5543 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: ≥ 2.5 mg/mL (8.89 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.89 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Phentolamine is a potent, selective and orally active α ₁ adrenergic and α ₂ adrenergic receptor antagonist. Phentolamine can be used for the research of erectile dysfunction ^{[1][2][3]} .
IC ₅₀ & Target	α adrenergic receptor
In Vivo	<p>Phentolamine (5-20 mg/kg; i.p.) effectively inhibits the seizures elicited by strychnine (2 mg/kg, i.p.) and attenuates the seizure-potentiating effect of DOPS (4 mg/kg, i.p.) in mouse^[2].</p> <p>Phentolamine (1 mg/kg; i.p.) increases insulin secretion by inhibition of b-cell α_{2A}-adrenoceptors in mouse^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

Animal Model:	WT mice ^[3]
Dosage:	1 mg/kg
Administration:	IP
Result:	Reduced blood glucose and increased insulin levels.

CUSTOMER VALIDATION

- Neurosci Bull. 2023 Jun 19.
- J Endocrinol. 2020 Mar;244(3):459-471.
- bioRxiv. 2023 Oct 13.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Goldstein I I. Oral phentolamine: an alpha-1, alpha-2 adrenergic antagonist for the treatment of erectile dysfunction. Int J Impot Res. 2000 Mar;12(S1):S75-S80
- [2]. Amabeoku G, et al. Strychnine-induced seizures in mice: the role of noradrenaline. Prog Neuropsychopharmacol Biol Psychiatry. 1994 Jul;18(4):753-63.
- [3]. Fagerholm V, et al. alpha2A-adrenoceptor antagonism increases insulin secretion and synergistically augments the insulinotropic effect of glibenclamide in mice. Br J Pharmacol. 2008 Jul;154(6):1287-96.

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

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