Phentolamine

Cat. No.: HY-12717

CAS No.: 50-60-2

Molecular Formula: $C_{17}H_{19}N_3O$

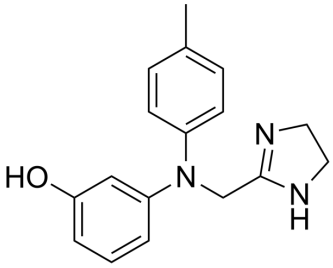
Molecular Weight: 281.35

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (444.29 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	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.

BIOLOGICAL ACTIVITY

Description

Phentolamine is a potent, selective and orally active α1 adrenergic and α2 adrenergic receptor antagonist. Phentolamine can be used for the research of erectile dysfunction[1][2][3].

IC_{50} & Target

α adrenergic receptor

In Vivo

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].

Phentolamine (1 mg/kg; i.p.) increases insulin secretion by inhibition of b-cell a2A-adrenoceptors in mouse[3].

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

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.

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