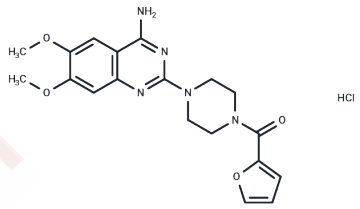
Data Sheet (Cat.No.T1050)

TargetMol

Prazosin hydrochloride

Chemical Properties



CAS No. : 19237-84-4

Formula: C19H22ClN5O4

Molecular Weight: 419.86

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Prazosin hydrochloride (Vasoflex) reduces peripheral resistance and relaxes vascular smooth muscles as a selective adrenergic alpha-1 antagonist by a mechanism not completely known. Prazosin hydrochloride is a synthetic piperazine derivative with hypotensive antiadrenergic properties, It is used in the treatment of heart failure, hypertension, pheochromocytoma, Raynaud's syndrome, prostatic hypertrophy, and urinary retention.
Targets(IC50)	Adrenergic Receptor,ABC Transporter,Autophagy,MRP,Potassium Channel
In vitro	Prazosin leads to a significant increase in VEGF concentration in endothelial cells and angiogenesis only if eNOS is present. Prazosin binds to the α1-adrenergic receptors that are present on smooth muscle cells surrounding all larger blood vessels. [1] Prazosin (0.1 nM) blocks the increases in perfusion pressure caused by electrical stimulation of the perimesenteric nerves but does not significantly reduce the vasomotor effect of exogenous noradrenaline. [2]
In vivo	Prazosin application leads to the expansion of the capillary system by modulation of the hemodynamic environment (flow rate, shear stress) in skeletal muscle. Prazosin induces angiogenesis in extensor digitorum longus (EDL) muscles of C57BL/6 mice but not eNOS-knockout mice. [1] Prazosin (0.5-2.0 mg/kg) blocks Yohimbine-induced reinstatement of food and alcohol seeking, as well as footshock-induced reinstatement of alcohol seeking in rats. [3] Prazosin (0.2 mg kg(-1) s.c.) causes an enhancement of a suppression of conditioned avoidance response in the presence of the dopamine D2 receptor antagonist raclopride (0.05-0.20 mg/kg s.c.) in rats. [4] Prazosin administration alone (1 mg/kg, s.c.) only slightly reduces horizontal activity during an initial 10 min measurement period, although it consistently reduces rearing in freely moving rats. Prazosin effectively suppresses the locomotor stimulation caused by either dose of MK-801 throughout the whole observation period in freely moving rats. [5]

Solubility Information

Solubility	Ethanol: 5 mM,Sonication is recommended. DMSO: 55 mg/mL (131 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3817 mL	11.9087 mL	23.8175 mL
5 mM	0.4763 mL	2.3817 mL	4.7635 mL
10 mM	0.2382 mL	1.1909 mL	2.3817 mL
50 mM	0.0476 mL	0.2382 mL	0.4763 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Baum O, et al. Am J Physiol Heart Circ Physiol,2004, 287(5), H2300-H2308.
Bowden G D, Land K M, O'Connor R M, et al. High-throughput screen of drug repurposing library identifies inhibitors of Sarcocystis neurona growth. International Journal for Parasitology: Drugs and Drug Resistance. 2018 Apr；8(1): 137-144
Donoso MV, et al. J Pharmacol Exp Ther,1997, 282(2), 691-698.
Lê AD, et al. Psychopharmacology (Berl),2011, 218(1), 89-99.
Wadenberg ML, et al. J Neural Transm, 2000, 107(10), 1229-1238.
Mathé JM, et al. Eur J Pharmacol,1996, 309(1), 1-11.
Bowden G D, Land K M, O'Connor R M, et al. High-throughput screen of drug repurposing library identifies inhibitors of Sarcocystis neurona growth[J]. International Journal for Parasitology: Drugs and Drug Resistance. 2018 Apr；8(1): 137-144.