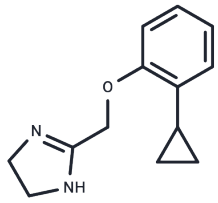
Data Sheet (Cat.No.T14972)

TargetMol

Cirazoline hydrochloride

Chemical Properties



CAS No. : 40600-13-3

Formula: C13H17ClN2O

Molecular Weight: 252.74

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cirazoline hydrochloride is a synthetic compound that acts as a competitive full agonist of the α1A-adrenergic receptor (α1A-AR) with a binding affinity of Ki = 120 nM, and Cirazoline hydrochloride also functions as a partial agonist at α1B-AR (Ki = 960 nM) and α1D-AR (Ki = 660 nM), thereby serving as a versatile adrenergic receptor probe with relevance for studying vascular tone regulation, adrenergic pharmacology, and potential therapeutic cardiovascular applications.
Targets(IC50)	Adrenergic Receptor,Adenosine Receptor
In vitro	**Methods**: Glioblastoma-initiating cells were treated with cirazoline hydrochloride (5-10 μM, 24 hours), and cell viability was measured using the WST-1 reduction assay. **Results**: Cirazoline hydrochloride did not alter the viability of GICs and only slightly antagonized prazosin-induced GIC death. [2]
In vivo	**Methods**: B6/CBA mice were treated with Cirazoline hydrochloride (drinking water, 40 μM, for 9 months) to investigate the influence of α1A-AR signaling in antidepressant effects. **Results**: Wild-type mice with long-term intake of Cirazoline hydrochloride showed a significant reduction in immobility time during the TST (tail suspension test). [1].

Solubility Information

Solubility	H2O: 24 mg/mL (94.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9566 mL	19.7832 mL	39.5664 mL
5 mM	0.7913 mL	3.9566 mL	7.9133 mL
10 mM	0.3957 mL	1.9783 mL	3.9566 mL
50 mM	0.0791 mL	0.3957 mL	0.7913 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Doze VA, et al. alpha(1A)- and alpha(1B)-adrenergic receptors differentially modulate antidepressant-like behaviorin the mouse.Brain Res. 2009 Aug 18;1285:148-57.
Suzana Assad Kahn , et al. The Anti-Hypertensive Drug Prazosin Inhibits Glioblastoma Growth via the PKCδ-dependent Inhibition of the AKT Pathway. EMBO Mol Med. 2016 May 2;8(5):511-26.