Data Sheet (Cat.No.T4369)

TargetMol

SCH-23390 hydrochloride

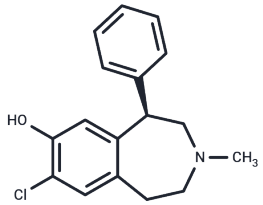
Chemical Properties

CAS No. : 125941-87-9

Formula: C17H19Cl2NO

Molecular Weight: 324.24

Storage: 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	SCH-23390 hydrochloride (R-(+)-SCH23390 hydrochloride) is an effective dopamine receptor antagonist, with high affinity for the D1 (Ki=0.2 nM) and D5 (Ki=0.3 nM) receptors.
Targets(IC50)	5-HT Receptor,Dopamine Receptor,Potassium Channel
In vitro	SCH23390 blocks endogenous GIRK currents induced by either somatostatin or D3 dopamine receptors in AtT-20 cells (IC50=268 nM).SCH 23390 also shows high affinity (Ki=9.3 nM) at h5-HT2C sites.
In vivo	In the rat, the repeated administration of SCH 23390 (0.05 mg/kg s.c., thrice daily for 21 days) enhances the steady-state density of dopamine D1 receptors in the striatum (+30%) and substantia nigra (+24%).
Animal Research	Rats are injected with SCH 23390(0, 1, or 10 μg/kg i.p.).

Solubility Information

Solubility	H2O: 25 mg/mL (77.1 mM),Sonication is recommended. DMSO: 50 mg/mL (154.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.17 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0841 mL	15.4207 mL	30.8414 mL
5 mM	0.6168 mL	3.0841 mL	6.1683 mL
10 mM	0.3084 mL	1.5421 mL	3.0841 mL
50 mM	0.0617 mL	0.3084 mL	0.6168 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

Bourne JA, et al . SCH 23390: the first selective dopamine D1-like receptor antagonist. CNS Drug Rev. 2001 Winter;7 (4):399-414.
Xiang Z, Wu F, He Z, et al.D1-like dopamine receptors promote B-cell differentiation in systemic lupus erythematosus.Cell Communication and Signaling.2024, 22(1): 1-13.
Millan MJ, et al. The "selective" dopamine D1 receptor antagonist, SCH23390, is a potent and high efficacy agonist at cloned human serotonin2C receptors. Psychopharmacology (Berl). 2001 Jun;156(1):58-62.
Kuzhikandathil EV, et al. Classic D1 dopamine receptor antagonist R-(+)-7-chloro-8-hydroxy-3-methyl-1-phenyl-2,3,4,5-tetrahydro-1H-3-benzazepine hydrochloride (SCH23390) directly inhibits G protein-coupledinwardly rectifying potassium channels. Mol Pharmacol. 2002 Jul;62(1):119-26.
Giorgi O, et al. Chronic treatment with SCH 23390 increases the production rate of dopamine D1 receptors in the nigro-striatal system of the rat. Eur J Pharmacol. 1993 Apr 15;245(2):139-45.
Aoyama K, et al. Systemic injection of the DAD1 antagonist SCH 23390 reduces saccharin seeking in rats. Appetite. 2016 Oct 1;105:8-13.