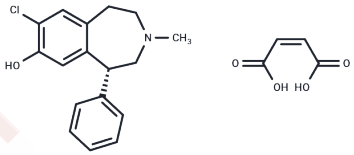
Data Sheet (Cat.No.T12865)

TargetMol

SCH-23390 maleate

Chemical Properties



CAS No. : 87134-87-0

Formula: C21H22ClNO5

Molecular Weight: 403.86

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 maleate (R-(+)-SCH-23390 maleate) is a potent and selective dopamine D1-like receptor antagonist, specifically targeting D1 and D5 receptors with Ki values of 0.2 nM and 0.3 nM, respectively.
Targets(IC50)	5-HT Receptor,Dopamine Receptor,Potassium Channel
In vitro	SCH-23390 (1 μM) reverses the Isosibiricin-mediated inhibition of the NLRP3/caspase-1 inflammasome pathway, including the suppression of NLRP3 expression and the cleavages of caspase-1 and IL-1β in LPS-induced BV-2 cells[4].
In vivo	SCH-23390 can eliminate systemic seizures caused by chemical convulsions:pilocarpine and soman. SCH-23390 has also been used in studies of other neurological disorders in which the dopamine system has been implicated(psychosis and Parkinson's disease). Apart from the study of neurological disorders, SCH-23390 has been wildly used as a tool in the topographical determination of brain D1 receptors in rodents, nonhuman primates, and humans[1]. SCH-23390 is a very short-acting compound with an elimination half-life of around 25 min following administration of 0.3 mg/kg i.p. in the rat[1]. SCH-23390 augments dopamine-induced ductus constriction in CD-1 mouse vessels under newborn O2 conditions[5].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4761 mL	12.3805 mL	24.7611 mL
5 mM	0.4952 mL	2.4761 mL	4.9522 mL
10 mM	0.2476 mL	1.2381 mL	2.4761 mL
50 mM	0.0495 mL	0.2476 mL	0.4952 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

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-coupled inwardly rectifying potassium channels. Mol Pharmacol. 2002 Jul;62(1):119-26.
Wang YH, et al. Isosibiricin inhibits microglial activation by targeting the dopamine D1/D2 receptor-dependent NLRP3/caspase-1 inflammasome pathway. Acta Pharmacol Sin. 2020 Feb;41(2):173-180.
Crockett SL, et al. Role of dopamine and selective dopamine receptor agonists on mouse ductus arteriosus tone and responsiveness. Pediatr Res. 2019 Dec 9.
Bourne JA. SCH 23390: the first selective dopamine D1-like receptor antagonist. CNS Drug Rev. 2001 Winter;7(4):399-414.