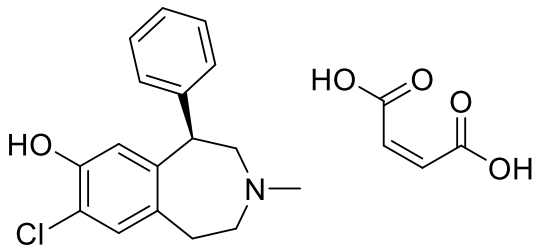
Product data sheet

MedKoo Cat#: 526322 Name: SCH 23390 maleate CAS#: 87134-87-0 (maleate) Chemical Formula: $C_{21}H_{22}ClNO_5$ Molecular Weight: 403.86	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
SCH 23390 is a potent dopamine receptor antagonist, a 5-HT1C and 5-HT2C receptors agonist, and inhibits G protein-coupled inwardly rectifying potassium (GIRK) channels.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.48 mL	12.38 mL	24.76 mL
5 mM	0.50 mL	2.48 mL	4.95 mL
10 mM	0.25 mL	1.24 mL	2.48 mL
50 mM	0.05 mL	0.25 mL	0.50 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Kuzhikandathil EV, Oxford GS. 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. doi: 10.1124/mol.62.1.119. PMID: 12065762.
2. Millan MJ, Newman-Tancredi A, Quentric Y, Cussac D. 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. doi: 10.1007/s002130100742. PMID: 11465634.

In vivo study

1. Japarin RA, Harun N, Hassan Z, Müller CP. The dopamine D1 receptor antagonist SCH-23390 blocks the acquisition, but not expression of mitragynine-induced conditioned place preference in rats. Behav Brain Res. 2023 Sep 13;453:114638. doi: 10.1016/j.bbr.2023.114638. Epub 2023 Aug 22. PMID: 37619769.
2. Aoyama K, Barnes J, Koerber J, Glueck E, Dorsey K, Eaton L, Grimm JW. Systemic injection of the DAD1 antagonist SCH 23390 reduces saccharin seeking in rats. Appetite. 2016 Oct 1;105:8-13. doi: 10.1016/j.appet.2016.05.008. Epub 2016 May 11. PMID: 27179937; PMCID: PMC4980176.

7. Bioactivity
Biological target:

Product data sheet

SCH 23390 maleate is a dopamine D1-like receptor antagonist with Kis of 0.2 nM and 0.3 nM for the D1 and D5 receptor, respectively. SCH 23390 maleate is a human 5-HT2C receptor agonist with a Ki of 9.3 nM. SCH 23390 maleate inhibits GIRK channels with an IC50 of 268 nM.

In vitro activity

In this study, SCH 23390 was discovered to inhibit GIRK channels, independent of receptor activation. The inhibition is selective, affecting GIRK currents induced by somatostatin or D3 dopamine receptors. SCH 23390 can depolarize membrane potential and induce action potentials in cells.

Reference: Mol Pharmacol. 2002 Jul;62(1):119-26. https://pubmed.ncbi.nlm.nih.gov/12065762/

In vivo activity

SCH 23390 may have use in addiction treatment research. In a saccharin seeking rat model, systemic SCH 23390 injections reduced saccharin seeking and reduced saccharin seeking persistence.

Reference: Appetite. 2016 Oct 1;105:8-13. https://pubmed.ncbi.nlm.nih.gov/27179937/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.