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TOCRIS

Print Date: Oct 16th 2024

Certificate of Analysis

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Product Name: **SCH 23390 hydrochloride** **Catalog No.: 0925** **Batch No.: 15**

CAS Number: 125941-87-9

IUPAC Name: (*R*)-(+)-7-Chloro-8-hydroxy-3-methyl-1-phenyl-2,3,4,5-tetrahydro-1*H*-3-benzazepine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{17}H_{18}ClNO.HCl$

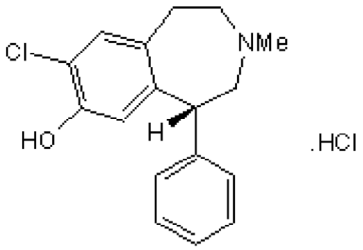
Batch Molecular Weight: 324.24

Physical Appearance: White solid

Solubility: water to 100 mM with gentle warming
ethanol to 50 mM
DMSO to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.33 (Pyridine:Acetic acid:Water:Butanol [3:8:11:22])

HPLC: Shows 99.7% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +30.8 (Concentration = 1, Solvent = DMF)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.97	5.91	4.32
Found	62.95	5.83	4.41

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Description:

SCH 23390 hydrochloride is a potent dopamine receptor antagonist (K_i values are 0.2 nM and 0.3 nM at D_1 and D_5 receptor sub-types, respectively). Also an agonist at 5-HT_{2C} receptors in vitro (K_i values are 6.3 - 9.3 nM). Blocks quinpirole-induced $K_{ir}3$ (GIRK) currents (EC_{50} = 268 nM) independently of receptors.

Physical and Chemical Properties:

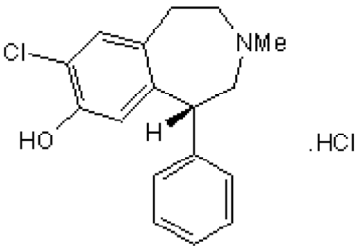
Batch Molecular Formula: $C_{17}H_{18}ClNO.HCl$

Batch Molecular Weight: 324.24

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 100 mM with gentle warming
ethanol to 50 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Kuzhikandathil and Oxford (2002) Classic D_1 DA receptor antagonist *R*-(+)-7-chloro-8-hydroxy-3-methyl-1-phenyl-2,3,4,5-tetrahydro-1*H*-3-benzazepine hydrochloride (SCH23390) directly inhibits G protein-coupled inwardly rectifying potassium channels. Mol.Pharmacol. ***62*** 119. PMID: 12065762.

Bourne *et al* (2001) SCH 23390: The first selective DA D_1-like receptor antagonist. CNS Drug Rev. ***7*** 399. PMID: 11830757.

Millan *et al* (2001) The "selective" DA D1 receptor antagonist, SCH23390, is a potent and high efficacy agonist against cloned human serotonin$_{2C}$ receptors. Psychopharmacology ***156*** 58. PMID: 11465634.

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