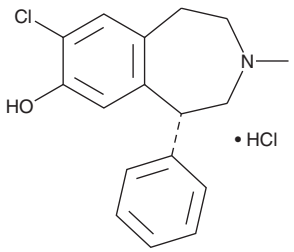
# PRODUCT INFORMATION

## SCH 23390 (hydrochloride)

*Item No. 15631*

**CAS Registry No.:** 125941-87-9
**Formal Name:** 8-chloro-2,3,4,5-tetrahydro-3-methyl-5R-phenyl-1H-3-benzazepin-7-ol, monohydrochloride
**MF:** $C_{17}H_{18}ClNO \bullet HCl$
**FW:** 324.2
**Purity:** ≥99%
**UV/Vis.:** $\lambda_{max}$: 289 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years
**Special Conditions:** Light sensitive




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

SCH 23390 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SCH 23390 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SCH 23390 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SCH 23390 (hydrochloride) in these solvents is approximately 5, 20, and 15 mg/ml, respectively.

SCH 23390 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SCH 23390 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SCH 23390 (hydrochloride) has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SCH 23390 is a halobenzazepine that acts as a selective antagonist of the dopamine $D_1$-like receptor subtypes $D_1$ and $D_5$ ($K_i$s = 0.2 and 0.3 nM, respectively).[1] *In vivo* studies have demonstrated that SCH 23390 can abolish pharmacologically-induced seizures.[1] This compound is useful for studying the role of the dopamine system in normal brain function and neurological disorders.[2-5]

### References


1. Bourne, J.A. SCH 23390: The first selective dopamine $D_1$-like receptor antagonist. *CNS Drug Rev.* **7(4)**, 399-414 (2001).
2. Beninger, R.J. and Miller, R. Dopamine D1-like receptors and reward-related incentive learning. *Neurosci. Biobehav. Rev.* **22(2)**, 335-345 (1998).
3. Oerther, S. and Ahlenius, S. Atypical antipsychotics and dopamine $D_1$ receptor agonism: An *in vivo* experimental study using core temperature measurements in the rat. *J. Pharmacol. Exp. Ther.* **292(2)**, 731-736 (2000).
4. Patel, S., Rademacher, D.J., and Hillard, C.J. Differential regulation of the endocannabinoids anandamide and 2-arachidonylglycerol within the limbic forebrain by dopamine receptor activity. *J. Pharmacol. Exp. Ther.* **306(3)**, 880-888 (2003).
5. Yang, Z., Asico, L.D., Yu, P., *et al.* $D_5$ dopamine receptor regulation of phospholipase D. *Am. J. Physiol. Heart Circ. Physiol.* **288(1)**, H55-H61 (2005).





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