

## Certificate of Analysis

**Product Name:** SKF 83959 hydrobromide

**Catalog No.:** 2074

**Batch No.:** 6

CAS Number: 67287-95-0

IUPAC Name: 6-Chloro-2,3,4,5-tetrahydro-3-methyl-1-(3-methylphenyl)-1*H*-3-benzazepine-7,8-diol

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>20</sub>ClNO<sub>2</sub>·HBr

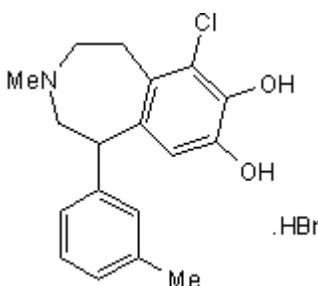
**Batch Molecular Weight:** 398.73

**Physical Appearance:** White solid

**Solubility:** DMSO to 50 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.72 (Ethyl acetate:Methanol + NH<sub>3</sub> [9:1])

**HPLC:** Shows 99.5% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	54.22	5.31	3.51
Found	54.47	5.42	3.67

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**Description:**

Dopamine D<sub>1</sub>-like receptor partial agonist (K<sub>i</sub> values are 1.18, 7.56, 920 and 399 nM for rat D<sub>1</sub>, D<sub>5</sub>, D<sub>2</sub> and D<sub>3</sub> receptors respectively). May act as an antagonist in vivo, producing anti-Parkinsonian effects and antagonizing the behavioral effects of cocaine. Shown to potentiate agonist binding of the σ<sub>1</sub> receptor.

**Physical and Chemical Properties:**

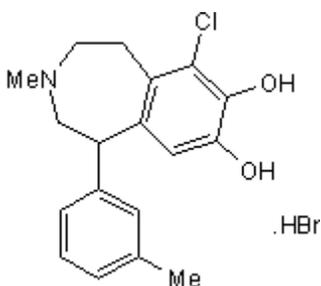
Batch Molecular Formula: C<sub>18</sub>H<sub>20</sub>ClNO<sub>2</sub>.HBr

Batch Molecular Weight: 398.73

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 50 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. Our standard recommendations are:

**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:**

**Platt et al** (2000) Dissociation of cocaine-antagonist properties and motoric effects of the D<sub>1</sub> receptor partial agonists SKF 83959 and SKF 77434. *J.Pharmacol.Exp.Ther.* **293** 1017. PMID: 10869406.

**Cools et al** (2002) SKF 83959 is an antagonist of dopamine D1-like receptors in the prefrontal cortex and nucleus accumbens: a key to its antiparkinsonian effect in animals? *Neuropharmacology* **42** 237. PMID: 11804620.

**Neumeyer et al** (2003) Receptor affinities of dopamine D1 receptor-selective novel phenylbenzazepines. *Eur.J.Pharmacol.* **474** 137. PMID: 12921854.

**Guo et al** (2013) SKF83959 is a potent allosteric modulator of sigma-1 receptor. *Mol.Pharmacol.* **83** 577. PMID: 23295385.

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