

**Product Name:** SB 271046 hydrochloride

**Catalog No.:** 3368

**Batch No.:** 1

CAS Number: 209481-20-9

IUPAC Name: 5-Chloro-N-[4-methoxy-3-(1-piperazinyl)phenyl]-3-methyl-benzo[b]thiophen-2-sulfonamide hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:**  $C_{20}H_{22}ClN_3O_3S_2 \cdot HCl \cdot 2H_2O$

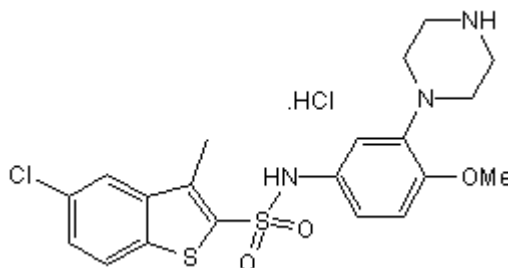
**Batch Molecular Weight:** 524.48

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
ethanol to 50 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:**  $R_f = 0.3$  (Chloroform:Methanol [95:5])

**HPLC:** Shows 100% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

Carbon Hydrogen Nitrogen

	Carbon	Hydrogen	Nitrogen
Theoretical	45.8	5.19	8.01
Found	45.42	5.19	7.92

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**Description:**

Selective, orally active 5-HT<sub>6</sub> antagonist (pK<sub>i</sub> values are 9.02-8.92, 6.55, 6.35, 6.27, 6.05, 5.95, 5.76, 5.73, 5.62, 5.55, 5.41, 5.39, 5.27 and < 4.99 at 5-HT<sub>6</sub>, 5-HT<sub>1D</sub>, 5-HT<sub>1A</sub>, D<sub>3</sub>, 5-HT<sub>1B</sub>, 5-HT<sub>1F</sub>, α<sub>1B</sub>, 5-HT<sub>2C</sub>, 5-HT<sub>2A</sub>, D<sub>2</sub>, 5-HT<sub>2B</sub>, 5-HT<sub>7</sub>, 5-HT<sub>4</sub> and 5-HT<sub>1E</sub> respectively) and is > 200-fold selective over 55 other receptors, enzymes and ion channels. Increases extracellular glutamate and aspartate in the frontal cortex, and exhibits anticonvulsant activity (EC<sub>50</sub> = 0.16 μM).

**Physical and Chemical Properties:**

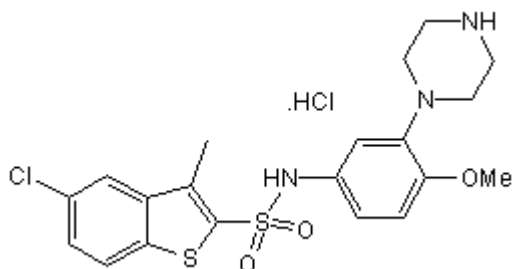
Batch Molecular Formula: C<sub>20</sub>H<sub>22</sub>ClN<sub>3</sub>O<sub>3</sub>S<sub>2</sub>.HCl.2H<sub>2</sub>O

Batch Molecular Weight: 524.48

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**References:**

**Bromidge et al** (1999) 5-Chloro-N-(4-methoxy-3-piperazin-1-yl-phenyl)-3-methyl-2-benzothiophenesulfonamide (SB-271046): a potent, selective, and orally bioavailable 5-HT<sub>6</sub> receptor antagonist. *J.Med.Chem.* **42** 202. PMID: 9925723.

**Dawson et al** (2000) *In vivo* effects of the 5-HT<sub>6</sub> antagonist SB-271046 on striatal and frontal cortex extracellular concentrations of noradrenaline, dopamine, 5-HT, glutamate and aspartate. *Br.J.Pharmacol.* **130** 23. PMID: 10780993.

**Routledge et al** (2000) Characterization of SB-271046: a potent, selective and orally active 5-HT<sub>6</sub> receptor antagonist. *Br.J.Pharmacol.* **130** 1606. PMID: 10928964.

**Marcos et al** (2008) Effects of 5-HT<sub>6</sub> receptor antagonism and cholinesterase inhibition in models of cognitive impairment in the rat. *Br.J.Pharmacol.* **155** 434. PMID: 18622410.

**Storage:** Desiccate at RT

**Solubility & Usage Info:**

DMSO to 100 mM  
ethanol 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.

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