

**Product Name:** SB 203580 hydrochloride

**Catalog No.:** 1402

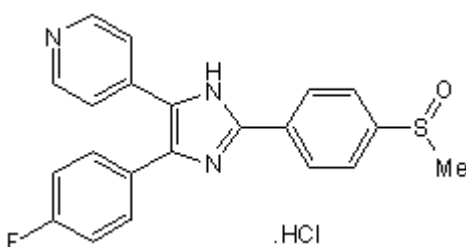
**Batch No.:** 4

CAS Number: 869185-85-3

IUPAC Name: 4-[5-(4-Fluorophenyl)-2-[4-(methylsulphonyl)phenyl]-1H-imidazol-4-yl]pyridine hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>21</sub>H<sub>16</sub>FN<sub>3</sub>OS.HCl.H<sub>2</sub>O  
**Batch Molecular Weight:** 431.91  
**Physical Appearance:** Yellow solid  
**Solubility:** water to 25 mM with gentle warming  
**Storage:** Desiccate at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.43 (Chloroform:Methanol [9:1])  
**HPLC:** Shows >98.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.4	4.43	9.73
Found	58.48	4.43	9.78

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**Description:**

Water-soluble salt of SB 203580 (Cat. No. 1202). Selective inhibitor of p38 mitogen-activated protein kinase (IC<sub>50</sub> values are 50 and 500 nM for SAPK2a/p38 and SAPK2b/p38β2 respectively). Displays 100-500-fold selectivity over LCK, GSK3β and PKBα. Shown to inhibit interleukin-2-induced T cell proliferation, cyclooxygenase-1 and -2, and thromboxane synthase.

**Physical and Chemical Properties:**

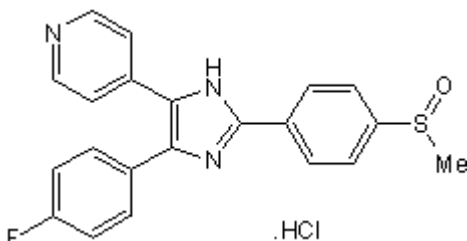
Batch Molecular Formula: C<sub>21</sub>H<sub>16</sub>FN<sub>3</sub>OS.HCl.H<sub>2</sub>O

Batch Molecular Weight: 431.91

Physical Appearance: Yellow solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

water to 25 mM with gentle warming

**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:**

**Cuenda et al** (1995) SB 203580 is a specific inhibitor of a MAP kinase homologue which is stimulated by cellular stresses and interleukin-1. *FEBS Lett.* **364** 229. PMID: 7750577.

**Saklatvala et al** (1996) Role for p38 mitogen-activated protein kinase in platelet aggregation caused by collagen on a thromboxane analogue. *J.Biol.Chem.* **271** 6586. PMID: 8636072.

**Borsch-Haubold et al** (1998) Direct inhibition of cyclooxygenase-1 and -2 by the kinase inhibitors SB 203580 and PD 98059. *J.Biol.Chem.* **273** 28766. PMID: 9786874.

**Davies et al** (2000) Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem.J.* **351** 95. PMID: 10998351.

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