

Product Name: SB 203580

Catalog No.: 1202

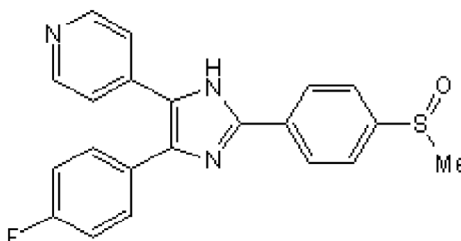
Batch No.: 6

CAS Number: 152121-47-6

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₁H₁₆FN₃OS.
Batch Molecular Weight: 377.44
Physical Appearance: Cream solid
Solubility: DMSO to 25 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.83	4.27	11.13
Found	66.72	4.16	10.93

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

SB 203580 is a selective inhibitor of p38 MAPK (IC₅₀ values are 50 and 500 nM for SAPK2a/p38 and SAPK2b/p38β2 respectively). Displays 100-500-fold selectivity over LCK, GSK-3β and PKBα. Shown to inhibit IL-2-induced T cell proliferation, cyclooxygenase-1 and -2, and thromboxane synthase. Enhances clonal growth of skin epithelial progenitor cells; stimulates neural stem cell (NSC) proliferation. SB 203580 is an essential component of medium for maintaining stem cells in naive pluripotent state and can be used to promote expansion of HSCs ex vivo. Water-soluble Salt also available. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

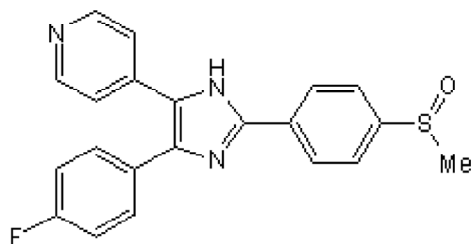
Batch Molecular Formula: C₂₁H₁₆FN₃OS.

Batch Molecular Weight: 377.44

Physical Appearance: Cream solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Jiang et al (2021) Effects of signaling pathway inhibitors on hematopoietic stem cells. *Mol.Med.Rep.* **23** 9. PMID: 33179097.

Gafni et al (2013) Derivation of novel human ground state naive pluripotent stem cells. *Nature* **504** 282. PMID: 24172903.

Sato et al (2008) Inhibitors of p38 mitogen-activated protein kinase enhance proliferation of mouse neural stem cells. *J.Neurosci.Res.* **86** 2179. PMID: 18338804.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 25 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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.

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