

# Certificate of Analysis

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**Product Name:** SB 202190

**Catalog No.:** 1264

**Batch No.:** 7

**CAS Number:** 152121-30-7

**IUPAC Name:** 4-[4-(4-Fluorophenyl)-5-(4-pyridinyl)-1*H*-imidazol-2-yl]phenol

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>14</sub>N<sub>3</sub>OF.½H<sub>2</sub>O

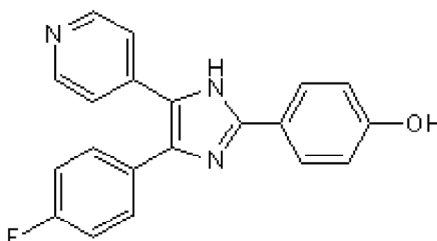
**Batch Molecular Weight:** 335.85

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.83% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	71.53	4.35	12.51
Found	70.96	4.36	12.31

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

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**Description:**

SB 202190 is a highly selective, potent and cell-permeable inhibitor of p38 MAP kinase. Binds within the ATP pocket of the active kinase ( $K_d = 38$  nM, as measured in recombinant human p38), and selectively inhibits the p38 $\alpha$  and  $\beta$  isoforms ( $IC_{50} = 50$  and 100 nM at SAPK2a/p38 and SAPK2b/p38 $\beta$ 2 respectively). Promotes stability of naive human pluripotent stem cells in culture. Inhibits Yamanaka factor reprogramming of human fibroblasts to iPSCs. SB 202190 improves the self-renewal ability of neuronal stem cells from NPC1-deficient mice.

**Physical and Chemical Properties:**

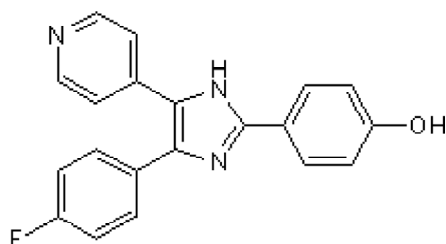
Batch Molecular Formula:  $C_{20}H_{14}N_3OF \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 335.85

Physical Appearance: White solid

**Minimum Purity:**  $\geq 99\%$

**Batch Molecular Structure:**



**References:**

**Neganova et al** (2017) A critical role for p38MAPK signalling pathway during reprogramming of human fibroblasts to iPSCs. *Sci.Rep.* **7** 41693. PMID: 28155868.

**Bartfeld et al** (2015) *In vitro* expansion of human gastric epithelial stem cells and their responses to bacterial infection. *Gastroenterology* **148** 126. PMID: 25307862.

**Sato et al** (2015) SnapShot: Growing Organoids from Stem Cells. *Cell* **161** 1700. PMID: 26091044.

**Storage:** Store at  $-20^{\circ}C$

**Solubility & Usage Info:**

DMSO to 100 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  $45-60^{\circ}C$  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  $-20^{\circ}C$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**Licensing Information:**

Sold with the permission of GlaxoSmithKline

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