

Certificate of Analysis

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Product Name: SB 202190

Catalog No.: 1264

Batch No.: 8

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: C₂₀H₁₄N₃OF.H₂O

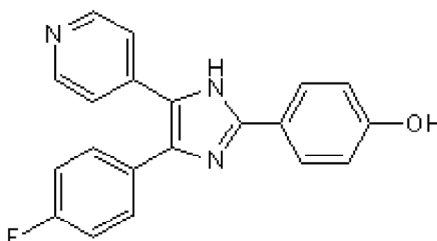
Batch Molecular Weight: 349.37

Physical Appearance: Pale yellow solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	68.76	4.62	12.03
Found	68.06	4.6	11.88

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 α and β isoforms ($IC_{50} = 50$ and 100 nM at SAPK2a/p38 and SAPK2b/p38 β 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:

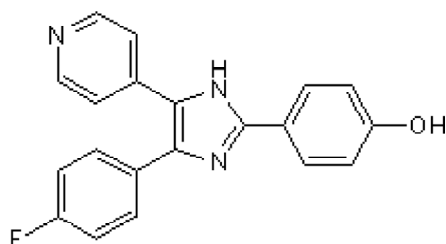
Batch Molecular Formula: C₂₀H₁₄N₃OF.H₂O

Batch Molecular Weight: 349.37

Physical Appearance: Pale yellow solid

Minimum Purity: ≥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°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°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.

Licensing Information:

Sold with the permission of GlaxoSmithKline

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