1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{21}\text{H}_{16}\text{FN}_{3}\text{OS} \)

Batch Molecular Weight: 377.44

Physical Appearance: Cream solid

Solubility: DMSO to 25 mM

1eq. HCl to 100 mM

Storage: Desiccate at +4°C

2. ANALYTICAL DATA

TLC: \( R_f = 0.23 \) (Dichloromethane:Methanol [9:1])

HPLC: Shows 98.0% purity

\(^1\text{H NMR:} \) Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>66.83</td>
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<td>0.19</td>
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<tr>
<td>H</td>
<td>4.27</td>
<td>4.33</td>
<td>0.61</td>
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<tr>
<td>N</td>
<td>11.13</td>
<td>11.06</td>
<td>0.44</td>
</tr>
</tbody>
</table>

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

Product Name: SB 203580

CAS Number: 152121-47-6

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

Description:
Selective inhibitor of p38 MAPK (IC_{50} values are 50 and 500 nM for SAPK2a/p38 and SAPK2b/p38 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. Essential component of medium for maintaining stem cells in naive pluripotent state. Available as part of the MAPK Cascade Inhibitor Tocriset™ and MAPK Inhibitor Tocriset™. Water-soluble Salt also available. Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:
Batch Molecular Formula: C_{21}H_{16}FN_{3}OS
Batch Molecular Weight: 377.44
Physical Appearance: Cream solid

Minimum Purity: ≥98%

Batch Molecular Structure:

Storage: Desiccate at +4°C

Solubility & Usage Info:
DMSO to 25 mM
1eq. HCl to 100 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. 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.

Licensing Information:
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References: