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

Batch Molecular Structure:

2. ANALYTICAL DATA

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

HPLC: Shows 98.4% purity

$^1$H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

<table>
<thead>
<tr>
<th>Carbon</th>
<th>Hydrogen</th>
<th>Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>66.83</td>
<td>4.27</td>
</tr>
<tr>
<td>Found</td>
<td>66.65</td>
<td>4.33</td>
</tr>
</tbody>
</table>
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/p38b2 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. Part of the MAPK Cascade Inhibitor Tocriset™ and MAPK Inhibitor Tocriset™. Water-soluble salt SB 203580 hydrochloride (Cat. No. 1402) also available.

Physical and Chemical Properties:
Batch Molecular Formula: C_{21}H_{15}FN_{2}OS
Batch Molecular Weight: 377.44
Physical Appearance: Cream solid
Minimum Purity: >98%

Storage: Desiccate at +4°C

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