**Product Specification Sheet**

**Product Name:** SB203580  
**Catalog Number:** C7320

### Technical information:
- **Chemical Formula:** C$_{21}$H$_{16}$FN$_{3}$OS  
- **CAS #:** 152121-47-6  
- **Molecular Weight:** 377.43  
- **Purity:** > 98%  
- **Appearance:** White solid  
- **Solubility:** Soluble in DMSO up to 100 mM  
- **Chemical Name:** 4-(4-(4-fluorophenyl)-2-(4-(methylsulfinyl)phenyl)-1H-imidazol-5-yl)pyridine  
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.  
- **Shelf Life:** In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

### Handling:
- • To make 10 mM stock solution, add 0.265mL of DMSO for each mg of SB203580.  
- • For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

### Biological Activity:
SB203580 is a pyridinylimidazole-based inhibitor of p38-MAPK at an IC50 of 0.3-0.5 uM. [1] It also inhibits PKB phosphorylation at an IC50 of 3-5 uM and blocks the key cell cycle event of retinoblastoma protein phosphorylation in IL-2-stimulated T-cells. SB203580 was found to inhibit the activation of p70S6K, but at a location downstream of PI3K. [1]

Independent studies indicate at concentrations of 10 uM, SB203580 activates phosphorylation of ERK1/2 and JNK, which in turn may activate gene transcription regulated by NF-kB. [2] Similarly, SB203580 was shown to stimulate the phosphorylation and activation of cPLA2, CAMKIIa and arachidonic acid release. [3]

In an L1210 mouse leukemic cell line resistant to vincristine, SB203580 is believed to play a role in the reversal of Pgp-mediated multidrug resistance. [4]

### Reference:

To reorder: [http://www.cellagentech.com/SB203580/](http://www.cellagentech.com/SB203580/)

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

*Chemicals are sold for research use only, not for clinical or diagnostic use.*