Product Description

SB202190 is a selective, potent, cell-permeable inhibitor of p38 MAP kinases, inhibiting p38α (SAPK2A, MAPK14) and p38β (SAPK2B, MAPK11) with IC$_{50}$ values of 50 and 100 nM, respectively (Davies et al.; Jiang et al.). When tested at 10 µM, SB202190 has negligible effects on a range of other kinases, including other MAP kinases (ERKs, JNKs; Davies et al.). Pyridinyl imidazole inhibitors, including this compound, directly bind p38 MAP kinases in the ATP binding pocket (Fox et al.).

**Molecular Name:** SB202190  
**Alternative Names:** Not applicable  
**CAS Number:** 152121-30-7  
**Chemical Formula:** C$_{20}$H$_{14}$FN$_{3}$O  
**Molecular Weight:** 331.3 g/mol  
**Purity:** ≥ 98%  
**Chemical Name:** 4-[[4-(4-fluorophenyl)-5-(4-pyridinyl)-1H-imidazol-2-yl]-phenol

**Physical Appearance:** A crystalline solid  
**Storage:**  
Product stable at -20°C as supplied. Protect from prolonged exposure to light.  
Stable as supplied for 12 months from date of receipt.  
**Solubility:**  
- Absolute ethanol ≤ 750 µM  
- DMSO ≤ 45 mM  
For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 3.02 mL of DMSO.  
Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

MAINTENANCE AND SELF-RENEWAL
- Improves the self-renewal ability of neural stem cells from NPC1-deficient mice (Yang et al.).
- Blocks adiponectin-mediated proliferation of hematopoietic stem cells (DiMascio et al.).
- Reduces BMP3-mediated proliferation of C3H10T1/2 mesenchymal stem cells (Stewart et al.).

DIFFERENTIATION
- Induces cardiomyocyte differentiation from human embryonic stem cells (Graichen et al.).

References


Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).