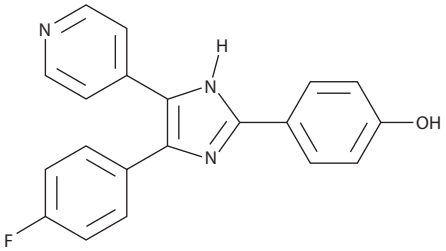
PRODUCT INFORMATION

SB 202190

Item No. 10010399

CAS Registry No.:	152121-30-7
Formal Name:	4-[4-(4-fluorophenyl)-5-(4-pyridinyl)-1H-imidazol-2-yl]-phenol
MF:	$C_{20}H_{14}FN_3O$
FW:	331.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 202, 295 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SB 202190 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB 202190 in the solvent of choice. SB 202190 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of SB 202190 in these solvents is approximately 0.25, 16, and 10 mg/ml, respectively.

SB 202190 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB 202190 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SB 202190 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SB 202190 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.[1,2] When tested at 10 µM, SB 202190 has negligible effects on a range of other kinases, including other MAP kinases (ERKs, JNKs).[2] Pyridinyl imidazole inhibitors, including this compound, directly bind p38 MAP kinases in the ATP binding pocket.[3] Recently, SB 202190 has been used to elucidate the roles of p38 MAP kinases in inflammatory cytokine expression, nicotine-induced receptor expression, and HIV-mediated depressive disorder.[4-6]

References

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2. Davies, S.P., Reddy, H., Caivano, M., *et al*. Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem. J.* **351**, 95-105 (2000).
3. Fox, T., Coll, J.T., Xie, X., *et al*. A single amino acid substitution makes ERK2 susceptible to pyridinyl imidazole inhibitors of p38 MAP kinase. *Protein Sci.* **7**, 2249-2255 (1998).
4. Fu, X., Lawson, M.A., Kelley, K.W., *et al*. HIV-1 Tat activates indoleamine 2,3 dioxygenase in murine organotypic hippocampal slice cultures in a p38 mitogen-activated protein kinase-dependent manner. *J. Neuroinflammation* **8(88)**, 1-12 (2011).
5. Riis, J.L., Johansen, C., Vestergaard, C., *et al*. CCL27 expression is regulated by both p38 MAPK and IKKβ signalling pathways. *Cytokine* **56(3)**, 699-707 (2011).
6. Röthig, A., Schreckenberg, R., Weber, K., *et al*. Effects of nicotine on PTHrP and PTHrP receptor expression in rat coronary endothelial cells. *Cell Physiol. Biochem.* **29**, 485-492 (2012).

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