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DATASHEET

SB 203580

Product overview

Name	SB 203580
Cat No	HB1302
Biological action	Inhibitor
Purity	>98%
Description	Potent, selective p38 MAPK inhibitor. Stimulates neural stem cell proliferation.

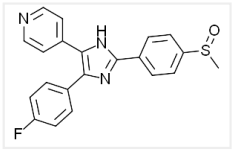
Biological Data

Biological description	Potent and selective p38 MAPK inhibitor (IC_{50} values are 32.6 and 22.4 nM for active and inactive forms of p38 respectively). Exhibits higher selectivity for p38α over p38β (IC_{50} values are 50 and 500 nM respectively). Inhibits many kinases including tyrosine kinases p56 lck and c-src (IC_{50} = 5 µM) and also TNFα, IL-6, COX-1, COX-2. Also stimulates neural stem cell proliferation. Displays anti-inflammatory properties.

Solubility & Handling

Storage instructions	+4°C (desiccate)
Solubility overview	Soluble in DMSO (25mM) or HCl (100mM, 1eq. HCl)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-[5-(4-Fluorophenyl)-2-[4-(methylsulfonyl)phenyl]-1*H*-imidazol-4-yl]pyridine
Molecular Weight	377.44
Chemical structure	
Molecular Formula	$C_{21}H_{16}FN_3OS$
CAS Number	152121-47-6
PubChem identifier	176155
SMILES	CS(=O)C1=CC=C(C=C1)C1=NC(=C(N1)C1=CC=NC=C1)C1=CC=C(F)C=C1
InChiKey	CDMGBJANTYXAIV-UHFFFAOYSA-N

References

Specificity and mechanism of action of some commonly used protein kinase inhibitors.

Davies SP *et al* (2000) Biochem J 351(Pt 1)
PubMedID 10998351

Novel p38 MAPK inhibitor ML3403 has potent anti-inflammatory activity in airway smooth muscle.

Munoz L *et al* (2010) Eur J Pharmacol 635(1-3)
PubMedID 20226180

RWJ 67657, a potent, orally active inhibitor of p38 mitogen-activated protein kinase.

Wadsworth SA *et al* (1999) J Pharmacol Exp Ther 291(2)
PubMedID 10525088

Direct inhibition of cyclooxygenase-1 and -2 by the kinase inhibitors SB 203580 and PD 98059. SB 203580 also inhibits thromboxane synthase.

Börsch-Haubold AG *et al* (1998) J Biol Chem 273(44)
PubMedID 9786874