MAPK Inhibitor
SB 220025

5-(2-Amino-4-pyrimidinyl)-4-(4-fluorophenyl)-1-(4-piperidinlyl)imidazole

PRODUCT ANALYSIS SHEET

Catalog Number:	PHZ1102
Lot Number:	See product label
Quantity:	0.5 mg
Appearance:	Pale yellow solid. Packaged under an inert gas.
Molecular Formula:	$C_{18}H_{19}FN_6$
Molecular Weight:	338.4
Purity:	≥95%, as determined by HPLC
Summary:	SB 220025 is a potent inhibitor of p38 MAPK, and is a valuable tool for elucidating p38 MAPK's role in signaling pathways. This compound binds to a pocket within the p38 MAPK's active site. SB 220025 also inhibits RIP2 autophosphorylation and phosphorylation of substrates histone H3 and myelin basic protein. Inhibition of ERK, PKA, PKC, and EGFR is negligible. SB 220025 is found to be a potent inhibitor of LPS-induced TNF-α production. This compound also inhibits inflammation-induced angiogenesis and the progression of collagen-induced arthritis in the mouse.
Biological Activity:	p38 MAPK: IC_{50} = 60 nM LPS-induced TNF-α production: ED_{50} = 7.5 mg/kg
Solubility:	Soluble in DMSO at a concentration of 100 mg/mL.
Sterility:	This product is not sterile.
Storage:	Store, as supplied, at –20°C, preferably desiccated. Protect from light. Upon solubilization, apportion into working aliquots and store at –20°C. Avoid repeated freeze/thaw cycles. Solutions are stable at –20°C for up to three months.
Expiration Date:	Expires one year from date of receipt when stored as instructed.
Related Products:	p38 MAPK [pTpY180/182] antibody, Cat. # 44-684G p38 MAPK antibody, Cat. # AHO0782 ERK1&2 [pTpY185/187] antibody, Cat. # 44-680G JNK1&2 [pTpY183/185] antibody, Cat. # 44-682G
Caution:	Avoid contact with eyes, skin, and mucous membranes. Wear protective clothing when handling this product. Not for human use.

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Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com
PI PHZ1102 (Rev 2.0) DCC-08-1232

References:

Jackson, J.R., et al. (1998) Pharmacological effects of SB 220025, a selective inhibitor of p38 mitogen-activated protein kinase, in angiogenesis and chronic inflammatory disease models. J. Pharmacol. 284(2):687-692.

Wang, Z., et al. (1998) Structural basis of inhibitor selectivity in MAP kinases. Structure 6(9):1117-1128.

Casanovas, O., et al. (2000) Osmotic stress regulates the stability of cyclin D1 in a p38SAPK2-dependent manner. J. Biol. Chem. 275(45):35091-35097.

Murray, H.J. and J.J. O'Connor (2003) A role for COX-2 and p38 mitogen activated protein kinase in long-term depression in the rat dentate gyrus in vitro. Neuropharmacology 44(3):374-380.

Argast, G.M., et al. (2005) Inhibition of RIP2/RIck/CARDIAK activity by pyridinyl imidazole inhibitors of p38 MAPK. Mol. Cell Biochem. 268(1-2):129-140.