

# SB203580

## Protein kinase inhibitor

Cell permeable, specific inhibitor of p38 (SAPK2a). Inhibits p38 MAPK stimulation of MAPKAPK2 ( $IC_{50}$ =70nM). Can inhibit the key cell cycle event of retinoblastoma protein phosphorylation in interleukin-2-stimulated T cells. Studies on the proximal regulator of this event, the PI(3)K (phosphoinositide 3-kinase)/Akt (protein kinase B; PKB) pathway, showed that SB203580 blocks the phosphorylation and activation of Akt by inhibiting the Akt kinase, phosphoinositide-dependent protein kinase 1 (PDK1).

The concentrations of SB203580 required to block Akt phosphorylation ( $IC_{50}$ = 3-5 $\mu$ M) are only approximately 10-fold higher than those required to inhibit p38 MAP kinase ( $IC_{50}$ =0.3-0.5 $\mu$ M). These data define a new activity for this drug and suggest that extreme caution should be used when interpreting data when SB203580 has been used at concentrations above 1-2 $\mu$ M. Non-specific effects include inhibition of COX-1 and -2. Enhances clonal growth of skin epithelial progenitor cells and stimulates neural stem cell proliferation.

Citations: 82

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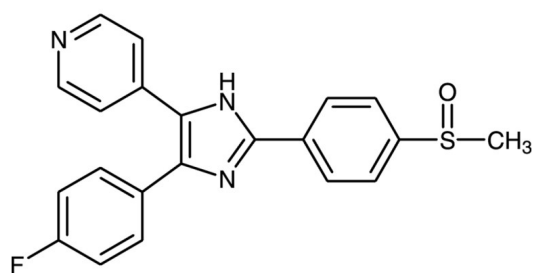
## Ordering Information

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BML-EI286-0001	1mg
BML-EI286-0005	5mg

## Manuals, SDS & CofA

[View Online »](#)



## Handling & Storage

**Use/Stability** As indicated on product label or CoA when stored as recommended.

**Long Term Storage** -20°C

**Shipping** Ambient Temperature

**Regulatory Status** RUO - Research Use Only

## Product Details

**Alternative Name** 4-(4-Fluorophenyl)-2-(4-methylsulfinylphenyl)-5-(4-pyridyl)1H-imidazole

**Appearance** White to off-white powder.

**CAS** 152121-47-6

**Couple Target** p38, Phosphoinositide-dependent protein kinase

**Couple Type** Inhibitor

**Formula**  $C_{21}H_{16}N_3FOS$

**MW** 377.4

**Purity** ≥97% (HPLC)

**Solubility** Soluble in DMSO (50mg/ml).

**Technical Info / Product Notes** Replacement for **ADI-HPK-110**

**Last modified: May 29, 2024**



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