Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

SB 203580 (hydrochloride)

Catalog No: tcsc1880

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
869185-85-3

Formula:
$C_{21}H_{17}ClFN_3OS$

Pathway:
MAPK/ERK Pathway;PI3K/Akt/mTOR;Autophagy;Autophagy

Target:
p38 MAPK;Akt;Autophagy;Mitophagy

Purity / Grade:
>98%

Solubility:
H2O : 8.43 mg/mL (20.37 mM; Need ultrasonic and warming)

Alternative Names:
RWJ 64809 hydrochloride

Observed Molecular Weight:
413.9

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Product Description

SB 203580 hydrochloride is a widely used **p38 MAPK** inhibitor with an **IC_{50}** of 0.3-0.5 μM. It shows more than 100-fold selectivity over PKB, LCK, and GSK-3β.

IC50 & Target: IC50: 0.3-0.5 μM (p38 MAPK)[1]

In Vitro: SB 203580 inhibits IL-2-driven T cell proliferation with an IC_{50} of 3-5 μM, SB 203580 is able to inhibit the activity of PDK1 in a dose-dependent manner with an IC_{50} in the 3-10 μM range[1]. SB 203580 at a concentration of 1 μM is sufficient for inhibiting p38 kinase activity in TF-1 cells. SB 203580 at 5 and 10 μM enhances NF-κB-mediated gene transcription independently of phosphorylation on the transactivation domains of the p65 subunit. SB 203580 at 10 μM enhances phosphorylation of ERK1/2 and JNK [1].

In Vivo: All animals challenged with NS (noninfected controls) and treated with either SB203580 or placebo survive. Compared with placebo, pretreatment with the highest dose of SB203580 (100 mg/kg) 1 hour before *E. coli* increases the hazards ratio of death. With *E. coli*, compared with placebo, at 48 hours, but not 24 hours, low and high dose SB203580 decrease phosphorylated p38 MAPK and the ratio of phosphorylated to total p38. High dose SB203580 decreases lung neutrophils on histology at 24 hours in a trend approaching significance (p = 0.09) and increases them significantly at 48 hours (p = 0.01) in patterns different over time[3]. SB 203580 is evaluated in several models of cytokine inhibition and inflammatory disease. It is demonstrated clearly to be a potent inhibitor of inflammatory cytokine production in both mice and rats with IC_{50} values of 15 to 25 mg/kg[4].