

SB-431542

Catalog No: tcsc0135



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

301836-41-9

Formula:

$C_{22}H_{16}N_4O_3$

Pathway:

TGF-beta/Smad

Target:

TGF- β Receptor

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 40 mg/mL (104.06 mM); Ethanol : 11.17 mg/mL (29.06 mM; Need ultrasonic and warming)

Observed Molecular Weight:

384.39

Product Description

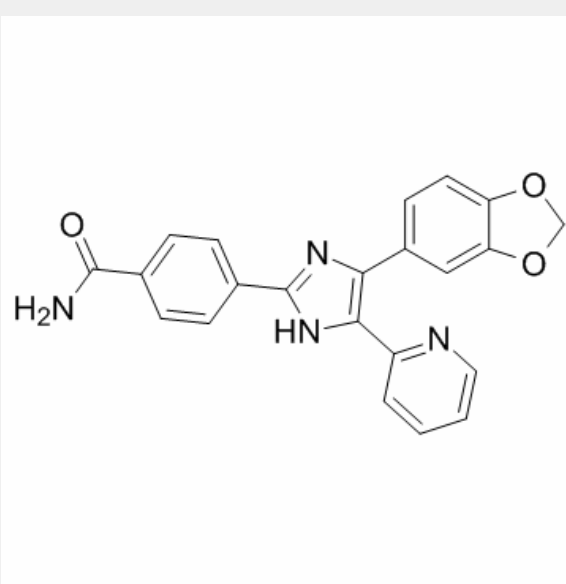
SB-431542 is a potent and selective inhibitor of **ALK5** with an **IC₅₀** value of 94 nM, and is also an inhibitor of **TGF- β Receptor**.

IC50 & Target: IC50: 94 nM (ALK5)^[2]

In Vitro:

SB-431542 (1 μ M) significantly reduces the TGF- β -induced nuclear accumulation of Smad proteins in A498 cells. SB-431542 inhibits TGF- β 1-induced collagen I α 1 and PAI-1 mRNA with IC₅₀ values of 60 and 50 nM, respectively. In addition, SB-431542 inhibits TGF- β 1-induced fibronectin mRNA and protein with IC₅₀ values of 62 and 22 nM, respectively^[1]. SB-431542 (10 μ M) is a selective inhibitor of endogenous activin and TGF- β signaling but has no effect on BMP signaling in NIH 3T3 cells^[2]. TRKI, SB-431542, inhibits TGF-beta-induced transcription, gene expression, apoptosis, and growth suppression. SB-431542 attenuates the tumor-promoting effects of TGF-beta, including TGF-beta-induced EMT, cell motility, migration and invasion, and vascular endothelial growth factor secretion in human cancer cell lines. SB-431542 induces anchorage independent growth of cells that are growth-inhibited by TGF-beta, whereas it reduces colony formation by cells that are growth-promoted by TGF-beta^[3]. SB-431542 (0.3 μ M) inhibits cell proliferation induced by TGF- β in MG63 cells^[4].

In Vivo: SB-431542 (10 mg/kg, i.p.) decreases lung metastasis but does not significantly alter growth of the primary tumor 4T1 xenograft^[5].



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