

A 83-01

Catalog No: tcsc1437



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

909910-43-6

Formula:

$C_{25}H_{19}N_5S$

Pathway:

TGF-beta/Smad

Target:

TGF- β Receptor

Purity / Grade:

>98%

Solubility:

DMSO : 30 mg/mL (71.17 mM; Need ultrasonic); H₂O :

Observed Molecular Weight:

421.52

Product Description

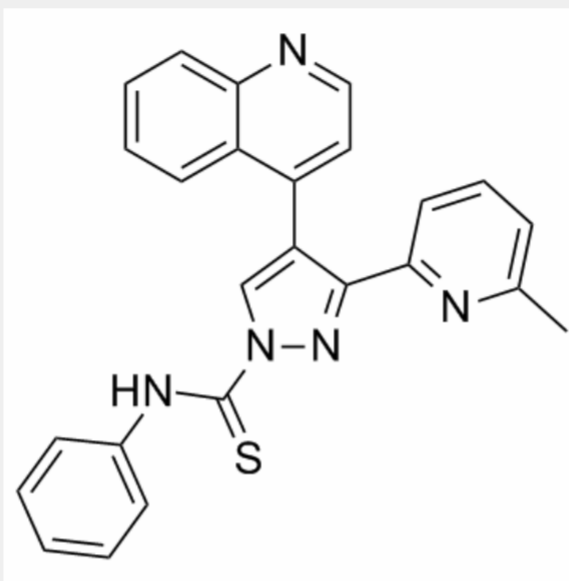
A 83-01 is a potent inhibitor of **TGF- β type I receptor ALK5 kinase**, type I activin/nodal receptor **ALK4** and type I nodal receptor **ALK7**, with **IC₅₀**s of 12, 45 and 7.5 nM against the transcription induced by ALK5, ALK4 and ALK7, respectively.

IC₅₀ & Target: IC₅₀: 12 nM (ALK5, cell-based), 45 nM (ALK4 cell-based), 7.5 nM (ALK7 cell-based)^[1]

In Vitro: A 83-01 is a potent inhibitor of TGF- β type I receptor ALK5 kinase, type I activin/nodal receptor ALK4 and type I nodal

receptor ALK7, reduces the level of ALK-5-induced transcription with an IC_{50} of 12 nM in Mv1Lu cells, also blocks the ALK4-TD and ALK7-TD induced transcription with IC_{50} s of 45 nM and 7.5 nM in R4-2 cells, and weakly suppresses that induced by constitutively active ALK-6, ALK-2, ALK-3, and ALK-1. A 83-01 (0.03-10 μ M) potently prevents the growth-inhibitory effects of TGF- β , and completely inhibits the effect at 3 μ M. A 83-01 (1-10 μ M) inhibits TGF- β -induced Smad activation in HaCaT cells^[1]. A 83-01 (1 μ M) decreases cell motility, adhesion and invasion increased by TGF- β 1 in HM-1 cells, but does not change cell proliferation^[2].

In Vivo: A 83-01 (50, 150 and 500 μ g/mouse, i.p.) significantly improves survival of the mice without body weight or neurobehavioral appearances^[2]. A 83-01 (0.5 mg/kg, i.p.) shows a significantly strong antitumor effect in mice bearing M109 cells^[3].



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