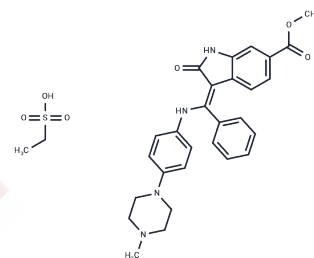


TGF- β 1/Smad3-IN-1

Chemical Properties

CAS No. : 3043687-96-0
 Formula: C₃₀H₃₄N₄O₆S
 Molecular Weight: 578.68
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	TGF- β 1/Smad3-IN-1 (Compound 5aa) is an orally administrable dual inhibitor of TGF- β 1/Smad3 with anti-fibrotic activity and can be used for the study of idiopathic pulmonary fibrosis (IPF).
Targets(IC50)	TGF-beta/Smad
In vitro	TGF- β 1/Smad3-IN-1 (100-500 nM; 48 h) induced a decrease in TGF- β 1 levels in H2228 cells [1]. TGF- β 1/Smad3-IN-1 (2-6 μ M; 24 h) dose-dependently inhibited p-Smad3 and α -SMA expression, significantly suppressing NIH3T3 cell migration[1]. TGF- β 1/Smad3-IN-1 (3-10 μ M; 72 h) increased Cleave-caspase3 expression in NIH3T3 cells and induced apoptosis in a dose-dependent manner [1].
In vivo	TGF- β 1/Smad3-IN-1 (p.o.; 100 mg/kg/day; days 2-20) treated a bleomycin-induced mouse model of pulmonary fibrosis, suppressing bleomycin-induced expression of pulmonary TGF β 1 and HYP, reducing extracellular matrix deposition, and alleviating pulmonary fibrosis [1].

Solubility Information

Solubility	DMSO: 80.00 mg/mL (138.25 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7281 mL	8.6404 mL	17.2807 mL
5 mM	0.3456 mL	1.7281 mL	3.4561 mL
10 mM	0.1728 mL	0.864 mL	1.7281 mL
50 mM	0.0346 mL	0.1728 mL	0.3456 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

An B, et al. Inhibition of TGF- β 1/Smad3 signaling by compound 5aa: A potential treatment for idiopathic pulmonary fibrosis. *Bioorg Chem.* 2024 Apr 16;147:107374.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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