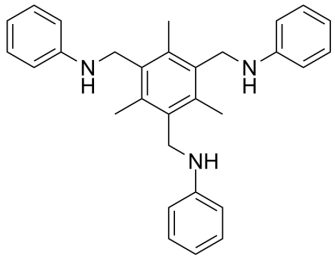
CJJ300

Cat. No.:	HY-146693
CAS No.:	1807631-83-9
Molecular Formula:	$C_{30}H_{33}N_3$
Molecular Weight:	435.6
Target:	TGF-β Receptor
Pathway:	TGF-beta/Smad
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (229.57 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2957 mL	11.4784 mL	22.9568 mL
	5 mM	0.4591 mL	2.2957 mL	4.5914 mL
	10 mM	0.2296 mL	1.1478 mL	2.2957 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.74 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

CJJ300 is a transforming growth factor-β (TGF-β) inhibitor with an IC_{50} of 5.3 μM. CJJ300 inhibits TGF-β signaling by disrupting the formation of the TGF-β-TβR-I-TβR-II signaling complex[1].

IC_{50} & Target

IC_{50}: 5.3 μM (TGF-β1-induced luciferase)[1]

In Vitro

CJJ300 disturbs protein-protein interactions and prevents TGF-β receptor dimerization (IC_{50} = 23.6 ± 5.8 μM)[1].
CJJ300 (0-80 μM, 2 h) inhibits the phosphorylation of intracellular mediators in the downstream TGF-β signaling pathways, and suppresses the expression of markers of EMT (epithelial-mesenchymal transition) without cytotoxicity[1].
CJJ300 suppresses TGF-β induced cell migration[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	Human A549 lung epithelial cells
Concentration:	20, 40, and 80 μM
Incubation Time:	2 h
Result:	Significantly attenuated the increasement of P-Smad2/Smad3, P-Erk1/2 and P-Akt induced by TGF-β. Down regulated the expression of EMT-associated proteins, including fibronectin, α-SMA and MMP-2 in a dose-dependent manner.

REFERENCES

[1]. Han Wu, et al. The development of a novel transforming growth factor-β (TGF-β) inhibitor that disrupts ligand-receptor interactions. Eur J Med Chem. 2020 Mar 1;189:112042.

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