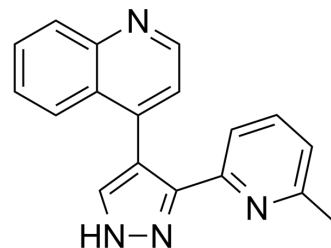


A 77-01

Cat. No.:	HY-78349		
CAS No.:	607737-87-1		
Molecular Formula:	C ₁₈ H ₁₄ N ₄		
Molecular Weight:	286.33		
Target:	TGF-β Receptor		
Pathway:	TGF-beta/Smad		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (87.31 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
	Preparing Stock Solutions		10 mg	
	1 mM	3.4925 mL	17.4624 mL	34.9247 mL
	5 mM	0.6985 mL	3.4925 mL	6.9849 mL
	10 mM	0.3492 mL	1.7462 mL	3.4925 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.73 mM); Clear solution			
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.73 mM); Clear solution			
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.73 mM); Clear solution			

BIOLOGICAL ACTIVITY

Description	A 77-01 is a potent inhibitor of transforming growth factor (TGF)-β type I receptor superfamily activin-like kinase ALK5 with an IC ₅₀ of 25 nM ^[1] .
IC ₅₀ & Target	IC50: 25 nM (ALK5) ^[1]
In Vitro	A-77-01 (0.01-10 μM; 25 hours; Mv1Lu cells) treatment effectively inhibits TGF-β-induced transcriptional activation in concentration-dependent fashion ^[1] .

A-77-01 (1 μ M; 24-72 hours; Mv1Lu cells) treatment efficiently prevents the growth-inhibitory effects of TGF- β ^[1].

A-77-01 (1 μ M; 30 minutes; HaCaT cells) treatment inhibits TGF- β -induced phosphorylation of Smad2^[1].

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

RT-PCR^[1]

Cell Line:	Mv1Lu cells
Concentration:	0.01 μ M, 0.03 μ M, 0.1 μ M, 0.3 μ M, 1 μ M, 3 μ M, 10 μ M
Incubation Time:	25 hours
Result:	Inhibited the luciferase activity induced by TGF- β in concentration-dependent fashion.

Cell Viability Assay^[1]

Cell Line:	Mv1Lu cells
Concentration:	1 μ M
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Efficiently prevented the growth-inhibitory effects of TGF- β .

Western Blot Analysis^[1]

Cell Line:	HaCaT cells
Concentration:	1 μ M
Incubation Time:	30 minutes
Result:	Inhibited TGF- β -induced phosphorylation of Smad2.

CUSTOMER VALIDATION

- Mol Med Rep. 2018 May;17(5):6301-6310.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Tojo M, et al. The ALK-5 inhibitor A-83-01 inhibits Smad signaling and epithelial-to-mesenchymal transition by transforming growth factor-beta. Cancer Sci. 2005 Nov;96(11):791-800.

Caution: Product has not been fully validated for medical applications. For research use only.

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