SIS3 free base

Cat. No.: HY-100444

CAS No.: 521985-36-4

Molecular Formula: $C_{28}H_{27}N_3O_3$

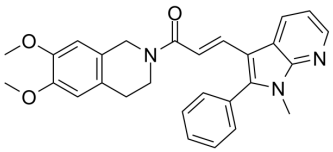
Molecular Weight: 453.53

Target: TGF-beta/Smad

Pathway: Stem Cell/Wnt; 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 (220.49 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2049 mL	11.0246 mL	22.0493 mL
5 mM	0.4410 mL	2.2049 mL	4.4099 mL
10 mM	0.2205 mL	1.1025 mL	2.2049 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 (5.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SIS3 free base is a potent and selective inhibitor of Smad3 phosphorylation. SIS3 free base inhibits the myofibroblast differentiation of fibroblasts by TGF-β1. SIS3 free base does not affect the phosphorylation of Smad2[1].

IC_{50} & Target

Smad3, ALK-5[1]

In Vitro

SIS3 free base attenuates the TGF-beta1-induced phosphorylation of Smad3 and interaction of Smad3 with Smad4[1].

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

Western Blot Analysis[1]

Cell Line:	Human dermal fibroblasts
Concentration:	0.3, 1, 3, 10 μM

Incubation Time:	For 1 hour
Result:	Attenuated the TGF-beta1-induced phosphorylation of Smad3 and interaction of Smad3 with Smad4.

CUSTOMER VALIDATION

- Brain Behav Immun. 2021 Mar 15;S0889-1591(21)00115-X.
- Nucleic Acids Res. 2023 Feb 2;gkad043.
- Cell Death Differ. 2021 Mar;28(3):1001-1012.
- Redox Biol. 2023 Jun, 102709.
- J ImmunoTher Cancer. 2020 Aug;8(2):e000422.

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REFERENCES

[1]. Jinnin M, et al. Characterization of SIS3, a novel specific inhibitor of Smad3, and its effect on transforming growth factor-beta1-induced extracellular matrix expression. Mol Pharmacol. 2006 Feb;69(2):597-607. Epub 2005 Nov 15.

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