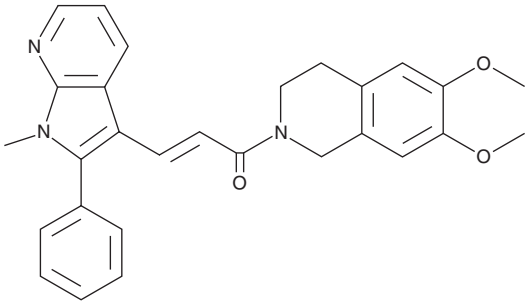
PRODUCT INFORMATION

SMAD3 Inhibitor, SIS3

Item No. 15945

CAS Registry No.:	1009104-85-1
Formal Name:	1-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-3-(1-methyl-2-phenyl-1H-pyrrolo[2,3-b] pyridin-3-yl)-2-propen-1-one
MF:	$C_{28}H_{27}N_3O_3$
FW:	453.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 234, 292, 319 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SMAD3 inhibitor, SIS3 is supplied as a crystalline solid. A stock solution may be made by dissolving the SMAD3 inhibitor, SIS3 in the solvent of choice, which should be purged with an inert gas. SMAD3 inhibitor, SIS3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SMAD3 inhibitor, SIS3 in these solvents is approximately 30 mg/ml.

SMAD3 inhibitor, SIS3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SMAD3 inhibitor, SIS3 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SMAD3 inhibitor, SIS3 has a solubility of approximately 0.2 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SMAD3 is a receptor-regulated intracellular protein that functions downstream of TGF-β and activin receptors and mediates their signaling, playing a role in cell proliferation, differentiation, apoptosis and formation of extracellular matrix. SMAD3 inhibitor, SIS3 selectively inhibits TGF-β and activin signaling by suppressing Smad3 phosphorylation (IC_{50} = 3 µM) without affecting the MAPK/p38, ERK, or PI3-kinase signaling pathways.[1] It has been shown to reduce TGF-β1-induced type 1 procollagen expression and myofibroblast differentiation in normal dermal fibroblasts as well as scleroderma fibroblasts.[1]

Reference

1. Jinnin, M., Ihn, H., and Tamaki, K. Characterization of SIS3, a novel specific inhibitor of Smad3, and its effect on transforming growth factor-β1-induced extracellular matrix expression. *Mol. Pharmacol.* **69(2)**, 597-607 (2006).

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