

Small Molecules

SIS3

Activin/NODAL/TGF- β pathway inhibitor; Inhibits SMAD3

Catalog # 73962
73964

500 μ g
1 mg



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

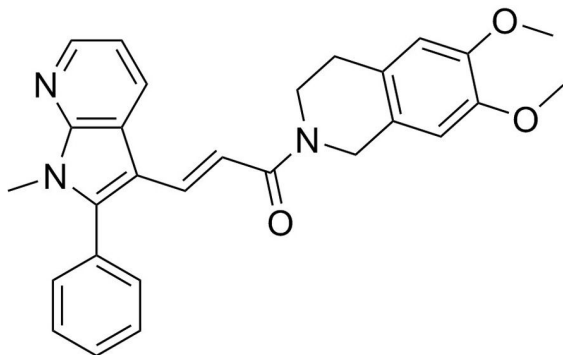
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

SIS3 (specific inhibitor of SMAD3) is a cell-permeable selective inhibitor of transforming growth factor β 1 (TGF- β 1)-dependent SMAD3 phosphorylation (IC_{50} = 3 μ M) and SMAD3-mediated cellular signaling (Jinnin et al.). SIS3 has no effect on SMAD2, p38 mitogen-activated protein kinase (MAPK), extracellular signal-regulated kinase (ERK), or phosphoinositide 3-kinases.

Molecular Name:	SIS3
Alternative Names:	Smad3 Inhibitor
CAS Number:	1009104-85-1
Chemical Formula:	C ₂₈ H ₂₇ N ₃ O ₃
Molecular Weight:	453.5 g/mol
Purity:	\geq 98%
Chemical 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

Structure:



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO \leq 65 mM · Absolute ethanol \leq 65 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 0.5 mg in 110 μ L of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION

- Facilitates the production of anterior ectoderm from mouse induced pluripotent stem cells (Oshima et al.).
- Inhibits myofibroblast differentiation of normal human dermal fibroblasts (Jinnin et al.).

References

Jinnin M et al. (2006) Characterization of SIS3, a novel specific inhibitor of Smad3, and Its effect on transforming growth factor- β 1-induced extracellular matrix expression. *Mol Pharmacol* 69(2): 597–607.

Oshima K et al. (2010) Mechanosensitive hair cell-like cells from embryonic and induced pluripotent stem cells. *Cell* 141(4): 704–16.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.