

SB431542

Reprogramming Enhancer -TGF- β Receptor Inhibitor

Catalog # inh-sb43

For research use only

Version # 10C17-MM

PRODUCT INFORMATION

Content:

- 5 mg SB431542

Storage and stability:

- SB431542 is provided as a crystalline solid and shipped at room temperature. Store at -20°C. Solid product is stable 1 year at -20°C.
- Upon resuspension in an organic solvent (DMSO/ethanol/DMF), SB431542 should be aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles. SB431542 resuspended in an organic solvent is stable for 3 months at -20°C when properly stored.
- An aqueous solution can be obtained by diluting the organic solvent into aqueous buffer or isotonic saline. We do not recommend storing the aqueous solution for more than 1 day.

CHEMICAL PROPERTIES

CAS number: 301836-41-9

Synonym: 4-(5-Benzol[1,3]dioxol-5-yl-4-pyridin-2-yl-1H-imidazol-2-yl)-benzamide hydrate, 4-[4-(3,4-Methylenedioxyphenyl)-5-(2-pyridyl)-1H-imidazol-2-yl]-benzamide hydrate, 4-[4-(1,3-Benzodioxol-5-yl)-5-(2-pyridinyl)-1H-imidazol-2-yl]-benzamide hydrate

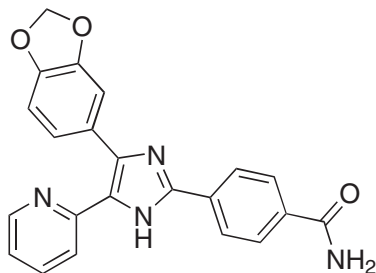
Formula: C₂₂H₁₆N₄O₃

Molecular weight: 384.39

Solubility: approx. 20 mg/ml in DMSO, DMF. Approx. 2 mg/ml in ethanol

Appearance: White to off-white solid

Purity: >99% (HPLC)



DESCRIPTION

SB431542 is a potent and selective inhibitor of transforming growth factor- β (TGF- β) superfamily type I activin receptor-like kinase (ALK) receptors, specifically ALK4, ALK5 and ALK7¹. Inhibition of TGF- β signaling is known to induce the de-repression of epithelial fate and thus was hypothesized to benefit the reprogramming process. Indeed, treatment of OSKM-transduced human primary fibroblasts with a combination of SB431542 and PD0325901, a MEK inhibitor, was found to improve reprogramming efficiency of human cells⁶.

1. Lin T. *et al.*, 2009. A chemical platform for improved induction of human iPSCs. *Nat Methods*. 6(11):805-8. 2. Inman GJ. *et al.*, 2002. SB-431542 is a potent and specific inhibitor of transforming growth factor-beta superfamily type I activin receptor-like kinase (ALK) receptors ALK4, ALK5, and ALK7. *Mol Pharmacol*. 2002 Jul;62(1):65-74.

Working concentration: 2 μ M

RELATED PRODUCTS

Product	Catalog Code
5-Aza-cytidine	inh-aza
Bix-01294	inh-bix
PD0325901	inh-pd32
Valproic acid	inh-vpa
LENTI-Smart™ OSKM (human)	ltsint-hoskm-5
LENTI-Smart™ OSKM (mouse)	ltsint-moskm-5

TECHNICAL SUPPORT

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