

Certificate of Analysis

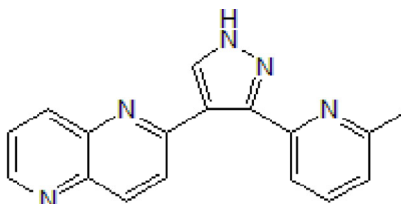
www.tocris.com

Product Name: RepSox
CAS Number: 446859-33-2
IUPAC Name: 2-(3-(6-Methylpyridine-2-yl)-1*H*-pyrazol-4-yl)-1,5-naphthyridine

Catalog No.: 3742 **Batch No.:** 10

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₃N₅.
Batch Molecular Weight: 287.32
Physical Appearance: Pale yellow solid
Solubility: DMSO to 100 mM
 ethanol to 20 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	71.06	4.56	24.37
Found	70.65	4.56	24.37

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

RepSox is a potent and selective inhibitor of the TGF- β type I receptor/ALK5 (IC₅₀ values are 4 and 23 nM for TGF- β type I receptor autophosphorylation and binding respectively). RepSox is selective for TGF- β type I receptor over a range of kinases, including p38 MAPK, JNK1 and GSK3 (IC₅₀ > 16 μ M). Enhances the efficiency of cellular reprogramming (see our protocols below); also used in protocols to generate CiPSCs from MEFs or β cells from hPSCs (see below); used in protocols to generate pancreatic beta cells from hPSCs or CiPSCs from MEFs. Replaces Sox2 by inducing Nanog expression. RepSox synthesized to Ancil... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

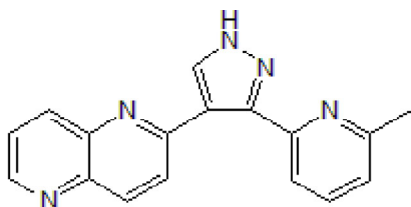
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Minimum Purity: \geq 99%

Batch Molecular Structure:



References:

Ichida *et al* (2009) A small-molecule inhibitor of Tgf- β signaling replaces Sox2 in reprogramming by inducing *Nanog*. *Cell Stem Cell* **5** 491. PMID: 19818703.

Li *et al* (2009) Generation of rat and human induced pluripotent stem cells by combining genetic reprogramming and chemical inhibitors. *Cell Stem Cell* **4** 16. PMID: 19097958.

Gellibert *et al* (2004) Identification of 1,5-naphthyridine derivatives as a novel series of potent and selective TGF- γ type I receptor inhibitors. *J.Med.Chem.* **47** 4494. PMID: 15317461.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 20 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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