

Product Name: A 83-01

Catalog No.: 2939

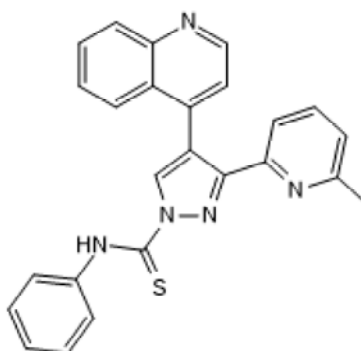
Batch No.: 10

CAS Number: 909910-43-6

IUPAC Name: 3-(6-Methyl-2-pyridinyl)-*N*-phenyl-4-(4-quinolinyl)-1*H*-pyrazole-1-carbothioamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅H₁₉N₅S
Batch Molecular Weight: 421.52
Physical Appearance: White solid
Solubility: DMSO to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	71.24	4.54	16.61
Found	71.07	4.51	16.59

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

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Description:

A 83-01 is a potent inhibitor of TGF- β type I receptor ALK5 kinase, type I activin/nodal receptor ALK4 and type I nodal receptor ALK7 (IC₅₀ values are 12, 45 and 7.5 nM respectively). Blocks phosphorylation of Smad2 and inhibits TGF- β -induced epithelial-to-mesenchymal transition. Only weakly inhibits ALK-1, -2, -3, -6 and MAPK activity. More potent than SB 431542 (Cat.No. 1614). Inhibits differentiation of rat induced pluripotent stem cells (riPSCs) and increases clonal expansion efficiency. Helps maintain homogeneity and long-term in vitro self-renewal of human iPSCs. Also promotes neural differentiation of hPSCs as part of a chemi... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

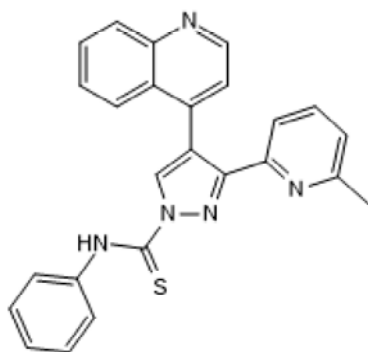
Batch Molecular Formula: C₂₅H₁₉N₅S

Batch Molecular Weight: 421.52

Physical Appearance: White solid

Minimum Purity: \geq 98%

Batch Molecular Structure:



References:

Chen et al (2019) Chemically defined neural conversion of human pluripotent stem cells. *Methods Mol.Biol.* **1919** 59. PMID: 30656621.

Bartfeld et al (2015) *In vitro* expansion of human gastric epithelial stem cells and their responses to bacterial infection. *Gastroenterology* **148** 126. PMID: 25307862.

Boj et al (2015) Organoid models of human and mouse ductal pancreatic cancer. *Cell* **160** 324. PMID: 25557080.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 50 mM

CAUTION - Solutions of this product should be made up and used on the same day.

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. Our standard recommendations are:

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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