

**Product Name:** A 83-01

**Catalog No.:** 2939

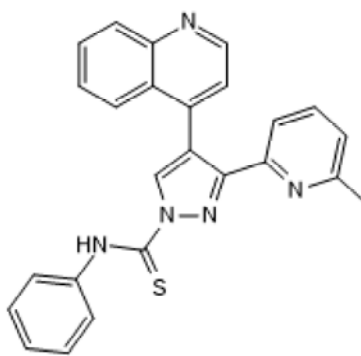
**Batch No.:** 13

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:** C<sub>25</sub>H<sub>19</sub>N<sub>5</sub>S.  
**Batch Molecular Weight:** 421.52  
**Physical Appearance:** Pale yellow solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	71.24	4.54	16.61
Found	70.95	4.52	16.66

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- $\beta$  type I receptor ALK5 kinase, type I activin/nodal receptor ALK4 and type I nodal receptor ALK7 (IC<sub>50</sub> values are 12, 45 and 7.5 nM respectively). A 83-01 blocks phosphorylation of Smad2 and inhibits TGF- $\beta$ -induced epithelial-to-mesenchymal transition. Only weakly inhibits ALK-1, -2, -3, -6 and MAPK activity. More potent than SB 431542 (Cat. No. 1614). A 83-01 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 a... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

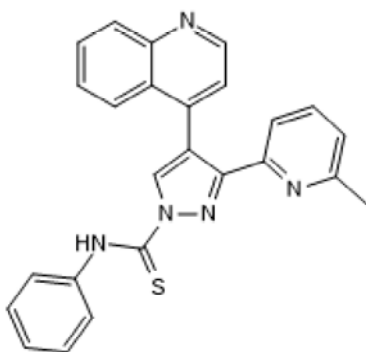
Batch Molecular Formula: C<sub>25</sub>H<sub>19</sub>N<sub>5</sub>S.

Batch Molecular Weight: 421.52

Physical Appearance: Pale yellow 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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