



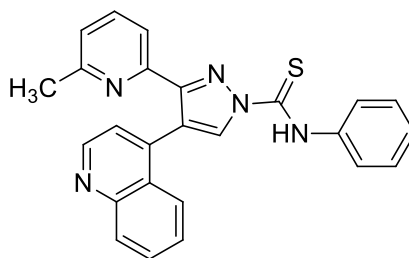
Catalog # 10-1327

A83-01

CAS# 909910-43-6

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

Lot # X104228



Potent and selective ALK4, 5 and 7 inhibitor^{1,2}. IC₅₀=45, 12 and 7.5 nM respectively. Prevents phosphorylation of Smad2/3 and growth inhibition induced by TGFβ². Inhibits differentiation of rat induced pluripotent stem cells and increases clonal expansion efficiency³. Together with AMI-5, A83-01 enabled Oct4-induced reprogramming of mouse embryonic fibroblasts⁴. Cell permeable. Active *in vivo*.

- 1) Vogt *et al.* (2011), *The specificities of small molecule inhibitors of the TGFβ and BMP pathways*; Cell Signal., **23** 1831
- 2) Tojo *et al.* (2005), *the ALK-5 inhibitor A-83-01 inhibits Smad signaling and epithelial-to-mesenchymal transition by transforming growth factor-beta*; Cancer Sci., **96** 791
- 3) 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
- 4) Yuan *et al.* (2011), *Brief report: combined chemical treatment enables Oct4-induced reprogramming from mouse embryonic fibroblasts*; Stem Cells, **29** 549

PHYSICAL DATA

Molecular Weight:	421.53
Molecular Formula:	C ₂₅ H ₁₉ N ₅ S
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 20 mg/ml)
Physical Description:	Light yellow solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

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