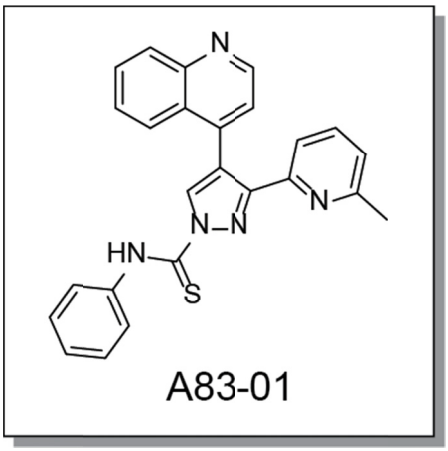
Product Specification Sheet

Product Name: A83-01

Catalog Number: C2831-2 (powder)
C2831-2s (10 mM in DMSO)

Package Size: 2 mg



Technical information:

Chemical Formula:	$C_{25}H_{19}N_5S$
CAS #:	909910-43-6
Molecular Weight:	421.52
Purity:	>98%
Formulation:	Pale yellow solid
Solubility:	Soluble in DMSO up to 100 mM
Chemical Name:	3-(6-methylpyridin-2-yl)-N-phenyl-4-(quinolin-4-yl)-1H-pyrazole-1-carbothioamide
Storage:	Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Handling:

- For C2831-2 (powder), add 474 uL of DMSO to make 10 mM solution.
- For C2831-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

Biological Activity: A83-01 is a selective inhibitor of ALK5 (12nM), ALK4 (45nM), and ALK7 (7.5 nM), and only weakly inhibits ALK1, 2, 3, and 6. It inhibits the TGF-β-induced epithelial-to-mesenchymal transition (EMT) via the inhibition of Smad2 phosphorylation. A83-01 has been used to generate rat and human iPS cells towards a mouse ES cell like self-renewal state.

Reference:

1. Tojo M, Hamashima Y, et al. The ALK-5 inhibitor A-83-01 inhibits smad signaling and epithelial-to-mesenchymal transition by transforming growth factor-beta. Cancer Science (2005), 96(11), 791-800.
2. Li W, Wei W, et al. Generation of rat and human induced pluripotent stem cells by combining genetic reprogramming and chemical inhibitors. Cell Stem Cell (2009), 4(1), 16-19.

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