

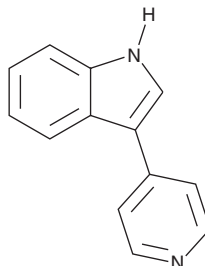
PRODUCT INFORMATION



3-(4-Pyridyl)indole

Item No. 17922

CAS Registry No.: 7272-84-6
Formal Name: 3-(4-pyridinyl)-1H-indole
Synonyms: Rho Kinase Inhibitor III, ROCK Inhibitor III, Rockout
MF: C₁₃H₁₀N₂
FW: 194.2
Purity: ≥98%
UV/Vis.: λ_{max}: 221, 314 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

3-(4-Pyridyl)indole is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-(4-pyridyl)indole in the solvent of choice, which should be purged with an inert gas. 3-(4-Pyridyl)indole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3-(4-pyridyl)indole in ethanol and DMF is approximately 30 mg/ml and 20 mg/ml in DMSO.

3-(4-Pyridyl)indole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3-(4-pyridyl)indole should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 3-(4-Pyridyl)indole has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Two Rho-associated kinases (ROCK), ROCK1 and ROCK2, act downstream of the G protein Rho to regulate cytoskeletal stability. The ROCKs play important roles in diverse cellular functions including cell adhesion and proliferation, smooth muscle contraction, and stem cell renewal.¹⁻³ 3-(4-Pyridyl)indole is a ROCK1 inhibitor (IC₅₀ = 25 μM) that promotes cell spreading, inhibits membrane blebbing, and induces dissolution of actin stress fibers in a wound healing assay.⁴ It also inhibits ROCK2 and PRK2, another Rho-dependent kinase, with similar potency, while inhibiting MSK-1 and PKA with relatively weaker potency.⁴

References

1. Olson, M.F. Applications for ROCK kinase inhibition. *Curr. Opin. Cell Biol.* **20(2)**, 242-248 (2008).
2. Narumiya, S., Tanji, M., and Ishizaki, T. Rho signaling, ROCK and mDia1, in transformation, metastasis and invasion. *Cancer Metastasis Rev.* **28(1-2)**, 65-76 (2009).
3. Watanabe, K., Ueno, M., Kamiya, D., et al. A ROCK inhibitor permits survival of dissociated human embryonic stem cells. *Nat. Biotechnol.* **25(6)**, 681-686 (2007).
4. Yarrow, J.C., Totsukawa, G., Charras, G.T., et al. Screening for cell migration inhibitors via automated microscopy reveals a Rho-kinase inhibitor. *Chem. Biol.* **12(3)**, 385-395 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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