

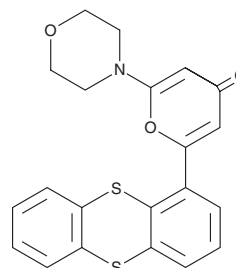
PRODUCT INFORMATION



Ku-55933

Item No. 16336

CAS Registry No.: 587871-26-9
Formal Name: 2-(4-morpholinyl)-6-(1-thianthrenyl)-4H-pyran-4-one
Synonym: ATM Kinase Inhibitor
MF: C₂₁H₁₇NO₃S₂
FW: 395.5
Purity: ≥98%
UV/Vis.: λ_{max}: 246 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

Ku-55933 is supplied as a crystalline solid. A stock solution may be made by dissolving the Ku-55933 in the solvent of choice, which should be purged with an inert gas. Ku-55933 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Ku-55933 in ethanol and DMSO is approximately 10 mg/ml and approximately 30 mg/ml in DMF.

Ku-55933 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Ku-55933 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ku-55933 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ku-55933 is a potent ATP-competitive inhibitor of the ataxia-telangiectasia mutated (ATM) kinase (IC₅₀ = 13 nM; K_i = 2.2 nM).¹ Inhibition of ATM by Ku-55933 blocks radiation-induced phosphorylation of downstream cellular targets and sensitizes cells to the cytotoxic effects of both ionizing radiation and chemotherapeutic agents.¹ Ku-55933 induces senescent breast, lung, and colon carcinoma cells to undergo cell death.² It also inhibits HIV-1 replication in C8166 human T-lymphocyte cells with an IC₅₀ value of 2.4 μM.³

References

- Hickson, I., Zhao, Y., Richardson, C.J., *et al.* Identification and characterization of a novel and specific inhibitor of the ataxia-telangiectasia mutated kinase ATM. *Cancer Res.* **64(24)**, 9152-9159 (2004).
- Crescenzi, E., Palumbo, G., de Boer, J., *et al.* Ataxia telangiectasia mutated and p21^{CIP1} modulate cell survival of drug-induced senescent tumor cells: Implications for chemotherapy. *Clin. Cancer Res.* **14(6)**, 1877-1887 (2008).
- Lau, A., Swinbank, K.M., Ahmed, P.S., *et al.* Suppression of HIV-1 infection by a small molecule inhibitor of the ATM kinase. *Nat. Cell. Biol.* **7(5)**, 493-500 (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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