

PRODUCT INFORMATION



FK-866

Item No. 13287

CAS Registry No.: 658084-64-1

Formal Name: N-[4-(1-benzoyl-4-piperidiny)butyl]-3-(3-pyridinyl)-2E-propenamide

Synonyms: APO-866, Daporinad, K 22.175

MF: C₂₄H₂₉N₃O₂

FW: 391.5

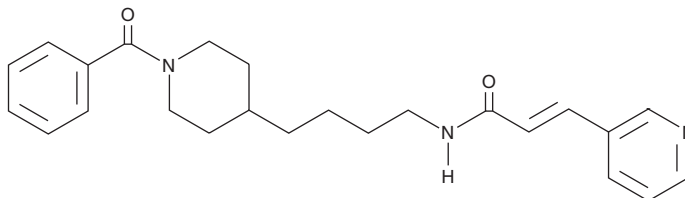
Purity: ≥98%

UV/Vis.: λ_{max}: 257 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

FK-866 is supplied as a crystalline solid. A stock solution may be made by dissolving the FK-866 in the solvent of choice, which should be purged with an inert gas. FK-866 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of FK-866 in these solvents is approximately 50, 25, and 40 mg/ml, respectively.

FK-866 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FK-866 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. FK-866 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

FK-866 is a highly specific non-competitive inhibitor of Nampt ($K_i = 0.4$ nM), causing gradual NAD⁺ depletion.¹ In HepG2 human liver carcinoma cells, NAD⁺ depletion by FK-866 directs delayed cell death by apoptosis ($IC_{50} = \sim 1$ nM).¹ In normal human smooth muscle cells, FK-866 causes premature senescence, an effect that may be linked to decreased activity of the NAD⁺-dependent enzyme SIRT1.² Also, FK-866 induces autophagy in SH-SY5Y neuroblastoma cells, as indicated by the formation of LC3-positive vesicles.³

References

1. Hasmann, M. and Schemainda, I. FK866, a highly specific noncompetitive inhibitor of nicotinamide phosphoribosyltransferase, represents a novel mechanism for induction of tumor cell apoptosis. *Cancer Res.* **63(21)**, 7436-7442 (2003).
2. van der Veer, E., Ho, C., O'Neil, C., et al. Extension of human cell lifespan by nicotinamide phosphoribosyltransferase. *J. Biol. Chem.* **282(15)**, 10841-10845 (2007).
3. Billington, R.A., Genazzani, A.A., Travelli, C., et al. NAD depletion by FK866 induces autophagy. *Autophagy* **4(3)**, 385-387 (2008).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM