

# FK-866, HCl

Catalog Number P006-5MG

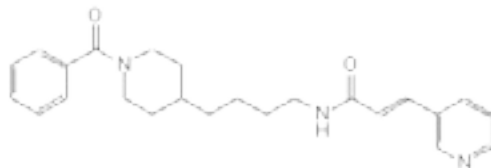
Catalog Number P006-25MG



ARBOR  
ASSAYS

## FEATURES

- Specific inhibitor of NAMPT
- Indirect inhibitor of SIRT1
- Causes gradual NAD<sup>+</sup> depletion



## INTRODUCTION

FK-866 is a selective inhibitor of the nicotinamide pathway dependent NAD<sup>+</sup> synthesis, causing NAD<sup>+</sup> depletion. Highly specific, non-competitive inhibitor of nicotinamide phosphoribosyltransferase (NAMPT/NAPRT) for both the substrate complex and the free enzyme ( $K_i=0.4$  nM and  $K_i'=0.3$  nM, respectively). NAD<sup>+</sup> depletion by FK-866 directs delayed cell death by apoptosis in Hep-G<sub>2</sub> human liver carcinoma cells ( $IC_{50} \approx 1$  nM). Causes premature senescence in normal human smooth muscle cells, an effect that may be linked to decreased activity of the NAD<sup>+</sup>-dependent enzyme SIRT1.

**FORM:** White powder

**MOLECULAR WEIGHT:** 427.95 (as hydrochloride)

**STORAGE:** -20°C, desiccated

**FORMULA:** C<sub>24</sub>H<sub>30</sub>N<sub>3</sub>ClO<sub>2</sub>

**CAS NUMBER:** 658084-64-1 (as free base)

**OTHER NAMES:** K 22.175, N-[4-(1-benzoyl-4-piperidinyl)butyl]-3-(3-pyridinyl)-2E-propenamide

**USES:** Soluble to 25 mg/mL in DMSO and DMF, 40 mg/mL in water

## REFERENCES:

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, 7436-7442 (2003).

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).

Billington, R.A., Genazzani, A.A., Travelli, C., et al. NAD depletion by FK866 induces autophagy. *Autophagy* 4:3, 385-387 (2008).

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info@ArborAssays.com • www.ArborAssays.com

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