

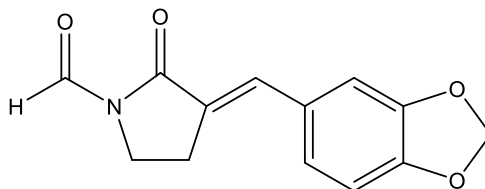
Catalog # 10-5561

KNK437

CAS# 218924-25-5

3-(1,3-Benzodioxol-5-ylmethylene)-2-oxo-1-pyrrolidinecarboxaldehyde

Lot # X109539



KNK437 Inhibits constitutive and inducible HSP70 expression in non-stressed¹ and heat-stressed² cancer cells. Blocks the geldanamycin-induced induction of HSP70 and inhibition of TGF β signaling.³ Inhibits leukocyte integrin α 4 β 7-mediated adhesion of T cells to mucosal addressin cell adhesion molecule 1 (MAdCAM-1) suggesting that HSP70 is essential for β 7 integrin signalling.⁴ Suppresses morphine analgesic tolerance in a rodent model (100 mg/Kg).⁵

References/Citations:

- 1) Shiota *et al.* (2010), *Heat shock cognate protein 70 is essential for Akt signaling in endothelial function*; Arterioscler. Thromb. Vasc. Biol., **30** 491
- 2) Yokota *et al.* (2000), *Benzylidene lactam compound, KNK437, a novel inhibitor of acquisition of thermotolerance and heat shock protein induction in human colon carcinoma cells*; Cancer Res., **60** 2942
- 3) Yun *et al.* (2010), *Geldanamycin inhibits TGF-beta signaling through induction of Hsp70*; Arch. Biochem. Biophys., **495** 8
- 4) Chan *et al.* (2015), *Leukocyte integrin α 4 β 7 associates with heat shock protein 70*; Mol. Cell. Biochem., **409** 263
- 5) Qin *et al.* (2020), *Effect of heat shock protein 70 modulators on the development of morphine analgesic tolerance in rats*; Behav. Pharmacol., **31** 179

PHYSICAL DATA

Molecular Weight:	245.23
Molecular Formula:	C ₁₃ H ₁₁ NO ₄
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (30 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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