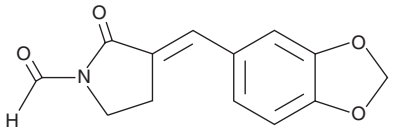
PRODUCT INFORMATION

Heat Shock Protein Inhibitor I

Item No. 15395

CAS Registry No.: 218924-25-5
Formal Name: 3-(1,3-benzodioxol-5-ylmethylene)-2-oxo-1-pyrrolidinecarboxaldehyde
Synonyms: Hsp Inhibitor I, KNK 437
MF: $C_{13}H_{11}NO_4$
FW: 245.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 253, 302, 338 nm



Laboratory Procedures

For long term storage, we suggest that heat shock protein (Hsp) inhibitor I be stored as supplied at -20°C. It should be stable for at least two years.

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

Hsp inhibitor I is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Hsp inhibitor I should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Hsp inhibitor I has a solubility of approximately 0.1 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hsp inhibitor I is a benzylidene lactam compound that prevents the synthesis of inducible Hsps Hsp105, Hsp72, and Hsp40. At 100 µM, it can inhibit the development of thermotolerance in COLO 320 DM cells.[1] Its effects on thermotolerance have been studied in the context of clinical fractionated hyperthermia as a modality of cancer therapy.[2]

References

1. Yokota, S., Kitahara, M., and Nagata, K. Benzylidene lactam compound, KNK437, a novel inhibitor of acquisition of thermotolerance and heat shock protein induction in human colon carcinoma cells. *Cancer Res.* **60(11)**, 2942-2948 (2000).
2. Koishi, M., Yokota, S., Mae, T., *et al*. The effects of KNK437, a novel inhibitor of heat shock protein synthesis, on the acquisition of thermotolerance in a murine transplantable tumor *in vivo*. *Clin. Cancer Res.* **7(1)**, 215-219 (2001).

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