

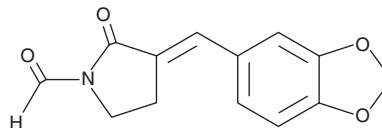
PRODUCT INFORMATION



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: C₁₃H₁₁NO₄
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).

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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