

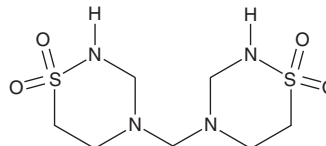
PRODUCT INFORMATION



Taurolidine

Item No. 15374

CAS Registry No.: 19388-87-5
Formal Name: 4,4'-methylenebis(tetrahydro-1,2H,4-thiadiazine) 1,1,1',1'-tetraoxide
MF: C₇H₁₆N₄O₄S₂
FW: 284.4
Purity: ≥98%
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

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

Taurolidine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, taurolidine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Taurolidine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Taurolidine is a synthetic taurine analog with antimicrobial and anti-neoplastic actions. It displays broad bactericidal and fungicidal activity.¹ Taurolidine and its metabolites mimic mannose by binding to the extracellular wall of bacteria, blocking adherence to epithelial and fibroblast cells.² In addition to modulating immunoregulatory systems, taurolidine induces autophagy, apoptosis, and necrosis in human cancer cells.^{1,3-5} It produces cell death in malignant mesothelioma cells by oxidative stress in concert with inhibition of Akt signaling.⁶

References

1. Calabresi, P., Goulette, F.A., and Darnowski, J.W. *Cancer Res.* **61(18)**, 6816-6821 (2001).
2. Caruso, F., Darnowski, J.W., Opazo, C., et al. *PLoS One* **5(1)**, e8927 (2010).
3. Watson, R.W., Redmond, H.P., McCarthy, J., et al. *J. Leukoc. Biol.* **58(3)**, 299-306 (1995).
4. Chromik, A.M., Daigeler, A., Bulut, D., et al. *J. Exp. Clin. Cancer Res.* **29**, 21 (2010).
5. Stendel, R., Biefer, H.R., Dékány, G.M., et al. *Autophagy* **5(2)**, 194-210 (2009).
6. Aceto, N., Bertino, P., Barbone, D., et al. *Eur. Respir. J.* **34(6)**, 1399-1407 (2009).

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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