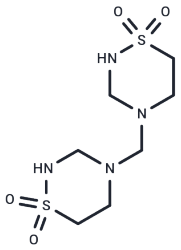
Data Sheet (Cat.No.T7533)

TargetMol

Taurolidine

Chemical Properties



CAS No. : 19388-87-5

Formula: C7H16N4O4S2

Molecular Weight: 284.36

Storage: Keep away from direct sunlight,Store under nitrogen
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Taurolidine is a synthetic taurine analog with antimicrobial and anti-neoplastic actions. It displays broad bactericidal and fungicidal activity.
Targets(IC50)	Apoptosis,Antibacterial,Antibiotic,Autophagy
In vitro	Incubation of the tumor cells with Taurolidine resulted in a 4-fold decrease in proliferation rates (25+/-4% vs. 100+/-28% for controls) and a 4-fold increase in cell necrosis as demonstrated by the increase in LDH release (403+/-28% vs. 100+/-26% for controls), at a Taurolidine concentration of 25 microg/ml.?A dose-dependent decrease in cell viability was also observed[1].
In vivo	In vivo, local Taurolidine administration resulted in significant decreases in tumor burden (3+/-1 nodules in Group B animals vs. 649+/-101 nodules in Group A animals)[1].
Cell Research	In the in vitro experiments, DHD/K12/TRb cells were incubated with 5, 10, 15, 25, microg/ml of Taurolidine.?Cells incubated in culture medium alone were used as controls.?Cell proliferation, cell viability, cell death, and cell apoptosis were measured using commercially available techniques[1].
Animal Research	In the in vivo experiment, BD IX rats were randomized into two groups (n = 10/group).? Group A (control) underwent laparotomy and instillation of DHD/K12/TRb tumor cells intraperitoneally followed by phosphate buffered saline (PBS).?Group B received Taurolidine (100 mg/kg) instead of PBS.?Animals were killed after 24 days and tumor burden assessed by counting the number of tumor nodules in the peritoneal cavity[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (175.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.03 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5167 mL	17.5833 mL	35.1667 mL
5 mM	0.7033 mL	3.5167 mL	7.0333 mL
10 mM	0.3517 mL	1.7583 mL	3.5167 mL
50 mM	0.0703 mL	0.3517 mL	0.7033 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mccourt M , Wang J H , Sookhai S , et al. Taurolidine Inhibits Tumor Cell Growth In Vitro and In Vivo[J]. Annals of Surgical Oncology, 2000, 7(9):685-691.

Madeline, Fink, Abdulla, et al. Taurolidine Sensitivity of Eryptosis, the Suicidal Erythrocyte Death.[J]. Cellular physiology and biochemistry : international journal of experimental cellular physiology, biochemistry, and pharmacology, 2018.