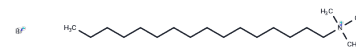


Cetrimonium bromide

Chemical Properties

CAS No. :	57-09-0
Formula:	C ₁₉ H ₄₂ BrN
Molecular Weight:	364.46
Storage:	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	Cetrimonium bromide (Lauroseptol) is a mixture of different quaternary ammonium salts, which is a known component of the broad-spectrum antiseptic cetrimide.
Targets(IC50)	Apoptosis, MMP, Antibiotic, TGF-beta/Smad
In vitro	In a FaDu xenograft tumor model established in SCID mice, intraperitoneal administration of 5 mg/kg Cetrimonium Bromide daily for five consecutive days moderately inhibited tumor growth as compared to the vehicle treatment arm. Additionally, 5 μM of Cetrimonium Bromide effectively prevented tumor formation in FaDu cells within SCID mice.
In vivo	Cetrimonium Bromide exhibits a dose-dependent and radiation potentiating interaction that inhibits the clonogenic survival of FaDu cells. It induces nuclear pyknosis and bubbling in FaDu cells, consistent with the morphology of apoptotic nuclei, which is not observed in CTAB-treated GM05757 cells. Additionally, it reproducibly suppresses ATPase activity in FaDu cells, achieving approximately 90% inhibition at 50 μM. Cetrimonium Bromide reduces the cell viability in a variety of cell lines including FaDu, C666-1, UTSCC-8A, UTSCC-42A, MRC5, and GM05757 fibroblasts, with respective EC50 values of 2 μM, 3.8 μM, 3.5 μM, 4.2 μM, 11 μM, and 18 μM. It also diminishes the cell viability of A549 lung and MCF7 breast cancer cells with EC50 values of 17 μM and 12 μM, respectively.

Solubility Information

Solubility	DMSO: 10 mg/mL (27.44 mM), Sonication is recommended. Ethanol: 93 mg/mL (255.17 mM), Sonication is recommended. H ₂ O: 100 mg/mL (274.38 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: 1 mg/mL (2.74 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7438 mL	13.7189 mL	27.4379 mL
5 mM	0.5488 mL	2.7438 mL	5.4876 mL
10 mM	0.2744 mL	1.3719 mL	2.7438 mL
50 mM	0.0549 mL	0.2744 mL	0.5488 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

Ito E, et al. Mol Pharmacol, 2009, 76(5), 969-983.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481