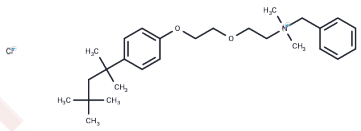
Data Sheet (Cat.No.T0401)

TargetMol

Benzethonium chloride

Chemical Properties



CAS No. : 121-54-0

Formula: C27H42ClNO2

Molecular Weight: 448.09

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	Benzethonium chloride (Quatrachlor) is a synthetic quaternary ammonium salt with surfactant, antiseptic, and broad spectrum antimicrobial properties.
Targets(IC50)	Apoptosis,Caspase,Antibacterial,AChR
In vitro	In human hypopharyngeal squamous carcinoma cells, Benzethonium chloride at a concentration of 9 μM induces apoptosis and activates caspases after 12 hours. Furthermore, Benzethonium chloride at 5 μM enhances the effect of glucose consumption on the intracellular solute Ca(2+) concentration and its binding to membrane-associated proteins.
In vivo	Administered in SCID mice bearing human laryngeal squamous cell carcinoma tumors, Benzethonium chloride (5 mg/kg) inhibited the growth of xenografts.
Cell Research	Cells are seeded in 96-well plates at 5,000 per well in 100 μL of growth medium and allowed to incubate for 24 hours. Benzethonium chloride is then added, as indicated, in a total volume of 5 μL. After 48 hours, MTS assay is done according to the specifications of the manufacturer, with DMSO (0.1%)-treated cells as negative control and cisplatin (166.6 μM)-treated cells as positive control.(Only for Reference)

Solubility Information

Solubility	DMSO: 45 mg/mL (100.43 mM),Sonication is recommended. H2O: 83 mg/mL (185.23 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 (4.46 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	2.2317 mL	11.1585 mL	22.3169 mL
5 mM	0.4463 mL	2.2317 mL	4.4634 mL
10 mM	0.2232 mL	1.1158 mL	2.2317 mL
50 mM	0.0446 mL	0.2232 mL	0.4463 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

Coates KM, et al. Br J Pharmacol, 2001, 134(4), 871-879.
Zaman Z, et al. Eur J Clin Chem Clin Biochem, 1997, 35(8), 603-607.
Durieux ME, et al. Anesthesiology, 1997, 86(6), 1326-1333.
Lang E, et al. Cell Physiol Biochem, 2011, 28(2), 347-354.
Yip KW, et al. Clin Cancer Res, 2006, 12(18), 5557-5569.