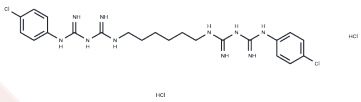
Data Sheet (Cat.No.T1147)

TargetMol

Chlorhexidine dihydrochloride

Chemical Properties



CAS No. : 3697-42-5

Formula: C22H32Cl4N10

Molecular Weight: 578.38

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	Chlorhexidine dihydrochloride (NSC-185) is a disinfectant and topical anti-infective agent used also as mouthwash to prevent oral plaque.
Targets(IC50)	Apoptosis,Cell wall,Antibacterial,Antibiotic,Antifection,Necroptosis
In vitro	Chlorhexidine is a chemical antiseptic.It is effective on both Gram-positive and Gram-negative bacteria, although it is less effective with some Gram-negative bacteria.It has both bactericidal and bacteriostatic mechanisms of action, the mechanism of action being membrane disruption, not ATPase inactivation as previously thought.It is also useful against fungi and enveloped viruses, though this has not been extensively investigated. Chlorhexidine is harmful in high concentrations, but is used safely in low concentrations in many products, such as mouthwash and contact lens solutions.

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 95.24 mg/mL (164.67 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: 3.3 mg/mL (5.71 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	1.729 mL	8.6448 mL	17.2897 mL
5 mM	0.3458 mL	1.729 mL	3.4579 mL
10 mM	0.1729 mL	0.8645 mL	1.729 mL
50 mM	0.0346 mL	0.1729 mL	0.3458 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

Jenkins S, et al. J Clin Periodontol, 1988, 15(7), 415-424.
Sanders D W, Jumper C C, Ackerman P J, et al. SARS-CoV-2 requires cholesterol for viral entry and pathological syncytia formation. Elife. 2021, 10: e65962.
Maki DG, et al. Lancet, 1991, 338(8763), 339-343.