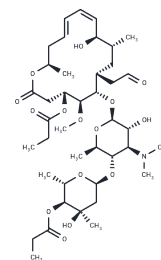


## Midecamycin

## Chemical Properties

CAS No. :	35457-80-8
Formula:	C <sub>41</sub> H <sub>67</sub> N <sub>5</sub> O <sub>15</sub>
Molecular Weight:	813.97
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	Midecamycin (Medecamycin A1), an acetoxy-substituted macrolide antibiotic, has effective on gram-positive and gram-negative bacteria acts by inhibiting bacterial protein synthesis.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	Midecamycin, a novel 16-membered macrolide antibiotic produced by <i>Streptomyces mycarofaciens</i> , effectively inhibits a substantial portion of streptococci, staphylococci, and strains of <i>Haemophilus</i> and <i>Listeria</i> at concentrations below 3.1 µg/mL [1] [2].

## Solubility Information

Solubility	DMSO: 250 mg/mL (307.14 mM), Sonication is recommended. Ethanol: 50 mg/mL (61.43 mM), Sonication is recommended. H <sub>2</sub> O: Insoluble, ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: $< 10$ mg/mL (12.29 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (12.29 mM), Solution. <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

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	1mg	5mg	10mg
1 mM	1.2285 mL	6.1427 mL	12.2855 mL
5 mM	0.2457 mL	1.2285 mL	2.4571 mL
10 mM	0.1229 mL	0.6143 mL	1.2285 mL
50 mM	0.0246 mL	0.1229 mL	0.2457 mL

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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

Neu HC. In vitro activity of midecamycin, a new macrolide antibiotic. *Antimicrob Agents Chemother.* 1983 Sep;24(3):443-4.

Li H, Li J, Li J, et al. Carrimycin inhibits coronavirus replication by decreasing the efficiency of programmed-1 ribosomal frameshifting through directly binding to the RNA pseudoknot of viral frameshift-stimulatory element. *Acta Pharmaceutica Sinica B.* 2024

Cong L, et al. Cloning and characterization of genes encoded in dTDP-D-mycaminose biosynthetic pathway from amidecamycin-producing strain, *Streptomyces mycarofaciens*. *Acta Biochim Biophys Sin (Shanghai).* 2007 Mar;39(3):187-93.

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