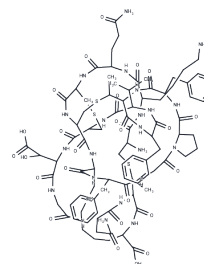


Duramycin

Chemical Properties

CAS No. :	1391-36-2
Formula:	C ₈₉ H ₁₂₅ N ₂₃ O ₂₅ S ₃
Molecular Weight:	2013.28
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Duramycin is a lantibiotic peptide antibiotic derived from <i>Streptomyces cinnamoneus</i> . It also functions as an ion channel modulator and has been investigated for cystic fibrosis (CF).
Targets(IC50)	Antibacterial
In vitro	Duramycin affects protein-lipid interactions, impairs protein translocation, induces aggregation of lipid vesicles, and inhibits ATP-dependent Ca ²⁺ uptake by the sarcoplasmic reticulum.
In vivo	[⁶⁸ Ga]NODAGA-Duramycin PET/CT is successfully applied to non-invasively detect chemotherapy-induced organ toxicity with high sensitivity in mice. Evaluation of [⁶⁸ Ga]NODAGA-Duramycin as a positron emission tomography (PET) tracer of cell death for whole-body detection of chemotherapy-induced organ toxicity. Organ uptake is analyzed in untreated and doxorubicin, busulfan, and cisplatin-treated mice 2 h after intravenous injection of [⁶⁸ Ga]NODAGA-Duramycin.

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble), Sonication is recommended. 0.1 M HCl: 10.00 mg/mL (4.97 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.4967 mL	2.4835 mL	4.967 mL
5 mM	0.0993 mL	0.4967 mL	0.9934 mL
10 mM	0.0497 mL	0.2484 mL	0.4967 mL
50 mM	0.0099 mL	0.0497 mL	0.0993 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

- Oliynyk I, et al. Effect of duramycin on chloride transport and intracellular calcium concentration in cystic fibrosis and non-cystic fibrosis epithelia. *APMIS*. 2010 Dec;118(12):982-90.
- Huo L, et al. Insights into the Biosynthesis of Duramycin. *Appl Environ Microbiol*. 2017 Jan 17;83(3). pii: e02698-16.
- Rix A, et al. Assessment of Chemotherapy-Induced Organ Damage with Ga-68 Labeled Duramycin. *Mol Imaging Biol*. 2019 Aug 8.

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