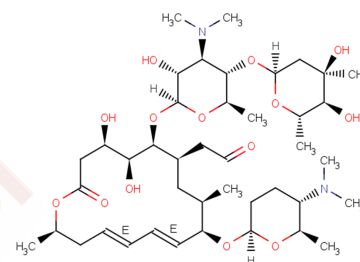


Spiramycin I

Chemical Properties

CAS No. :	24916-50-5
Formula:	C ₄₃ H ₇₄ N ₂ O ₁₄
Molecular Weight:	843.05
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	Spiramycin I is a macrolide compound that can be used as an antibiotic and an antiparasitic agent.
Targets(IC50)	Antibacterial, Antibiotic, Parasite
In vitro	<p>Methods: The antibacterial mechanism and antibacterial spectrum of spiramycin I were investigated, and the minimum inhibitory concentration (MIC) was determined.</p> <p>Results: Spiramycin I binds to the 50S ribosomal subunit and blocks the peptide chain synthesis channel, thereby exerting antibacterial activity against Gram-positive bacteria. It exhibits inhibitory effects on <i>Bacillus subtilis</i> (<i>B. subtilis</i>), <i>Micrococcus luteus</i> (<i>M. luteus</i>), <i>Staphylococcus aureus</i> (<i>S. aureus</i>), <i>Staphylococcus epidermidis</i> (<i>S. epidermidis</i>), and <i>Streptococcus pneumoniae</i> (<i>S. pneumoniae</i>), with MIC values ranging from 0.5 to 8 µg/mL.</p> <p>Methods: HeLa, KB, MCF-7, HepG2, and U87 cancer cells were treated with various concentrations of spiramycin I (0.1–20 µM) and cultured for 72 h.</p> <p>Results: Spiramycin I showed cytotoxicity against all the above cancer cell lines, with corresponding IC₅₀ values of 34.41, 31.26, 33.11, 30.51, and 31.10 µM, respectively [2].</p>

Solubility Information

Solubility	DMSO: 80 mg/mL (94.89 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	1.1862 mL	5.9308 mL	11.8617 mL
5 mM	0.2372 mL	1.1862 mL	2.3723 mL
10 mM	0.1186 mL	0.5931 mL	1.1862 mL
50 mM	0.0237 mL	0.1186 mL	0.2372 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

Klich K, et al., Synthesis, Antibacterial, and Anticancer Evaluation of Novel Spiramycin-Like Conjugates Containing C(5) Triazole Arm. J Med Chem. 2016 Sep 8;59(17):7963-73.

Zhu P, et al. Hydroxylation and hydrolysis: two main metabolic ways of spiramycin I in anaerobic digestion. Bioresour Technol. 2014 Feb;153:95-100.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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