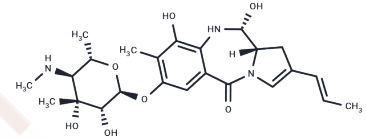


Sibiromycin

Chemical Properties

CAS No. :	12684-33-2
Formula:	C ₂₄ H ₃₃ N ₃ O ₇
Molecular Weight:	475.542
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	Sibiromycin, a glycosylated pyrrolobenzodiazepines (PBDs) compound, is a naturally occurring and potent antitumor antibiotic. It exerts its activity by covalently binding to DNA in the minor groove at the NH ₂ of guanine.
Targets(IC ₅₀)	Others,Antibiotic,DNA Alkylator/Crosslinker
In vitro	Pyrrolobenzodiazepines (PBDs) are highly specific DNA alkylating agents known for their exceptional antineoplastic properties, effectively targeting and binding to DNA sequences with a preference order of 5'-Pu-G-Pu>5'-Py-G-Pu>5'-Pu-G-Py>5'-Py-G-Py. Among them, anthramycin, sibiromycin, and tomaymycin demonstrate this sequence-specific action. Notably, sibiromycin exhibits potent cytotoxic capabilities against various cell lines, including L1210 (leukemia), ADJ/PC6 (plasmacytoma), and CH1 (ovarian), with half-maximal inhibitory concentrations (IC ₅₀ s) ranging from 0.000017 to 0.0029 μM, highlighting its potential as a therapeutic agent.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1029 mL	10.5144 mL	21.0287 mL
5 mM	0.4206 mL	2.1029 mL	4.2057 mL
10 mM	0.2103 mL	1.0514 mL	2.1029 mL
50 mM	0.0421 mL	0.2103 mL	0.4206 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

Gerratana B. Biosynthesis, synthesis, and biological activities of pyrrolbenzodiazepines. *Med Res Rev.* 2012;32(2): 254-293.

Li W, et al. Biosynthesis of sibiromycin, a potent antitumor antibiotic. *Appl Environ Microbiol.* 2009;75(9):2869-2878.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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