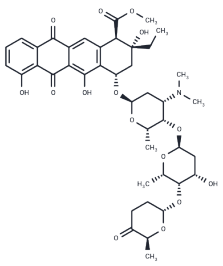
Data Sheet (Cat.No.T21502)

TargetMol

Aclacinomycin A

Chemical Properties



CAS No. : 57576-44-0

Formula: C42H53NO15

Molecular Weight: 811.87

Storage: Store at low temperature,Keep away from direct sunlight
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	Aclacinomycin A (Aclarubicin) is a novel anthracycline antibiotic isolated from Streptomyces galilei with antitumor activity.Aclacinomycin A is an inhibitor of topoisomerases I and II and inhibits RNA activity.Aclacinomycin A has been used in the study of relapsed leukemia and advanced malignant lymphomas.
Targets(IC50)	Proteasome,Antibiotic,DNA/RNA Synthesis,Topoisomerase
In vitro	In V79 and irs-2 cells, Aclacinomycin A (0, 0.006, 0.12, 1.2, and 2.4 μM; 3 hours) inhibited the catalytic activity of topoisomerase II in a dose-dependent manner. The loss of topoisomerase II catalytic activity in Aclacinomycin A-treated cells was significant in all cases compared to untreated cells[2].
In vivo	In DBA/2 and CDF1 (BALB/c×DBA/2) mice weighing 90-110 g with leukemia P-388 model, Aclacinomycin A (0.75 mg/kg, 1.5 mg/kg, 3 mg/kg, 6 mg/kg; intraperitoneal administration daily for 10 days starting 3 hr after transplantation) inhibited tumor growth[4].

Solubility Information

Solubility	DMSO: 30 mg/mL (36.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2317 mL	6.1586 mL	12.3172 mL
5 mM	0.2463 mL	1.2317 mL	2.4634 mL
10 mM	0.1232 mL	0.6159 mL	1.2317 mL
50 mM	0.0246 mL	0.1232 mL	0.2463 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

Isoe T, et al. Inhibition of different steps of the ubiquitin system by CDDP and aclarubicin. Biochim Biophys Acta. 1992 Sep 15;1117(2):131-5.
Hajji N, et al. Induction of genotoxic and cytotoxic damage by aclarubicin, a dual topoisomerase inhibitor. Mutat Res. 2005 May 2;583(1):26-35.
Iihoshi H, et al. Aclarubicin, an anthracycline anti-cancer drug, fluorescently contrasts mitochondria and reduces the oxygen consumption rate in living human cells. Toxicol Lett. 2017 Aug 5;277:109-114.
Hori S, et al. Antitumor activity of new anthracycline antibiotics, aclacinomycin-A and its analogs, and their toxicity. Gan. 1977 Oct;68(5):685-90.