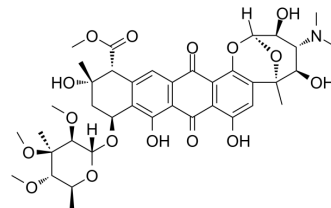


Nogalamycin

Cat. No.:	HY-105846		
CAS No.:	1404-15-5		
Molecular Formula:	C ₃₉ H ₄₉ NO ₁₆		
Molecular Weight:	787.8		
Target:	DNA/RNA Synthesis; Bacterial; Antibiotic		
Pathway:	Cell Cycle/DNA Damage; Anti-infection		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (12.69 mM; Need ultrasonic and warming)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.2694 mL	6.3468 mL	12.6936 mL
5 mM	0.2539 mL	1.2694 mL	2.5387 mL
10 mM	0.1269 mL	0.6347 mL	1.2694 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Nogalamycin is an anthracycline antibiotic. Nogalamycin is a potent antibiotic against Gram-positive bacteria, also has cytotoxicity against certain tumor cells. Nogalamycin is produced by *Streptomyces nogalater* var. *Nogalater*. Nogalamycin selectively inhibits RNA synthesis after binding to DNA template. Nogalamycin can be used for researching anticancer^{[1][2]}.

IC₅₀ & Target

RNA Synthesis^[2]

In Vitro

Nogalamycin (0-10 µg/ml; 2 hours) exhibits lethality against CHO, L1210 and B16 with LD₅₀s of 2.74 µg/ml, 0.25 µg/ml and 0.15 µg/ml^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay

Cell Line: CHO, L1210 and B16 cells^[1]

Concentration: 0-10 µg/ml

Incubation Time: 2 hours

	Result:	Exhibited lethality against CHO, L1210 and B16 with LD ₅₀ s of 2.74 µg/ml, 0.25 µg/ml and 0.15 µg/ml.
In Vivo	Nogalamycin (0-1000 mug/kg; IP) can regress chemically-induced fibrosarcoma tumors and tumors of spontaneous origin in rats ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Rats ^[1]
	Dosage:	0-1000 mug/kg
	Administration:	IP
	Result:	Regressed chemically-induced fibrosarcoma tumors and tumors of spontaneous origin in rats, and the most effective concentration was 556 mug/kg.

REFERENCES

- [1]. Bhuyan BK, et al. Cell kill kinetics of several nogalamycin analogs and adriamycin for Chinese hamster ovary, L1210 leukemia, and B16 melanoma cells in culture. *Cancer Res.* 1981;41(1):18-24.
- [2]. Bhuyan BK, et al. Differential interaction of nogalamycin with DNA of varying base composition. *Proc Natl Acad Sci U S A.* 1965;54(2):566-572.
- [3]. Bempong MA. Cytological effect of nogalamycin in mammals and regression of methylcholanthrene-induced and spontaneous tumors in rats. *Int J Clin Pharmacol Biopharm.* 1976;14(1):6-14.

Caution: Product has not been fully validated for medical applications. For research use only.

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