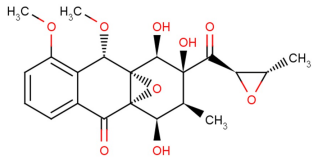
Data Sheet (Cat.No.T12003)

TargetMol
A DRUG SCREENING EXPERT

Mensacarcin

Chemical Properties



CAS No.:	808750-39-2
Formula:	C21H24O9
Molecular Weight:	420.41
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Mensacarcin targets to mitochondria, affects energy metabolism in mitochondria, and activates caspase-dependent apoptotic pathways. Mensacarcin, an antibiotic, can be used as a cytotoxic component of antibody-drug conjugates (ADCs). Mensacarcin, a highly complex polyketide, strongly inhibits cell growth universally in cancer cell lines and potently induces apoptosis in melanoma cells.
Targets(IC_{50})	Traditional Cytotoxic Agents: None
In vitro	Mensacarcin exhibits potent cytostatic properties (mean of 50% growth inhibition=0.2 μM) in almost all cell lines of the National Cancer Institute (NCI)-60 cell line screen and relatively selective cytotoxicity against melanoma cells. Mensacarcin is a highly oxygenated polyketide that was first isolated from soil-dwelling Streptomyces bacteria. Mensacarcin impairs mitochondrial function in melanoma cells[1].Mensacarcin (0-100 μM; 24 hours) exhibits general cytostatic but type-specific cytotoxic effects for melanoma cells[1]. Mensacarcin (2-50 μM; 15 hours) induces rapid apoptotic cell death in melanoma cells[1].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.379 mL	11.893 mL	23.786 mL
5 mM	0.476 mL	2.379 mL	4.757 mL
10 mM	0.238 mL	1.189 mL	2.379 mL
50 mM	0.048 mL	0.238 mL	0.476 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Birte Plitzko, et al. The natural product mensacarcin induces mitochondrial toxicity and apoptosis in melanoma cells. J Biol Chem. 2017 Dec 22;292(51):21102-21116.

2. Lutz F. Tietze, et al. Intramolecular Heck Reactions for the Synthesis of the Novel Antibiotic Mensacarcin: Investigation of Catalytic, Electronic and Conjugative Effects in the Preparation of the Hexahydroanthracene Core. Chemistry Europe. Volume2005, Issue9.

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