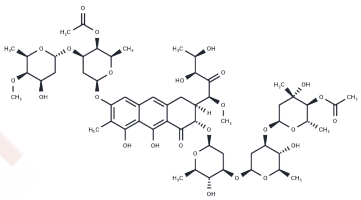
Data Sheet (Cat.No.T10810)

TargetMol

Chromomycin A3

Chemical Properties



CAS No. : 7059-24-7

Formula: C57H82O26

Molecular Weight: 1183.24

Storage: Store at low temperature
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	Chromomycin A3 is an antibiotic produced by Streptomyces sp that binds to gc-rich DNA sequences in the presence of divalent cations and inhibits DNA replication and transcription; it is also used as a fluorescent DNA stain and assay; and it has anticancer activity against diseases such as Hodgkin's, lung adenocarcinomas, melanomas, and breast cancer.
Targets(IC50)	Apoptosis,Caspase,Antibacterial,Antibiotic,Antifungal,DNA Alkylation,DNA Alkylator/Crosslinker,DNA/RNA Synthesis
In vitro	Chromomycin A3 showed strong antiproliferative effects in human pancreatic cancer cells AsPC-1, MIA PaCa-2, and BxPC-3 (IC_{50}: 2.01, 1.34, and 1.15 nM, respectively; 72 h treatment), and induced apoptosis at 5 nM with increased cleaved caspase-3 and PARP [1].
In vivo	In a MIA PaCa-2 xenograft model, intraperitoneal injection of Chromomycin A3 (0.5 mg/kg, once daily for 14 days) reduced tumor volume by over 60% without notable toxicity; tumor tissues showed reduced Ki-67 and increased cleaved caspase-3[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (67.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8451 mL	4.2257 mL	8.4514 mL
5 mM	0.169 mL	0.8451 mL	1.6903 mL
10 mM	0.0845 mL	0.4226 mL	0.8451 mL
50 mM	0.0169 mL	0.0845 mL	0.169 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

Saranaruk P, et al. Chromomycin A3 suppresses cholangiocarcinoma growth by induction of S phase cell cycle arrest and suppression of Sp1-related anti-apoptotic proteins. Int J Mol Med. 2020 Apr;45(4):1005-1016.
Murase H, et al. Evaluation of simultaneous binding of Chromomycin A3 to the multiple sites of DNA by the new restriction enzyme assay. Bioorg Med Chem Lett. 2018 Jun 1;28(10):1832-1835.