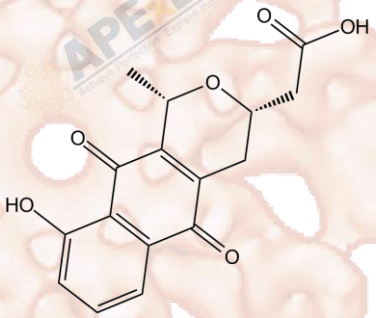
Product Data Sheet

Nanaomycin A



Cat. No.:	A8191
CAS No.:	52934-83-5
Formula:	C16H14O6
M.Wt:	302.28
Synonyms:	Nanafrocin, Nanafrocine, Nanafrocinum, Rosanomycin A
Target:	Chromatin/Epigenetics
Pathway:	DNA Methyltransferase
Storage:	Store at -20°C

Solvent & Solubility

insoluble in H2O; ⩾15.1 mg/mL in DMSO; ⩾31.07 mg/mL in EtOH with ultrasonic

In Vitro

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	3.3082 mL	16.5410 mL	33.0819 mL
5 mM	0.6616 mL	3.3082 mL	6.6164 mL
10 mM	0.3308 mL	1.6541 mL	3.3082 mL

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

Biological Activity

Shortsummary	DNMT3B inhibitor
IC_{50} & Target	500 nM (DNMT3B)

In Vitro

Cell Viability Assay

Cell Line:	A549, HL60, HeLa and HCT116 cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.

	Reacting conditions:	Ranging from 10 nM to 10 μM for 72 h
	Applications:	Nanaomycin A, initially identified by a virtual screening for inhibitors against DNMT1, as a compound inducing antiproliferative effects in three different tumor cell lines originating from different tissues. Nanaomycin A treatment reduced the global methylation levels in all three cell lines and reactivated transcription of the RASSF1A tumor suppressor gene. In biochemical assays, nanaomycin A revealed selectivity toward DNMT3B.
In Vivo	**Animal experiment**	
	Animal models:	Guinea pigs
	Applications:	The therapeutic effect of nanaomycin A and siccanin against experimental cutaneous Trichophyton mentagrophytes infection in guinea pigs was investigated. Topically applied formulation of nanaomycin A was very effective in improving the condition of lesions and in preventing fungal growth in the infected tissues. Nanaomycin A and siccanin were comparable in activity in experiments.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Liu PY, Sokolowski N, et al. "The BET bromodomain inhibitor exerts the mostpotent synergistic anticancer effects with quinone-containing compounds and anti-microtubule drugs." Oncotarget. 2016 Nov 29;7(48):79217-79232.PMID:27764794
2. Nicolson SC, Li C, et al. "Identification and validation of small molecules that enhance recombinant Adeno-associated virus transduction following high throughput screen." J Virol. 2016 May 4. pii:JVI.02953-15.PMID:27147738

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References

1. Kuck D1, Caulfield T, Lyko F et al. Nanaomycin A selectively inhibits DNMT3B and reactivates silenced tumor suppressor genes in human cancer cells. Mol Cancer Ther. 2010 Nov;9(11):3015-23.
2. Kitaura K, Araki Y, Marumo H. The therapeutic effect of nanaomycin A against experimental Trichophyton mentagrophytes infection in guinea pigs. Kitaura K, Araki Y, Marumo H.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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