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DATASHEET

Daunorubicin hydrochloride

Product overview

Name	Daunorubicin hydrochloride
Cat No	HB4376
Alternative names	Daunomycin
Purity	>98%
Description	RNA and DNA synthesis inhibitor. Antibiotic.

Biological Data

Biological description	Antibiotic. RNA and DNA synthesis inhibitor. Inhibits topoisomerase I and II and intercalates into DNA to induce DNA damage. Shows potent anticancer activity. Recently investigated as part of COVID-19 compound repurposing.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in water (50 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(8S,10S)-8-Acetyl-10-[(3-amino-2,3,6-trideoxy-α-L-lyxo-hexopyransoyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-5,12-naphthacenedione hydrochloride
Molecular Weight	563.99
Chemical structure	
Molecular Formula	$C_{27}H_{29}NO_{10}.HCl$
CAS Number	23541-50-6
PubChem identifier	62770
SMILES	C[C@H]1[C@H]([C@H](C[C@@H](O1)O[C@H]2C[C@@](CC3=C(C4=C(C(=C23)O)C(=O)C5=C(C4=O)C=CC=C5OC)O)(C(=O)C)O)N)O.Cl
InChiKey	GUGHGUXZJWAIAS-QQYBVWGSSA-N
MDL number	MFCD04974507
Appearance	Red

References

Daunorubicin and doxorubicin, anthracycline antibiotics, a physicochemical and biological review

Londos-Galgiardi (1984) Biochemie 66(5)

PubMedID 6380596

DNA topoisomerases and their poisoning by anticancer and antibacterial drugs

Marchard et al (2010) Chem Biol. 17(5)
PubMedID 20534341

A SARS-CoV-2 protein interaction map reveals targets for drug repurposing

Krogan et al (2020) Nature 7816
PubMedID 32353859