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## DATASHEET

### Daunorubicin hydrochloride

#### Product overview

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

#### Biological Data

<b>Biological description</b>	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.
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#### Solubility & Handling

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

#### Chemical Data

<b>Chemical name</b>	(8S,10S)-8-Acetyl-10-[(3-amino-2,3,6-trideoxy- $\alpha$ -L-lyxo-hexopyransoyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-5,12-naphthacenedione hydrochloride
<b>Molecular Weight</b>	563.99
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>27</sub> H <sub>29</sub> NO <sub>10</sub> .HCl
<b>CAS Number</b>	23541-50-6
<b>PubChem identifier</b>	62770
<b>SMILES</b>	<chem>C[C@H]1[C@H]([C@H]([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.CI</chem>
<b>InChiKey</b>	GUGHGUXZJWAIAS-QQYBVWGSSA-N
<b>MDL number</b>	MFCD04974507
<b>Appearance</b>	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](#)

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