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DATASHEET

Doxorubicin hydrochloride

Product overview

Name	Doxorubicin hydrochloride
Cat No	HB4183
Alternative names	Adriamycin, NSC 123127, DOX, DXR
Applications	Antineoplastic Agent
Purity	>99%
Description	Antibiotic. DNA topoisomerase II inhibitor. Apoptosis inducer.

Biological Data

Biological description	Antibiotic and DNA topoisomerase II inhibitor.
	Intercalates into DNA to inhibit nucleic acid synthesis.
	Induces apoptosis and shows antitumor and anti-neoplastic activity

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in DMSO (50 mM) and 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	10-[(3-Amino-2,3,6-trideoxy- α -L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-5,12-naphthacenedione hydrochloride
Molecular Weight	579.99
Chemical structure	
Molecular Formula	C ₂₇ H ₂₉ NO ₁₁ .HCl
CAS Number	25316-40-9
PubChem identifier	443939
SMILES	<chem>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)CO)O)N)O.Cl</chem>
InChIKey	MWWSFMDVAYGXBV-RUELKSSGSA-N
MDL number	MFCD00077757
Appearance	Orange

References

Identification of yeast DNA topoisomerase II mutants resistant to the antitumor drug doxorubicin: implications for the

mechanisms of doxorubicin action and cytotoxicity.

Patel et al (1997) Mol Pharmacol 52(4)

PubMedID [9380029](#)

Studies on the in vitro reactivity of clofibryl and fenofibryl glucuronides. Evidence for protein binding via a Schiff's base mechanism.

Grubb et al (1993) Biochem Pharmacol 46(3)

PubMedID [8347161](#)
