

# Doxorubicin hydrochloride

Cell Culture Tested

**Product Code: TC420**

## Product Description:

Molecular Weight: 579.98

Molecular Formula:  $C_{27}H_{29}NO_{11}.HCl$

CAS No.: 25316-40-9

Synonym: DOX, Hydroxydaunorubicin hydrochloride, Adiramycin

Doxorubicin hydrochloride is an anthracycline antibiotic isolated from *Streptomyces peucetius*. It is a hydrochloride salt of doxorubicin that exhibit anticancer and antineoplastic activity.

Doxorubicin intercalates between base pairs in the DNA helix and this prevents DNA replication. It also lead to inhibition of protein synthesis in cells. Doxorubicin inhibits topoisomerase II thus preventing ligation of nucleotide strand following DNA double strand break. These events lead to apoptotic cell death. It also induces formation of reactive oxygen species in tumor cells and brings about cell death. Liposomal Doxorubicin HCl complexes find therapeutic application in ovary, lung, and breast cancer due to its superior efficacy and minimum cardiotoxicity.

## Directions:

### Preparation instructions:

For cell culture applications, Doxorubicin hydrochloride solutions can be prepared as per required concentrations in dimethylsulfoxide (DMSO).

## Quality Control:

### Appearance

Orange to red to red brown powder

### Solubility

Orange to red clear solution at 50 mg per ml in water.

### Water (by KF)

NMT 3.0%

### Assay (by HPLC)

98.00% - 102.00%

### Antibiotic sensitivity test

Complies

### Cell Culture Test

Complies

## Storage and Shelf Life:

Store powder at 2 - 8°C in air tight containers and away from bright light.

Use before expiry date given on the product label.

Revision : 0 / 2015

### Disclaimer :

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