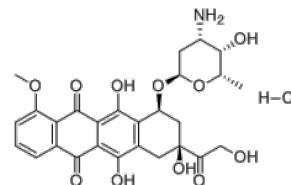


**Product Name** : Doxorubicin hydrochloride  
**Cat. No.** : PC-49305  
**CAS No.** : 25316-40-9  
**Molecular Formula** : C<sub>27</sub>H<sub>29</sub>NO<sub>11</sub>.HCl  
**Molecular Weight** : 579.99  
**Target** : Topoisomerase  
**Solubility** : 10 mM in DMSO



1. John L. Nitiss, et al. *Nat Rev Cancer*. 2009 May;9(5):338-50.
2. Hee-Kyung Rhee, et al. *Bioorg Med Chem*. 2007

## Biological Activity

Doxorubicin hydrochloride is a 14-hydroxylated version of Daunorubicin, Doxorubicin is an antitumor antibiotic agent that inhibits **DNA topoisomerase II**.

Doxorubicin is a DNA intercalator that inhibits nucleic acid synthesis and induces apoptosis.

Doxorubicin reduces intracellular tau levels.

Doxorubicin also promotes formation of free radicals for the disruption of membrane lipids and DNA strands.

Doxorubicin fluorescence is quenched upon intercalation into the DNA; while binding to histones or partitioning into the phospholipid phase of PEG-phospholipid micelles or hydrophobic cores of polymeric micelles, increases Doxorubicin fluorescence.

## References

Feb 15;15(4):1651-8.

