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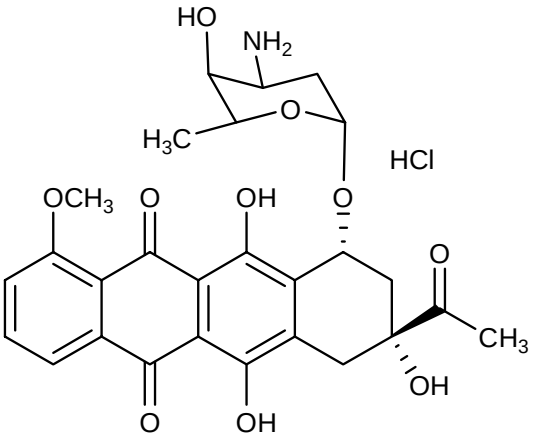
# ProductInformation

**WP900 hydrochloride**
Product Number **W 4013**
Storage Temperature –20 °C

Synonyms: (-)-daunorubicin




**Product Description**
Molecular Formula: $C_{27}H_{30}NO_{10}Cl$
Molecular Weight: 564 (anhydrous)

WP900, an anthracycline antibiotic shown to have activity against multidrug-resistant cancer cells, is the left-handed enantiomer of the anticancer natural product (+)-daunorubicin.[1, 2] WP900 binds selectively to a left-handed (Z-DNA) form of a synthetic DNA poly-nucleotide. It can be used in conjunction with (+)-daunorubicin (known to recognize the right-handed form B-DNA) to interconvert the polynucleotide back and forth between its left- and right-handed forms.[3] WP900 is a weak DNA binder but has the same pKa and lipophilicity as the natural product (+)-dauno-rubicin.[4]

WP900 retains cytotoxic activities over a number of multidrug resistant cell variants as compared to (+)-daunorubicin. WP900 is cytotoxic to cancer cells, making it a possible compound for studying Z-DNA-targeted anticancer agents. WP900 may be a potential tool for investigating the significance and function of left-handed DNA *in vivo*. It may also be used in studying the shifting balance between left- and right-handed forms of DNA, a new approach in drug discovery and control of gene expression.

**Reagent**
WP900 hydrochloride is supplied as a red solid.

Purity: ≥ 95% (HPLC)

**Precautions and Disclaimer**
Consult the MSDS for information regarding hazardous and safe handling practices.

**Preparation Instructions**
The product is soluble in dimethyl sulfoxide (DMSO) at greater than 5 mg/ml.

**Storage/Stability**
Store the product at –20 °C.

**References**
1. Borman, S., Left-handed DNA finally gets some recognition. Chem. & Eng. News, **78**, 7-8 (2000).
2. Waring, M., Commentaries in: Facilitating structural transitiions in DNA. Proc. Natl. Acad. Sci. USA, **97**, 11685-11687 (2000).
3. Qu, X., et al., Allosteric, chiral-selective drug binding to DNA. Proc. Natl. Acad. Sci. USA, **97**, 12032-12037 (2000).

4. Loetchutinat, C., et al., drug sequestration in cytoplasmic organelles does not contribute to the diminished sensitivity of antracyclines in multidrug resistant K562 cells. Eur. J. Biochem., **268**, 4459-4467 (2001).

5. Loetchutinat, C., et al., The absence of stereoselective P-glycoprotein- and multidrug resistance-associated protein-mediated transport of daunotubicin. Biochem. Pharmacol., **62**, 561-567 (2001).

KAA 04/03