Web: www.taiclone.com
Tel: +886-2-2735-9682
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# Epirubicin (hydrochloride)

## Catalog No: tcsc1773

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

### Specifications

**CAS No:**
56390-09-1

**Formula:**
$C_{27}H_{30}ClNO_{11}$

**Pathway:**
Cell Cycle/DNA Damage

**Target:**
Topoisomerase

**Purity / Grade:**
>98%

**Solubility:**
DMSO : ≥ 103.3 mg/mL (178.11 mM); H2O : ≥ 100 mg/mL (172.42 mM)

**Alternative Names:**
4'-Epidoxorubicin hydrochloride

**Observed Molecular Weight:**
579.98

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## Product Description

Epirubicin (hydrochloride) is a semisynthetic L-arabino derivative of doxorubicin, and an antineoplastic agent by inhibiting **Topoisomerase**.

***In Vitro:*** Epirubicin, like doxorubicin, exerts its antitumor effects by complex with DNA, resulting in damage to DNA and interference with the synthesis of DNA, RNA, and proteins. Epirubicin may also affect the integrity and activity of cellular membranes. Maximal cell kill caused by Epirubicin occurs during the S phase of the cell cycle. With higher concentrations effects are also seen in early G2 as well as G1 and M phases[1]. Epirubicin display antineoplastic activity against most cancer cells. Epirubicin is cytotoxic to Hepatoma G2 cells with $IC_{50}$ of 1.6 μg/mL at 24 hr. 1.6 μg/mL Epirubicin induces apoptosis of Hep G2 cells, and higher activity of catalase by 50%, Se-dependent glutathione peroxidase by 110%, Cu, Zn-superoxide dismutase by 172% and Mn-superoxide dismutase by 135%. Epirbicin increases the cellular expression of NADPH-CYP 450 reductase, and reduces GST-π expression[2].

***In Vivo:*** Epirubicin are clinically active against a broad range of tumor types, including breast cancer, malignant lymphomas, soft tissue sarcomas, lung cancer, pleural mesothelioma, gastrointestinal cancer, head and neck cancer, ovarian cancer, prostatic carcinoma, transitional bladder carcinoma and so on[3]. Epirubicin at a dose of 3.5 mg/kg suppresses tumor mass of human breast tumor xenograft R-27 by 74.4 %[4].