Web: www.taiclone.com
Tel: +886-2-2735-9682
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Daunorubicin (Hydrochloride)

Catalog No: tcsc1271

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg

Specifications

CAS No:
23541-50-6

Formula:
$C_{27}H_{30}ClNO_{10}$

Pathway:
Cell Cycle/DNA Damage;Antibody-drug Conjugate/ADC Related;Autophagy

Target:
Topoisomerase;ADC Cytotoxin;Autophagy

Purity / Grade:
>98%

Solubility:
H2O : ≥ 34 mg/mL (60.29 mM)

Alternative Names:
RP 13057 Hydrochloride;Daunomycin;RP13057 Hydrochloride;RP-13057 Hydrochloride;Rubidomycin hydrochloride

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Observed Molecular Weight:
563.98

Product Description

Daunorubicin hydrochloride is a **topoisomerase II** inhibitor.

IC50 & Target: Topoisomerase II[1]

In Vitro: The mean IC_{50} value is 0.04 μM for Daunorubicin (Dnr) in Molt-4 cells. Daunorubicin belongs to the anthracyclines, a group of cytotoxic chemotherapeutics. The cytotoxic effects of anthracyclines are caused by DNA intercalation and the ability to interfere with DNA transcription and replication by inhibiting Topoisomerase II as well as by producing reactive oxygen species[2] Daunorubicin inhibits of both DNA and RNA syntheses in HeLa cells over a concentration range of 0.2 through 2 μM. The IC_{50} value is 0.4 μM for Daunorubicin (Dnr) in human pancreatic cell line L3.6[3].

In Vivo: Urinary protein excretion, serum creatinine, and blood urea nitrogen (BUN) level are significantly increased in group Daunorubicin (3 mg/kg, i.v.) compared with those in group Control. Administration of Daunorubicin (DNR) causes a significant increase in malondialdehyde (MDA) level in renal tissue compared with that in the control group[4].