

Idarubicin (hydrochloride)

Catalog No: tcsc1061



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg



Specifications

CAS No:

57852-57-0

Formula:

$C_{26}H_{28}ClNO_9$

Pathway:

Cell Cycle/DNA Damage;Autophagy

Target:

Topoisomerase;Autophagy

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 50 mg/mL (93.64 mM); H₂O : 6.67 mg/mL (12.49 mM; Need ultrasonic)

Alternative Names:

4-Demethoxydaunorubicin hydrochloride

Observed Molecular Weight:

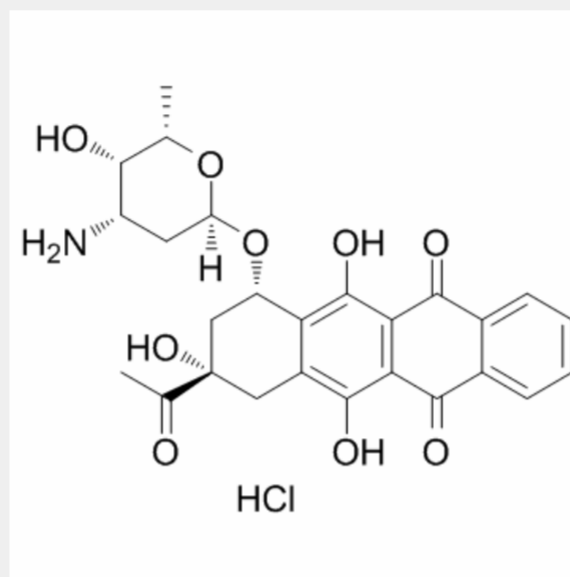
533.95

Product Description

Idarubicin hydrochloride is an anthracycline antibiotic in the treatment of leukaemia and a **DNA topoisomerase II** inhibitor.

IC₅₀ & Target: DNA topoisomerase II^[1]

In Vitro: The IC₅₀ of idarubicin is 3.3±0.4 ng/mL on MCF-7 monolayers and 7.9±1.1 ng/mL in multicellular spheroids^[1]. Idarubicin has shown a greater cytotoxicity than daunorubicin or doxorubicin in various *in vitro* systems. This has been attributed to a better ability of idarubicin to induce the formation of topoisomerase II -mediated DNA breaks^[2]. Idarubicin is about 57.5-fold and 25-fold more active than doxorubicin and epirubicin, respectively^[3]. Idarubicin produces a concentration-dependent reduction in cell growth, with an IC₅₀ value of approximately 0.01 μM. Idarubicin produced a concentration-dependent inhibition of DNA synthesis^[4].



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