Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Pirarubicin (Hydrochloride)

Catalog No: tcsc3244

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
95343-20-7

Formula:
$C_{32}H_{38}ClNO_{12}$

Pathway:
Cell Cycle/DNA Damage;Autophagy

Target:
Topoisomerase;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : 33.33 mg/mL (50.19 mM; Need ultrasonic); H2O :

Alternative Names:
THP Hydrochloride

Observed Molecular Weight:
664.1

Product Description

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Pirarubicin Hydrochloride is an anthracycline antibiotics, acts as a **topoisomerase II** inhibitor, and is a widely used for treatment of various cancers, in particular, solid tumors.

IC50 & Target: Topoisomerase II[1]

In Vitro: Pirarubicin is a topoisomerase II inhibitor[1]. Pirarubicin shows inhibitory activities against M5076 and Ehrlich cells, with IC_{50}s of 0.366 and 0.078 μM, respectively. The cytotoxicity of Pirarubicin toward M5076 cells is lower than toward Ehrlich cells, and this is due to the much lower expression of topoisomerase II in M5076 cells than in Ehrlich cells[2]. Pirarubicin (2.5, 5, 10 μg/mL) significantly induces autophagy in a dose dependent manner in bladder cancer (T24, EJ, 5637, J82 and UM-UC-3) cells. Furthmore, Pirarubicin (5 μg/mL) induces apoptosis through inhibition of mTOR/p70S6K/4E-BP1 in bladder cancer cells, and this effect is enhanced by inhibition of autophagy[3].

In Vivo: Pirarubicin (18 mg/kg, i.v.) significantly elevates serum level of BNP, CK-MB, CTnT, LDH, and MDA compared with those in the control group in acute cardiac toxicity rats. Pirarubicin also lowers heart rate, and depresses R-wave voltage, and prolongation of QT intervals in the acute cardiac toxicity model[4].