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

Valrubicin

Catalog No: tcsc2929

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
56124-62-0

Formula:
$C_{34}H_{36}F_3NO_{13}$

Pathway:
TGF-beta/Smad;Epigenetics

Target:
PKC;PKC

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 130 mg/mL (179.65 mM); H2O :

Alternative Names:
AD-32

Observed Molecular Weight:
723.64

Product Description

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Valrubicin is a chemotherapy agent, inhibits TPA- and PDBu-induced **PKC** activation with **IC_{50}**s of 0.85 and 1.25 μM, respectively, and has antitumor and antiinflammatory activity.

IC50 & Target: IC50: 0.85 μM (TPA-activated PKC), 1.25 μM (PDBu-activated PKC)[1]

In Vitro: Valrubicin (AD 32) is a chemotherapy agent, inhibits TPA- and PDBu-induced PKC activation with IC_{50}s of 0.85 and 1.25 μM, respectively. Valrubicin inhibits the binding of [^{3}H]PDBu to PKC. Therefore, Valrubicin competes with the tumor promoter for the PKC binding site and prevents the latter from both interacting with the phospholipid and binding to PKC[1]. Valrubicin shows cytotoxic activity against squamous cell carcinoma (SCC) cell line colony formation, with IC_{50}s and IC_{90}s of 8.24 ± 1.60 μM and 14.81 ± 2.82 μM for UMSCC5 cells, 15.90 ± 0.90 μM, 29.84 ± 0.84 μM for UMSCC5/CDDP‡ cells, and 10.50 ± 2.39 μM, 19.00 ± 3.91 μM for UMSCC10b cells, respectively. Moreover, Valrubicin in combination with radiation enhances the cytotoxicity[2].

In Vivo: Valrubicin (3, 6, or 9 mg) reduces tumor growth at week 3 by intratumoral jection in hamster. Valrubicin (6 mg) combined with minimally cytotoxic irradiation (150, 250, or 350 cGy) causes significant tumor shrinkage in hamster[2]. Valrubicin (0.1 μg/μL) significantly reduces the number of infiltrating neutrophils in biopsies challenged with TPA at 24 h and attenuates chronic inflammation in mice. Valrubicin also decreases the expression levels of inflammatory cytokines in the acute model[3].