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

Valspodar

Catalog No: tcsc1074

Available Sizes

Size: 5mg

Size: 10mg

Specifications

CAS No:
121584-18-7

Formula:
$C_{63}H_{111}N_{11}O_{12}$

Pathway:
Membrane Transporter/Ion Channel

Target:
P-glycoprotein

Purity / Grade:
>98%

Solubility:
DMSO : 12 mg/mL (9.88 mM; Need ultrasonic and warming)

Alternative Names:
PSC 833

Observed Molecular Weight:
1214.62

Product Description

Valspodar is a P-glycoprotein (**P-gp**) inhibitor widely used as overcoming multidrug resistance modulator.

In Vitro:

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Valspodar (PSC 833) has no cytotoxicity effects at up to the concentration of 0.75 μg/mL. Valspodar (0.25, 0.5 and 0.75 μg/mL) and DOX-L are added to the DOX resistant cells, and cell kill efficacy of MDR cell type increases significantly when valspodar is administered alongside DOX-L. Valspodar (0.5 and 0.75 μg/mL), in combination with all concentrations of DOX, are most toxic and kill more than 70% of the resistant cells[1]. Pretreatment with PSC833 decreases the IC_{50} value of mitoxantrone in MDA-MB-435mdr cells to 0.4±0.02 μM in MDR cells and almost completely reverses the resistance of MDR cells to mitoxantrone[3].

In Vivo: valspodar (10 mg/kg, o.p.) exhibits minimal blood-cell partitioning as reflected in its low mean blood-to-plasma ratio of approximately 0.52. Valspodar displays properties of slow clearance and a large volume of distribution. Valspodar shows properties of low hepatic extraction and wide distribution, similar to that of its structural analogue cyclosporine A[2]. Preadministration of PSC833 to mice increases mitoxantrone fluorescent intensity in MDR tumor to 94% of that in the wild-type tumors[3].