

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

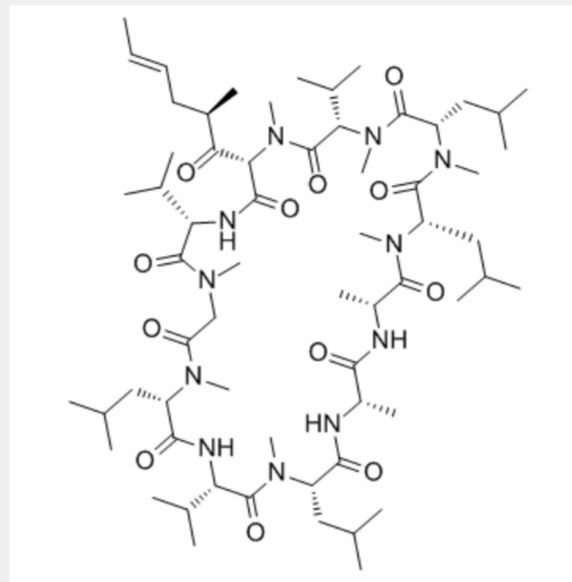
Product Description

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

In Vitro:

Valspodar (PSC 833) has no cytotoxicity effects at up to the concentration of 0.75 $\mu\text{g}/\text{mL}$. Valspodar (0.25, 0.5 and 0.75 $\mu\text{g}/\text{mL}$) 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 $\mu\text{g}/\text{mL}$), 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 $0.4 \pm 0.02 \mu\text{M}$ 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].



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