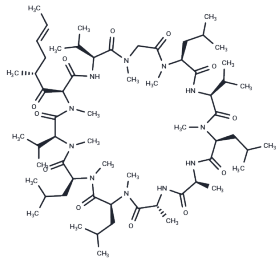
Data Sheet (Cat.No.T17216)

TargetMol

Valspodar

Chemical Properties



CAS No. : 121584-18-7

Formula: C63H111N11O12

Molecular Weight: 1214.62

Storage: Store at low temperature,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Valspodar (PSC 833), a specific P-glycoprotein inhibitor and MDR regulator, is commonly used as a chemical sensitizer in the study of advanced epithelial ovarian cancer.
Targets(IC50)	P-gp
In vitro	At concentrations up to 0.75 μg/mL, Valspodar (PSC 833) exhibits no cytotoxic effects. When Valspodar (0.25, 0.5, and 0.75 μg/mL) and DOX-L are introduced to DOX-resistant cells, the cell-killing efficacy of the MDR cell type significantly increases, particularly with the administration of Valspodar alongside DOX-L. The combination of Valspodar (0.5 and 0.75 μg/mL) with all concentrations of DOX is the most toxic, resulting in the death of more than 70% of the resistant cells [1]. Pretreatment with PSC833 reduces the IC50 value of NSC 279836 in MDA-MB-435mdr cells to 0.4±0.02 μM and almost completely reverses the resistance of MDR cells to NSC 279836 [2].
In vivo	Administered orally at a dose of 10 mg/kg, Valspodar exhibits minimal blood-cell partitioning, as indicated by its low mean blood-to-plasma ratio of approximately 0.52. Valspodar demonstrates characteristics of slow clearance and a large volume of distribution. Its properties include low hepatic extraction and wide distribution, akin to those observed in its structural analogue CsA [3]. Preadministration of PSC833 to mice increases NSC 279836 fluorescent intensity in MDR tumors to 94% of that observed in wild-type tumors [2].

Solubility Information

Solubility	DMSO: 90 mg/mL (74.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (2.72 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8233 mL	4.1165 mL	8.233 mL
5 mM	0.1647 mL	0.8233 mL	1.6466 mL
10 mM	0.0823 mL	0.4117 mL	0.8233 mL
50 mM	0.0165 mL	0.0823 mL	0.1647 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Bajelan E, et al. Co-delivery of doxorubicin and PSC 833 (Valspodar) by stealth nanoliposomes for efficient overcoming of multidrug resistance. J Pharm Pharm Sci. 2012 Sep;15(4):568-82.
Fei Shen, et al. Dynamic Assessment of Mitoxantrone Resistance and Modulation of Multidrug Resistance by Valspodar (PSC833) in Multidrug Resistance Human Cancer Cells. JPET August 2009,330 (2): 423-429
PermissionsZ., et al. Pharmacokinetics of PSC 833 (valspodar) in its Cremophor EL formulation in rat.2010,40(1):55-61.