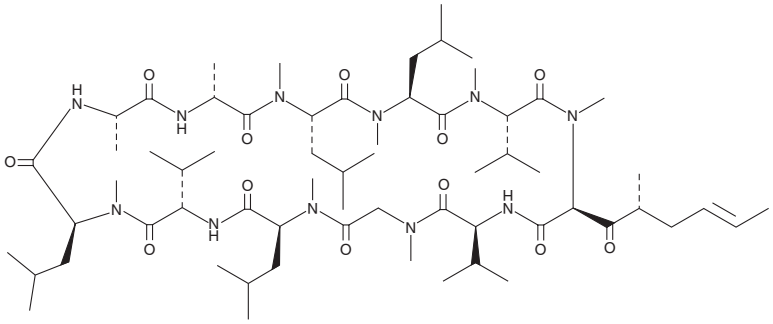
PRODUCT INFORMATION

PSC 833

Item No. 20391

CAS Registry No.:	121584-18-7
Formal Name:	6-[(2S,4R,6E)-4-methyl-2-(methylamino)-3-oxo-6-octenoic acid]-7-L-valine-cyclosporin A
Synonyms	Valspodar
MF:	$C_{63}H_{111}N_{11}O_{12}$
FW:	1,214.6
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PSC 833 is supplied as a crystalline solid. A stock solution may be made by dissolving the PSC 833 in the solvent of choice, which should be purged with an inert gas. PSC 833 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PSC 833 in these solvents is approximately 14, 3, and 20 mg/ml, respectively.

PSC 833 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PSC 833 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PSC 833 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PSC 833 is a non-immunosuppressant derivative of cyclosporine and potent multidrug-resistance (MDR) modulator.[1] It restores sensitivity of MDR-P388 murine leukemia cells to cytostatic agents when used at concentrations of 70, 33, 45, 34, and 26 nM in combination with colchicine, vincristine (Item No. 11764), daunorubicin (Item No. 14159), doxorubicin (Item No. 15007), and etoposide (Item No. 12092), respectively. PSC 833 inhibits basal-to-apical transport and increases apical-to-basal transport of [^{14}C]docetaxel in LLC-GA5-COLO150 cells that overexpress human P-glycoprotein (P-gp).[2] *In vivo*, PSC 833 increases survival time in MDR-P388 tumor-bearing mice and in an MDR-L1210 leukemia mouse xenograft model when administered in combination with doxorubicin.[1,3] PSC 833 also prolongs the anti-hyperalgesic effects of intraperitoneally administered pregabalin in a mouse model of cold stress-induced central pain.[4]

References

1. Boesch, D., Gavériaux, C., Jachez, B., *et al. In vivo* circumvention of P-glycoprotein-mediated multidrug resistance of tumor cells with SDZ PSC 833. *Cancer Res.* **51(16)**, 4226-4233 (1991).
2. Shirakawa, K., Takara, K., Tanigawara, Y., *et al.* Interaction of docetaxel ("Taxotere") with human P-glycoprotein. *Jpn. J. Cancer Res.* **90(12)**, 1380-1386 (1999).
3. Keller, R.P., Altermatt, H.J., Nooter, K., *et al.* SDZ PSC 833, a non-immunosuppressive cyclosporine: Its potency in overcoming P-glycoprotein-mediated multidrug resistance of murine leukemia. *Int. J. Cancer* **50(4)**, 593-597 (1992).
4. Mukae, T., Fujita, W., and Ueda, H. P-glycoprotein inhibitors improve effective dose and time of pregabalin to inhibit intermittent cold stress-induced central pain. *J. Pharmacol. Sci.* **131(1)**, 64-67 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM