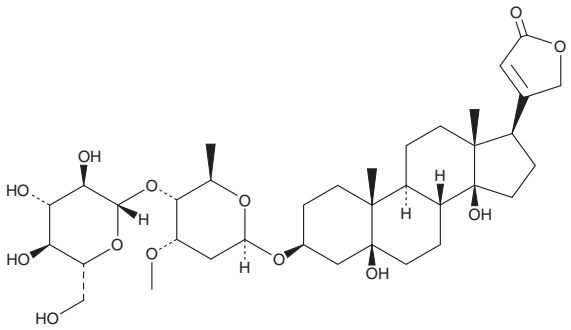
PRODUCT INFORMATION

Periplocin

Item No. 25216

CAS Registry No.:	13137-64-9
Formal Name:	(3β,5β)-3-[(2,6-dideoxy-4-O-β-D-glucopyranosyl-3-O-methyl-β-D-ribo-hexopyranosyl)oxy]-5,14-dihydroxy-card-20(22)-enolide
MF:	$C_{36}H_{56}O_{13}$
FW:	696.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 219 nm
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

Periplocin is supplied as a crystalline solid. A stock solution may be made by dissolving the periplocin in the solvent of choice. Periplocin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of periplocin in these solvents is approximately 10 mg/ml.

Periplocin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, periplocin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Periplocin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Periplocin is a cardiac glycoside that has been isolated from *P. sepium* and has cardiac and anticancer activity.[1] It increases viability and proliferation of mouse cardiac microvascular endothelial cells (CMECs) when used at concentrations ranging from 2 to 50 µM and improves left ventricular structure and function in a rat model of chronic heart failure.[2,3] Periplocin inhibits cell proliferation in nine lung cancer cell lines in a time- and dose-dependent manner with IC_{50} values ranging from 0.12 to 53 µM.[4] It induces apoptosis in SGC-7901 and MGC-803 gastric cancer cells and activates the ERK1/2-EGR1 pathway.[5] Periplocin (5 and 20 mg/kg) reduces tumor growth in a hepatocellular carcinoma (HCC) mouse xenograft model.[1] It also inhibits AKT and ERK autophosphorylation and tumor growth in an A549 lung cancer mouse xenograft model when administered at doses of 50 and 100 µg.[4]

References

1. Cheng, C.-F., Lu, I.-H., Tseng, H.-W., *et al. Evid. Based Complement. Altnernat. Med.* **2013**, 958025 (2013).
2. Wang, X.-y., Gao, X.-m., Liu, H., *et al. Chin. J. Integr. Med.* **16(1)**, 33-40 (2010).
3. Li, Y., Li, J., Zhou, K., *et al. Molecules* **21(12)**, E1702 (2016).
4. Lu, Z.J., Zhou, Y., Song, Q., *et al. Cell Physiol. Biochem.* **26(4-5)**, 609-618 (2010).
5. Li, L., Zhao, L.-M., Dai, S.-l., *et al. Cell Physiol. Biochem.* **38(5)**, 1939-1951 (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