

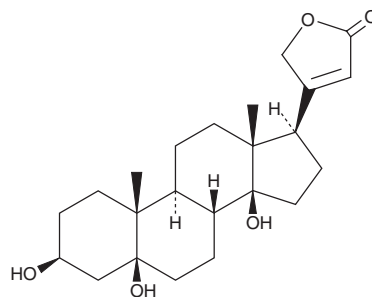
# PRODUCT INFORMATION



## Periplogenin

Item No. 35047

<b>CAS Registry No.:</b>	514-39-6
<b>Formal Name:</b>	3 $\beta$ ,5 $\beta$ ,14-trihydroxy-card-20(22)-enolide
<b>Synonyms:</b>	Desoxostrophanthidin, 5 $\beta$ -hydroxy Digitoxigenin
<b>MF:</b>	C <sub>23</sub> H <sub>34</sub> O <sub>5</sub>
<b>FW:</b>	390.5
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	$\lambda_{\max}$ : 218 nm
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years
<b>Item Origin:</b>	Plant/ <i>Periploca sepium</i>



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

### Laboratory Procedures

Periplogenin is supplied as a solid. A stock solution may be made by dissolving the periplogenin in the solvent of choice, which should be purged with an inert gas. Periplogenin is soluble in the organic solvent DMSO.

### Description

Periplogenin is a cardenolide and an active metabolite of periplocin (Item No. 25216) that has been found in *P. graeca* and has diverse biological activities.<sup>1-3</sup> It reduces the activity of porcine Na<sup>+</sup>/K<sup>+</sup> ATPase when used at concentrations of 0.3 or 0.6  $\mu$ M.<sup>1</sup> Periplogenin induces apoptosis in U937 and PC3 prostate cancer cells, as well as inhibits the proliferation of these cells (EC<sub>50</sub>s = 1.41 and 1.2  $\mu$ M, respectively), when used at concentrations of 0.1 or 0.2  $\mu$ M. It increases the production of reactive oxygen species (ROS) and induces necroptosis in HaCaT keratinocytes when used at a concentration of 2  $\mu$ g/ml.<sup>3</sup> Topical application of periplogenin reduces ear thickness in a mouse model of psoriasis induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014).

### References

1. Bloise, E., Braca, A., De Tommasi, N., *et al.* Pro-apoptotic and cytostatic activity of naturally occurring cardenolides. *Cancer Chemother. Pharmacol.* **64**(4), 793-802 (2009).
2. He, J., Bo, F., Tu, Y., *et al.* A validated LC-MS/MS assay for the simultaneous determination of periplocin and its two metabolites, periplocymarin and periplogenin in rat plasma: Application to a pharmacokinetic study. *J. Pharm. Biomed. Anal.* **114**, 292-295 (2015).
3. Zhang, W.-J., Song, Z.-B., Bao, Y.-L., *et al.* Periplogenin induces necroptotic cell death through oxidative stress in HaCaT cells and ameliorates skin lesions in the TPA- and IMQ-induced psoriasis-like mouse models. *Biochem. Pharmacol.* **105**, 66-79 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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