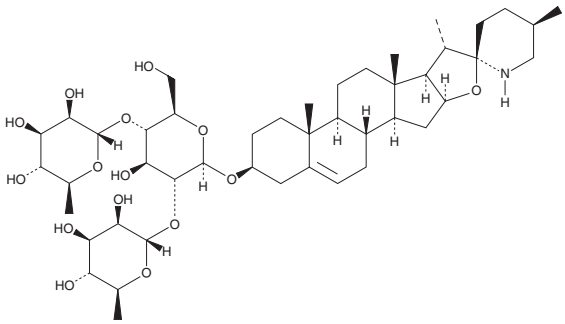
PRODUCT INFORMATION

Solamargine

Item No. 28110

CAS Registry No.:	20311-51-7
Formal Name:	(3β,22α,25R)-spirosol-5-en-3-yl O-6-deoxy-α-L-mannopyranosyl-(1→2)-O-[6-deoxy-α-L-mannopyranosyl-(1→4)]-β-D-glucopyranoside
Synonyms:	NSC 407810, α-Solamargine
MF:	$C_{45}H_{73}NO_{15}$
FW:	868.1
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years
Item Origin:	Plant/*Solanum nigrum*



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

Laboratory Procedures

Solamargine is supplied as a crystalline solid. A stock solution may be made by dissolving the solamargine in the solvent of choice, which should be purged with an inert gas.. Solamargine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of solamargine in these solvents is approximately 30 mg/ml.

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

Description

Solamargine is a glycoalkaloid that has been found in *S. lycocarpum* and has anticancer activity.[1] It decreases viability of H1650, H1975, PC-9, A549, and H1299 non-small cell lung cancer (NSCLC) cells when used at a concentration of 6 µM. Solamargine increases ERK1/2 phosphorylation and decreases the expression of DNA methyltranferase 1 (DNMT1) in H1299 and A549 cells. It reduces tumor growth in an A549 mouse xenograft model when administered at a dose of 8 mg/kg per day. Solamargine increases ERK1/2 phosphorylation and reduces the expression of the prostaglandin E_2 receptor, DNMT1, and c-Jun in tumor tissue.

Reference

1. Chen, Y., Tang, Q., Xiao, Q., *et al*. Targeting EP4 downstream c-Jun through ERK1/2-mediated reduction of DNMT1 reveals novel mechanism of solamargine-inhibited growth of lung cancer cells. *J. Cell. Mol. Med.* **21(2)**, 222-233 (2017).

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