

PRODUCT INFORMATION



Oleandrin

Item No. 29871

CAS Registry No.: 465-16-7
Formal Name: (3 β ,5 β ,16 β)-16-(acetyloxy)-3-[(2,6-dideoxy-3-O-methyl- α -L-arabino-hexopyranosyl)oxy]-14-hydroxy-card-20(22)-enolide

Synonyms: Folinerin, Neriolin

MF: C₃₂H₄₈O₉

FW: 576.7

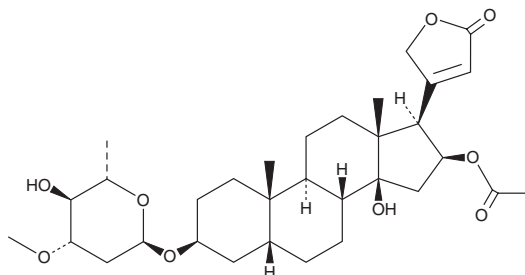
Purity: \geq 98%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years

Item Origin: Plant/*Nerium oleander*



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

Laboratory Procedures

Oleandrin is supplied as a solid. A stock solution may be made by dissolving the oleandrin in the solvent of choice, which should be purged with an inert gas. Oleandrin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of oleandrin in these solvents is approximately 5, 10, and 15 mg/ml, respectively.

Oleandrin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, oleandrin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Oleandrin has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Oleandrin is a glycoside that has been found in *N. oleander* and has diverse biological activities.¹⁻⁴ It inhibits NF- κ B activation induced by hydrogen peroxide, LPS, okadaic acid (Item No. 10011490), ceramide, or TNF in U937 cells when used at a concentration of 1 μ g/ml.¹ Oleandrin inhibits transmissible gastroenteritis virus (TGEV) replication without inducing cytotoxicity in swine testis cells (IC₅₀ = 147 nM).² It reduces pyramidal neuron cell death induced by oxygen-glucose deprivation (OGD) in cultured rat brain explant slices.³ Oleandrin reduces viability and inhibits migration of U87MG, A172, U251, and GBM19 glioma cells.⁴ *In vivo*, oleandrin (0.3 mg/kg) reduces tumor size and increases survival in U87MG, GL261, and U251 glioma mouse xenograft models.

References

1. Manna, S.K., Sah, N.K., Newman, R.A., *et al.* Oleandrin suppresses activation of nuclear transcription factor- κ B, activator protein-1, and c-Jun NH2-terminal kinase. *Cancer Res.* **60**(14), 3838-3847 (2000).
2. Yang, C.-W., Chang, H.-Y., Hsu, H.-Y., *et al.* Identification of anti-viral activity of the cardenolides, Na⁺/K⁺-ATPase inhibitors, against porcine transmissible gastroenteritis virus. *Toxicol. Appl. Pharmacol.* **332**, 129-137 (2017).
3. Dunn, D.E., He, D.N., Yang, P., *et al.* *In vitro* and *in vivo* neuroprotective activity of the cardiac glycoside oleandrin from *Nerium oleander* in brain slice-based stroke models. *J. Neurochem.* **119**(4), 805-814 (2011).
4. Garofalo, S., Grimaldi, A., Chece, G., *et al.* The glycoside oleandrin reduces glioma growth with direct and indirect effects on tumor cells. *J. Neurosci.* **37**(14), 3926-3939 (2017).

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.

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