

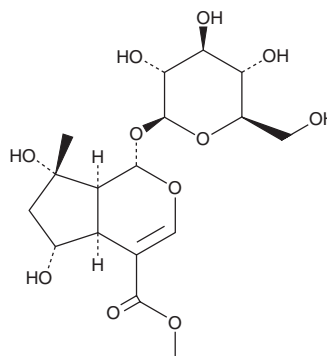
PRODUCT INFORMATION



Shanzhiside methyl ester

Item No. 34047

CAS Registry No.: 64421-28-9
Formal Name: 1-(β-D-glucopyranosyloxy)-
1S,4aS,5R,6,7S,7aS-hexahydro-5,7-
dihydroxy-7-methyl-cyclopenta[c]pyran-4-
carboxylic acid, methyl ester
MF: C₁₇H₂₆O₁₁
FW: 406.4
Purity: ≥98%
UV/Vis.: λ_{max}: 238 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Lamiophlomis rotata*



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

Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of shanzhiside methyl ester can be prepared by directly dissolving the solid in aqueous buffers. The solubility of shanzhiside methyl ester in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Shanzhiside methyl ester is an iridoid glycoside that has been found in *L. rotata* and has anti-inflammatory and antinociceptive activities.^{1,2} It is a glucagon-like peptide 1 receptor (GLP-1R) agonist.¹ Shanzhiside methyl ester (10 μM) inhibits the release of myeloperoxidase (MPO) and elastase from isolated rat neutrophils activated by N-Formyl-Met-Leu-Phe (fMLF; Item No. 21495).² It also inhibits LPS-induced increases in the release of IL-8 and leukotriene B₄ (LTB₄; Item No. 20110) from isolated rat neutrophils when used at a concentration of 10 μM. Shanzhiside methyl ester reduces L5/L6 spinal nerve ligation-induced mechanical allodynia in rats (ED₅₀ = 40.4 μg/animal), an effect that can be reversed by the GLP-1R antagonist exendin (9-39).¹

References

1. Fan, H., Li, T.-F., Gong, N., *et al.* Shanzhiside methylester, the principle effective iridoid glycoside from the analgesic herb *Lamiophlomis rotata*, reduces neuropathic pain by stimulating spinal microglial β-endorphin expression. *Neuropharmacology* **101**, 98-109 (2016).
2. Ghule, B.V., Kotagale, N.R., and Patil, K.S. Inhibition of the pro-inflammatory mediators in rat neutrophils by shanzhiside methyl ester and its acetyl derivative isolated from *Barleria prionitis*. *J. Ethnopharmacol.* **249**, 112374 (2020).

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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