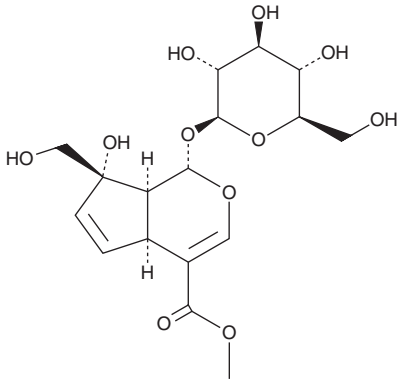
PRODUCT INFORMATION

Gardenoside

Item No. 34381

CAS Registry No.:	24512-62-7
Formal Name:	1-(β-D-glucopyranosyloxy)-1S,4aS,7S,7aS-tetrahydro-7-hydroxy-7-(hydroxymethyl)-cyclopenta[c] pyran-4-carboxylic acid, methyl ester
Synonym:	NSC 325664
MF:	$C_{17}H_{24}O_{11}$
FW:	404.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 237 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Gardenia jasminoides*



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

Laboratory Procedures

Gardenoside is supplied as a solid. A stock solution may be made by dissolving the gardenoside in the solvent of choice, which should be purged with an inert gas. Gardenoside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of gardenoside in ethanol and DMSO is approximately 10 mg/ml and approximately 30 mg/ml in DMF.

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 gardenoside can be prepared by directly dissolving the solid in aqueous buffers. The solubility of gardenoside in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gardenoside is an iridoid glycoside that has been found in *G. jasminoides* and has anti-inflammatory and antinociceptive activities.[1-3] It decreases free fatty acid-induced accumulation of lipid droplets and increases in TNF-α, IL-6, and IL-1β levels in HepG2 cells when used at concentrations of 10 and 20 µM.[2] Gardenoside reduces increases in the expression of purinergic $P2X_3$ and $P2X_7$ receptors, as well as reverses decreases in mechanical withdrawal thresholds in a rat model of chronic constriction injury-induced neuropathic pain.[3]

References

1. Ishiguro, K., Yamaki, M., and Takagi, S. Studies on iridoid-related compounds, II. The structure and antimicrobial activity of aglucones of galioside and gardenoside. *J. Nat. Prod.* **46(4)**, 532-536 (1983).
2. Liang, H., Zhang, L., Wang, H., *et al.* Inhibitory effect of gardenoside on free fatty acid-induced steatosis in HepG2 hepatocytes. *Int. J. Mol. Sci.* **16(11)**, 27749-27756 (2015).
3. Yu, M., Su, B., and Zhang, X. Gardenoside suppresses the pain in rats model of chronic constriction injury by regulating the P2X3 and P2X7 receptors. *J. Recept. Signal Transduct. Res.* **38(3)**, 198-203 (2018).

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