

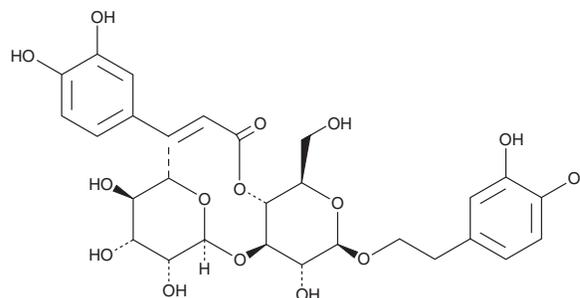
PRODUCT INFORMATION



Verbascoside

Item No. 24965

CAS Registry No.: 61276-17-3
Formal Name: 2-(3,4-dihydroxyphenyl)ethyl 3-O-(6-deoxy- α -L-mannopyranosyl)- β -D-glucopyranoside, 4-[(2E)-3-(3,4-dihydroxyphenyl)-2-propenoate]
Synonyms: Acteoside, NSC 603831
MF: C₂₉H₃₆O₁₅
FW: 624.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 220, 335 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Verbascoside is supplied as a crystalline solid. A stock solution may be made by dissolving the verbascoside in the solvent of choice, which should be purged with an inert gas. Verbascoside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of verbascoside 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 verbascoside can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of verbascoside in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Verbascoside is a natural phenylpropanoid glucoside that has been found in a variety of plants, including *B. cordata*, *B. officinalis*, and *S. vulgaris*, and has diverse biological activities.¹⁻⁵ Verbascoside is a PKC inhibitor (IC₅₀ = 25 μ M).² It inhibits the growth of Gram-positive and Gram-negative bacteria with MIC values ranging from 4 to 128 μ g/ml including *S. aureus* and *E. coli* (MICs = 16 and 32 μ g/ml, respectively).³ Verbascoside (0.1-10 μ g/ml) dose-dependently reduces extracellular hydrogen peroxide concentrations and increases cell viability of PC12 cells following 1-methyl-4-phenylpyridinium ion (MPP⁺) administration to induce apoptosis and oxidative stress.¹ It also inhibits the growth of MGC803 human gastric adenocarcinoma cells in a dose-dependent manner when used at concentrations ranging from 10 to 20 μ M with maximal growth inhibition of 53%.⁴ In a rat model of colitis induced by 2,4-dinitrobenzene sulfonic acid (DNBS), verbascoside (0.2-2 mg/kg) reduces colon damage and the expression of TNF- α , IL-1 β , and inducible nitric oxide synthase (iNOS).⁵

References

1. Sheng, G.Q., Zhang, J.R., Pu, X.P., et al. *Eur. J. Pharmacol.* **451**(2), 119-124 (2002).
2. Herbert, J.M., Maffrand, J.P., Toubi, K., et al. *J. Nat. Prod.* **54**(6), 1595-1600 (1991).
3. Rigano, D., Formisano, C., Basile, A., et al. *Phytother. Res.* **21**(4), 395-397 (2007).
4. Li, J., Zheng, Y., Zhou, H., et al. *Planta Med.* **63**(6), 499-502 (1997).
5. Mazzon, E., Esposito, E., Di Paola, R., et al. *Naunyn Schmiedebergs Arch. Pharmacol.* **380**(1), 79-94 (2009).

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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