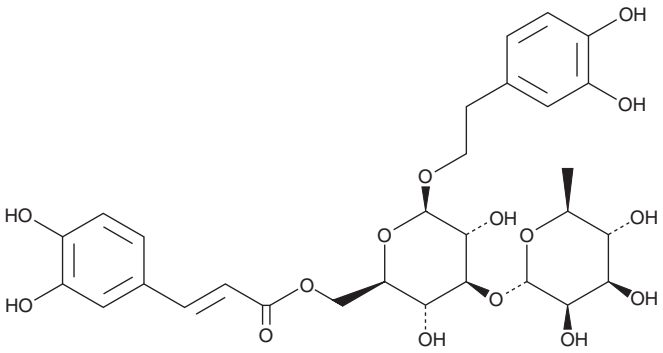
PRODUCT INFORMATION

Isoverbascoside

Item No. 29216

CAS Registry No.:	61303-13-7
Formal Name:	2-(3,4-dihydroxyphenyl)ethyl 3-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranoside, 6-[(2E)-3-(3,4-dihydroxyphenyl)-2-propenoate]
Synonym:	Isoacteoside
MF:	$C_{29}H_{36}O_{15}$
FW:	624.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 333 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Cistanches herba*



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

Laboratory Procedures

Isoverbascoside is supplied as a crystalline solid. A stock solution may be made by dissolving the isoverbascoside in the solvent of choice, which should be purged with an inert gas. Isoverbascoside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of isoverbascoside in DMF is approximately 20 mg/ml and approximately 30 mg/ml in ethanol and DMSO.

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

Description

Isoverbascoside is a phenylethanoid glycoside that has been found in *C. trichotomum* and has diverse biological activities.[1-4] It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay and inhibits hydrogen peroxide-induced lipid peroxidation in V79-4 cells when used at a concentration of 10 µg/ml.[1] Isoverbascoside (7.5-30 µM) induces apoptosis and production of reactive oxygen species (ROS) in, and reduces viability of, OVCAR-3 cells.[2] It inhibits tumor growth in an OVCAR-3 mouse xenograft model when administered at a dose of 30 mg/kg. Isoverbascoside (2.5 and 5 mg/kg) decreases brain amyloid deposition and increases exploratory behavior in rats when infused into the cerebral ventricles with amyloid-β (1-42) (Aβ42; Item No. 20574).[3] It also decreases xylene-induced ear edema in mice and increases survival in a mouse model of LPS-induced endotoxic shock.[4]

References

1. Chae, S., Kim, J.S., Kang, K.A., *et al. J. Toxicol. Environ. Health A.* **68(5)**, 389-400 (2005).
2. Yang, X., Guo, F., Peng, Q., *et al. J. BUON.* **24(1)**, 285-290 (2019).
3. Shiao, Y.-J., Su, M.-H., Lin, H.-C., *et al. Int. J. Mol. Sci.* **18(4)**, E895 (2017).
4. Gao, H., Cui, Y., Kang, N., *et al. Br. J. Pharmacol.* **174(17)**, 2880-2896 (2017).

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