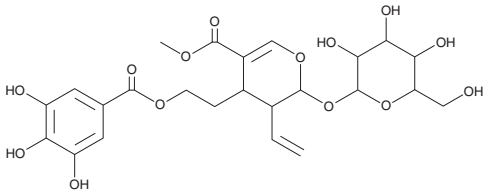
PRODUCT INFORMATION

Cornuside

Item No. 36284

CAS Registry No.:	131189-57-6
Formal Name:	3-ethenyl-2-(β-D-glucopyranosyloxy)-3,4-dihydro-4-[2-[(3,4,5-trihydroxybenzoyl)oxy] ethyl]-2H-pyran-5-carboxylic acid, methyl ester
Synonym:	Cornuside I
MF:	$C_{24}H_{30}O_{14}$
FW:	542.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 220 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Cornus officinalis*



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

Laboratory Procedures

Cornuside is supplied as a solid. A stock solution may be made by dissolving the cornuside in the solvent of choice, which should be purged with an inert gas. Cornuside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of cornuside in these solvents is approximately 20 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 cornuside can be prepared by directly dissolving the solid in aqueous buffers. The solubility of cornuside in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cornuside is a bisiridoid glycoside that has been found in *C. officinalis* and has diverse biological activities.[1-4] It induces osteogenic differentiation of isolated human bone mesenchymal stem cells (BMSCs) when used at concentrations of 10, 30, and 60 µM.[1] *In vivo*, cornuside (150 mg/kg) reduces demyelination, focal inflammation, and T helper 17 (Th17) cell spinal cord infiltration, as well as improves neurological deficits in a rat model of experimental autoimmune encephalomyelitis (EAE).[2] Cornuside (0.4 and 0.8 mg/kg) decreases mortality, vascular instability, and pulmonary leukocyte infiltration in a mouse model of cecal ligation and puncture-induced sepsis.[3] It also reduces polydipsia and polyphagia, lowers fasting blood glucose levels, prevents testicular cell apoptosis, and decreases the abundance of *Weissella*, *Clostridium*, *Anaerotruncus*, and *Bilophila* in the gut microbiome in KK/Ay diabetic mice.[4]

References

1. Gao, F., Xia, S.-L., Wang, X.-H., *et al. J. Orthop. Surg. Res.* **16(1)**, 397 (2021).
2. Zhang, R., Liu, J., Xu, B., *et al. J. Zhejiang Univ. Sci. B* **22(5)**, 421-430 (2021).
3. Kim, N., Kim, C., Ryu, S.H., *et al. Int. J. Mol. Sci.* **23(4)**, 2065 (2022).
4. Liu, L., Shu, A., Zhu, Y., *et al. Evid. Based Complement. Alternat. Med.* 5301942 (2021).

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