

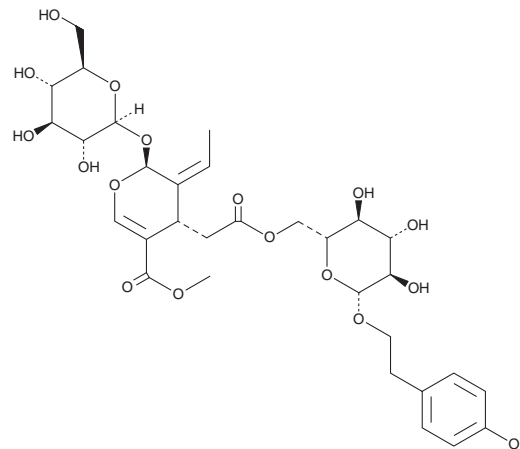
PRODUCT INFORMATION



Specnuezhenide

Item No. 26385

CAS Registry No.: 449733-84-0
Formal Name: 2-(4-hydroxyphenyl)ethyl, 6-[[2S,3Z,4S)-3-ethylidene-2-(β-D-glucopyranosyloxy)-3,4-dihydro-5-(methoxycarbonyl)-2H-pyran-4-acetate], β-D-glucopyranoside
Synonym: 8(Z)-Nuzhenide
MF: C₃₁H₄₂O₁₇
FW: 686.7
Purity: ≥95%
UV/Vis.: λ_{max}: 227 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Ligustrum lucidum*



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

Laboratory Procedures

Specnuezhenide is supplied as a crystalline solid. A stock solution may be made by dissolving the specnuezhenide in the solvent of choice, which should be purged with an inert gas. Specnuezhenide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of specnuezhenide in these solvents is approximately 17, 14, and 25 mg/ml, respectively.

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 specnuezhenide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of specnuezhenide in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Specnuezhenide is an iridoid glycoside originally isolated from *L. lucidum* with diverse biological activities.¹⁻⁴ It reduces neurotoxicity induced by 6-OHDA (Item No. 25330) in SH-SY5Y cells by 49.2% when used at a concentration of 10 μM.¹ Specnuezhenide (25, 50, and 100 μM) reduces high glucose-induced levels of cleaved caspase-3 protein and apoptosis in mouse glomerular mesangial cells.² It increases cell viability and alkaline phosphatase activity in osteoblastic UMR-106 cells.³ Specnuezhenide inhibits hypoxia-induced VEGFA secretion, VEGFA and prolyl hydroxylase 2 (PHD-2) mRNA expression, and protein levels of VEGFA, HIF-1α, and PHD-2 in human acute retinal pigment epithelial-19 (ARPE-19) cells.⁴ *In vivo*, specnuezhenide (5 and 10 mg/kg) prevents retinal neovascularization in a rat model of oxygen-induced retinopathy.

References

1. Sung, S.H., Kim, E.S., Lee, K.Y., et al. *Planta Medica* **72**(1), 62-64 (2006).
2. Zhang, A.-n., Li, P., Hong, X.-h., et al. *Zhongguo Shiyang Fangjixue Zazhi* **21**(8), 116-119 (2015).
3. Huang, Y., Wu, Y., Wu, J., et al. *Lat. Am. J. Pharm.* **33**(2), 258-265 (2014).
4. Wu, J., Ke, X., Fu, W., et al. *Molecules* **21**(12), E1756 (2016).

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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