

PRODUCT INFORMATION

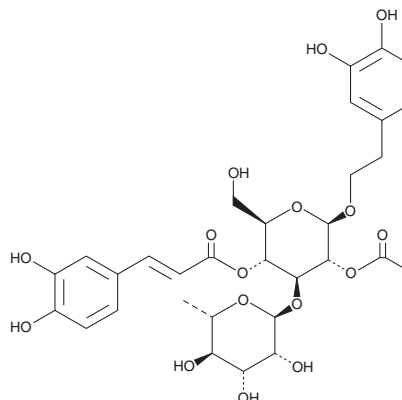


2'-Acetylacteoside

Item No. 36511

CAS Registry No.: 94492-24-7
Formal Name: 2-(3,4-dihydroxyphenyl)ethyl 3-O-(6-deoxy- α -L-mannopyranosyl)- β -D-glucopyranoside, 2-acetate 4-[(2E)-3-(3,4-dihydroxyphenyl)-2-propenoate]

MF: C₃₁H₃₈O₁₆
FW: 666.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 220, 335 nm
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Cistanche deserticola*



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

Laboratory Procedures

2'-Acetylacteoside is supplied as a solid. A stock solution may be made by dissolving the 2'-acetylacteoside in the solvent of choice, which should be purged with an inert gas. 2'-Acetylacteoside is soluble in the organic solvent methanol.

Description

2'-Acetylacteoside is a phenylethanoid glycoside that has been found in *C. deserticola* and has diverse biological activities.¹⁻⁵ It selectively inhibits aldose reductase over maltase and sucrase (IC₅₀s = 0.071, >300, and 277 μ M, respectively, for the rat enzymes).¹ 2'-Acetylacteoside scavenges superoxide radicals in a cell-free assay and inhibits hemolysis induced by AAPH (Item No. 82235) in isolated rat red blood cells in a concentration-dependent manner.² It decreases glutamate-induced cytotoxicity in primary rat cortical neurons when used at concentrations of 0.1, 1, and 10 μ M and protects primary mouse hepatocytes against D-galactosamine-induced cytotoxicity (IC₅₀ = 4.8 μ g/ml).^{3,4} 2'-Acetylacteoside (10-40 mg/kg) prevents decreases in bone strength in ovariectomized mice.⁵

References

1. Morikawa, T., Ninomiya, K., Imamura, M., *et al.* Acylated phenylethanoid glycosides, echinacoside and acteoside from *Cistanche tubulosa*, improve glucose tolerance in mice. *J. Nat. Med.* **68(3)**, 561-566 (2014).
2. He, Z.-D., Lau, K.-M., Xu, H.-X., *et al.* Antioxidant activity of phenylethanoid glycosides from *Brandisia hancei*. *J. Ethnopharmacol.* **71(3)**, 483-486 (2000).
3. Koo, K.A., Sung, S.H., Park, J.H., *et al.* *In vitro* neuroprotective activities of phenylethanoid glycosides from *Callicarpa dichotoma*. *Planta Med.* **71(8)**, 778-780 (2005).
4. Morikawa, T., Pan, Y., Ninomiya, K., *et al.* Acylated phenylethanoid oligoglycosides with hepatoprotective activity from the desert plant *Cistanche tubulosa*. *Bioorg. Med. Chem.* **18(5)**, 1882-1890 (2010).
5. Li, Y., Li, N., Zhao, X., *et al.* Beneficial effect of 2'-acetylacteoside on ovariectomized mice via modulating the function of bone resorption. *Biomed. Pharmacother.* **131**, 110747 (2020).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/19/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM