
Product Data Sheet

Product Name: 2'-Acetylacteoside

Cat. No.: GC35086

Chemical Properties

Cas. No. 94492-24-7

SMILES OC1=CC=C(/C=C/C(O[C@H]2[C@H](O[C@]3([H])O[C@@H](C)[C@H](O)[C@@H](O)[C@H]3O)[C@@H](OC(C)=O)[C@H](OCCC4=CC=C(O)C(O)=C4)O[C@@H]2CO)=O)C=C1O

Formula C₃₁H₃₈O₁₆

M.Wt 666.62

Solubility DMSO : 100 mg/mL (150.01 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

2'-Acetylacteoside is a phenylethanoid glycoside that has been found in *C. deserticola* and has diverse biological activities.^{1,2,3,4,5} It selectively inhibits aldose reductase over maltase and sucrase (IC₅₀s = 0.071, >300, and 277 μM, respectively, for the rat enzymes).¹ 2'-Acetylacteoside scavenges superoxide radicals in a cell-free assay and inhibits hemolysis induced by AAPH 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 μM and protects primary mouse hepatocytes against D-galactosamine-induced cytotoxicity (IC₅₀ = 4.8 μg/ml).^{3,4} 2'-Acetylacteoside (10-40 mg/kg) prevents decreases in bone strength in ovariectomized mice.⁵

1. Morikawa, T., Ninomiya, K., Imamura, M., et al. Acylated phenylethanoid glycosides, echinacoside and acteoside from *Cistanche tubulosa*, improve glucose tolerance in

Caution: Product has not been fully validated for medical applications. For research use only.

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mice]. 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 hanceij. 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 dichotomaPlanta 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 tubulosaBioorg. 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 resorptionBiomed. Pharmacother.131110747(2020)

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