

PRODUCT INFORMATION



2,3,5,4'-Tetrahydroxyl-diphenylethylene 2-O-β-D-Glucoside

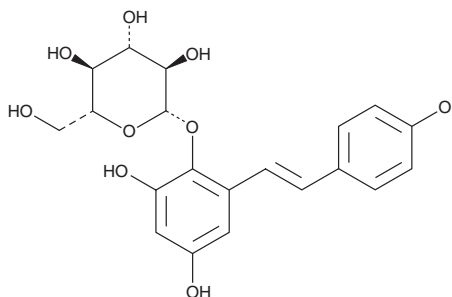
Item No. 34594

CAS Registry No.: 82373-94-2
Formal Name: 2,4-dihydroxy-6-[(1E)-2-(4-hydroxyphenyl)ethenyl]phenyl β-D-glucopyranoside
Synonyms: (E)-2,3,5,4'-Tetrahydroxyl-diphenylethylene 2-O-β-D-Glucoside, *trans*-2,3,5,4'-Tetrahydroxyl-diphenylethylene 2-O-β-D-Glucopyranoside, (E)-2,3,5,4'-Tetrahydroxystilbene-2-O-Glucoside, *trans*-2,3,5,4'-Tetrahydroxystilbene-2-O-β-d-Glucopyranoside, 2,3,5,4'-Tetrahydroxystilbene 2-O-β-D-Glucoside, TSG

MF: C₂₀H₂₂O₉
FW: 406.4
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 322 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

Item Origin: Plant/*Fallopia multiflora*

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



Laboratory Procedures

2,3,5,4'-Tetrahydroxyl-diphenylethylene 2-O-β-D-glucoside (TSG) is supplied as a solid. A stock solution may be made by dissolving the TSG in the solvent of choice, which should be purged with an inert gas. TSG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TSG in these solvents is approximately 30 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 TSG can be prepared by directly dissolving the solid in aqueous buffers. The solubility of TSG in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TSG is a stilbene glucoside that has been found in *P. multiflorum* and has diverse biological activities.¹⁻⁴ It scavenges DPPH (Item No. 14805) radicals in a cell-free assay (IC₅₀ = 40 μM).¹ TSG inhibits doxorubicin-induced apoptosis, loss of mitochondrial membrane potential, and generation of reactive oxygen species (ROS) in mouse cardiomyocytes.² *Ex vivo*, TSG (30, 60, and 120 mg/kg) increases acetylcholine-induced relaxation of, and nitric oxide (NO) levels in, aortic rings isolated from a rat model of diet-induced atherosclerosis.³ *In vivo*, TSG (15 and 40 mg/kg) reduces infarct area and neuronal apoptosis in a mouse model of ischemia and reperfusion injury induced by middle cerebral artery occlusion (MCAO).⁴

References

1. Ryu, G., Ju, J.H., Park, Y.J., et al. *Arch. Pharm. Res.* **25**(5), 636-639 (2002).
2. Zhang, S.-H., Wang, W.-Q., and Wang, J.L. *Acta Pharmacol. Sin.* **30**(11), 1479-1487 (2009).
3. Zhang, W., Xu, X.-L., Wang, Y.-Q., et al. *Planta Med.* **75**(11), 1209-1214 (2009).
4. Wang, T., Gu, J., Wu, P.-F., et al. *Free Radic. Biol. Med.* **47**(3), 229-240 (2009).

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

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