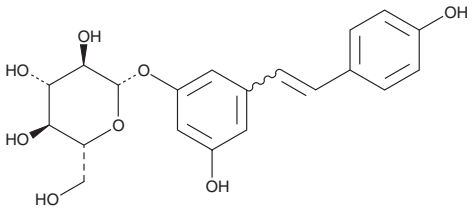
PRODUCT INFORMATION

3,4′-5-Trihydroxystilbene-3-β-D-Glucopyranoside

Item No. 21246

CAS Registry No.: 65914-17-2
Formal Name: 3-hydroxy-5-[2-(4-hydroxyphenyl)ethenyl] phenyl β-D-glucopyranoside
Synonyms: (E/Z)-Polydatin, Reservatrol 3-β-mono-D-Glucoside, Resveratrol 3-O-β-D-Glucopyranoside, Trihydroxystilbene-3-β-D-Glucopyranoside
MF: $C_{20}H_{22}O_8$
FW: 390.4
Purity: ≥98% (mixture of isomers)
UV/Vis.: λ_{max}: 217, 307, 320 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

3,4′-5-Trihydroxystilbene-3-β-D-glucopyranoside is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,4′-5-trihydroxystilbene-3-β-D-glucopyranoside in the solvent of choice. 3,4′-5-Trihydroxystilbene-3-β-D-glucopyranoside is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3,4′-5-trihydroxystilbene-3-β-D-glucopyranoside in ethanol and DMSO is approximately 30 mg/ml and approximately 50 mg/ml in DMF.

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 3,4′-5-trihydroxystilbene-3-β-D-glucopyranoside can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of polydatin in PBS, pH 7.2, is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3,4′-5-Trihydroxystilbene-3-β-D-glucopyranoside is a stilbene glucoside that has been found in *V. vinifera* and has diverse biological activities.[1-5] It reduces the growth of SKOV3 ovarian cancer cell 3D aggregates in a concentration-dependent manner.[2] 3,4′-5-Trihydroxystilbene-3-β-D-glucopyranoside (10 and 20 µg/ml) inhibits IL-17 production in activated peripheral blood mononuclear cells (PBMCs).[3] It inhibits the loss of glutathione peroxidase 4 (GPX4) activity induced by the ferroptosis inducer hemin in Neuro2a neuroblastoma cells.[4] 3,4′-5-Trihydroxystilbene-3-β-D-glucopyranoside (50 mg/kg) reduces escape latency in a rat model of vascular dementia induced by four-vessel occlusion (4-VO).[5]

References

1. Teguo, P.W., Fauconneau, B., Deffieux, G., *et al. J. Nat. Prod.* **61(5)**, 655-677 (1998).
2. Hogg, S.J., Chitcholtan, K., Hassan, W., *et al. Obstet. Gynecol. Int.* 279591 (2015).
3. Lanzilli, G., Cottarelli, A., Nicotera, G., *et al. Inflammation* **35(1)**, 240-248 (2012).
4. Huang, L., He, S., Cai, Q., *et al. Biochem. Biophys. Res. Commun.* **556**, 149-155 (2021).
5. Li, R.-P., Wang, Z.-Z., Sun, M.-X., *et al. Phytomedicine* **19(8-9)**, 677-681 (2012).

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