

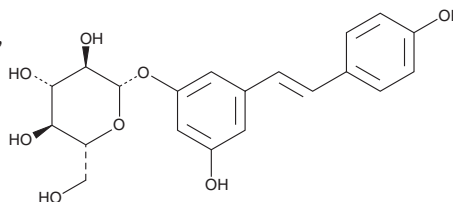
PRODUCT INFORMATION



Polydatin

Item No. 13932

CAS Registry No.: 27208-80-6
Formal Name: 3-hydroxy-5-[(1E)-2-(4-hydroxyphenyl)ethenyl]phenyl-β-D-glucopyranoside
Synonyms: Piceid, (E)-Piceid, (E)-Polydatin, *trans*-Polydatin, *trans*-Resveratrol-3-O-β-D-Glucopyranoside
MF: C₂₀H₂₂O₈
FW: 390.4
Purity: ≥98%
UV/Vis.: λ_{max}: 218, 306, 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

Polydatin is supplied as a crystalline solid. A stock solution may be made by dissolving the polydatin in the solvent of choice. Polydatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of polydatin 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 polydatin 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

Polydatin is a stilbene glucoside and a precursor to *trans*-resveratrol (Item No. 70675) that has been found in *V. vinifera* and has diverse biological activities.¹ It scavenges DPPH (Item No. 14805) radicals and inhibits copper-induced lipid peroxidation (IC₅₀s = 198 and 19.1 μM, respectively).¹ Polydatin inhibits the proliferation of, and induces cell cycle arrest at the S phase in, Caco-2 colon cancer cells.³ It decreases infarct size, cardiomyocyte fibrosis, and apoptosis in a mouse model of myocardial ischemia-reperfusion injury induced by left anterior descending (LAD) coronary artery occlusion when administered at a dose of 40 mg/kg per day.²

References

1. Teguio, P.W., Fauconneau, B., Deffieux, G., *et al.* Isolation, identification, and antioxidant activity of three stilbene glucosides newly extracted from *Vitis vinifera* cell cultures. *J. Nat. Prod.* **61**(5), 655-677 (1998).
2. Ming, D., Songyan, L., Yawen, C., *et al.* *trans*-Polydatin protects the mouse heart against ischemia/reperfusion injury via inhibition of the renin-angiotensin system (RAS) and Rho kinase (ROCK) activity. *Food Funct.* **8**(6), 2309-2321 (2017).
3. De Maria, S., Scognamiglio, I., Lombardi, A., *et al.* Polydatin, a natural precursor of resveratrol, induces cell cycle arrest and differentiation of human colorectal Caco-2 cell. *J. Transl. Med.* **11**, 264 (2013).

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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