

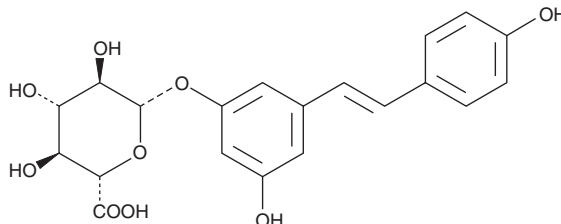
PRODUCT INFORMATION



trans-Resveratrol-3-O-β-D-Glucuronide

Item No. 13832

CAS Registry No.: 387372-17-0
Formal Name: 3-hydroxy-5-[(1E)-2-(4-hydroxyphenyl)ethenyl]phenyl-β-D-glucopyranosiduronic acid
Synonym: Resveratrol 3-O-D-Glucuronide
MF: C₂₀H₂₀O₉
FW: 404.4
Purity: ≥95%
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

trans-Resveratrol-3-O-β-D-glucuronide is supplied as a crystalline solid. A stock solution may be made by dissolving the *trans*-resveratrol-3-O-β-D-glucuronide in the solvent of choice, which should be purged with an inert gas. *trans*-Resveratrol-3-O-β-D-glucuronide is soluble in organic solvents such as methanol and DMSO. The solubility of *trans*-resveratrol-3-O-β-D-glucuronide in these solvents is approximately 5 and 10 mg/ml, respectively.

Description

trans-Resveratrol-3-O-β-D-glucuronide is a stilbene that has been found in red wine and an active metabolite of *trans*-resveratrol (Item No. 70675), a polyphenol with diverse biological activities.¹ It is primarily produced from *trans*-resveratrol by the UDP-glucuronosyltransferase (UGT) isoform UGT1A1.² *trans*-Resveratrol-3-O-β-D-glucuronide binds to COX-1 (IC₅₀ = 150 μM)³ It reduces the proliferation of several intestinal cancer cell lines (IC₅₀s = 10-16.5 μM) and induces cell cycle arrest at the G₀/G₁ phase in SW480 intestinal cancer cells when used at a concentration of 30 μM.⁴ *trans*-Resveratrol-3-O-β-D-glucuronide (200 μM) increases pyruvate production in livers isolated from rats in a model of arthritis induced by complete Freund's adjuvant (CFA)⁵

References

1. Potter, G.A., Patterson, L.H., Wanogho, E., *et al.* The cancer preventative agent resveratrol is converted to the anticancer agent piceatannol by the cytochrome P450 enzyme CYP1B1. *Br. J. Cancer* **86**(5), 774-778 (2002).
2. Aumont, V., Krisa, S., Battaglia, E., *et al.* Regioselective and stereospecific glucuronidation of *trans*- and *cis*-resveratrol in human. *Arch. Biochem. Biophys.* **393**(2), 281-289 (2001).
3. Calamini, B., Ratia, K., Malkowski, M.G., *et al.* Pleiotropic mechanisms facilitated by resveratrol and its metabolites. *Biochem. J.* **429**(2), 273-282 (2012).
4. Polycarpou, E., Meira, L.B., Carrington, S., *et al.* Resveratrol 3-O-D-glucuronide and resveratrol 4'-O-D-glucuronide inhibit colon cancer cell growth: evidence for a role of A3 adenosine receptors, cyclin D1 depletion, and G1 cell cycle arrest. *Mol. Nutr. Food Res.* **57**(10), 1708-1717 (2013).
5. Simões, M.S., Ames-Sibin, A.P., Lima, E.P., *et al.* Resveratrol biotransformation and actions on the liver metabolism of healthy and arthritic rats. *Life Sci.* **310**, 120991 (2022).

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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