

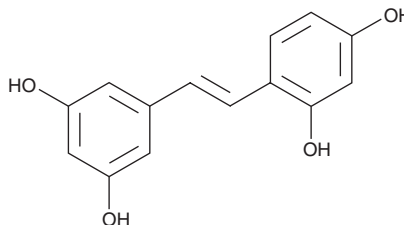
PRODUCT INFORMATION



Oxyresveratrol

Item No. 12028

CAS Registry No.: 29700-22-9
Formal Name: 4-[(1E)-2-(3,5-dihydroxyphenyl)ethenyl]-1,3-benzenediol
Synonyms: *trans*-2',3,4',5-Tetramethoxystilbene
MF: C₁₄H₁₂O₄
FW: 244.2
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 302, 329 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

Oxyresveratrol is supplied as a crystalline solid. A stock solution may be made by dissolving the oxyresveratrol in the solvent of choice. Oxyresveratrol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of oxyresveratrol in these solvents is approximately 50 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 oxyresveratrol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of oxyresveratrol in PBS, pH 7.2, is <0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Resveratrol is a potent phenolic antioxidant found in the skin of grapes and red wine that has anti-proliferative, anti-inflammatory, and cardioprotective properties.¹ Oxyresveratrol is a naturally occurring analog of resveratrol found in mulberry wood. It effectively scavenges H₂O₂, NO (IC₅₀ = 45.3 μM), and the artificial free radical 2,2-diphenyl-1-picrylhydrazyl (IC₅₀ = 28.9 μM).² At 10 mg/kg, oxyresveratrol acts as a neuroprotectant, reducing brain infarct volume and reducing cytochrome c release and caspase-3 activation in an *in vivo* model of stroke.³ Oxyresveratrol also has depigmenting effects by effectively inhibiting tyrosinase activity, which catalyzes the rate-limiting step in synthesizing melanin pigments (IC₅₀s = 1.2 and 52.7 μM in mushroom and mouse melanoma B-16 cells, respectively).⁴ It is 32-fold more potent than kojic acid, a depigmenting agent used in cosmetic materials with skin-whitening effects and medical agents used to treat hyperpigmentation disorders.⁴

References

1. Rotondo, S., Rajtar, G., Manarini, S., et al. *Br. J. Pharmacol.* **123**, 1691-1699 (1998).
2. Lorenz, P., Roychowdhury, S., Engelmann, M., et al. *Nitric Oxide* **9(2)**, 64-76 (2003).
3. Andrabi, S.A., Spina, M.G., Lorenz, P., et al. *Brain Res.* **1017**, 98-107 (2004).
4. Kim, Y.M., Yun, J., Lee, C.-K., et al. *J. Biol. Chem.* **277(18)**, 16340-16344 (2002).

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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