

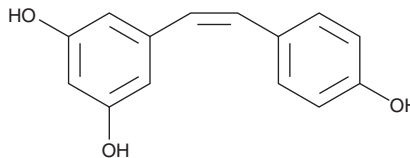
Product Information



cis-Resveratrol

Item No. 10004235

CAS Registry No.: 61434-67-1
Formal Name: 5-[(1Z)-2-(4-hydroxyphenyl)ethenyl]-1,3-benzenediol
Synonym: (Z)-Resveratrol
MF: C₁₄H₁₂O₃
FW: 228.2
Purity: ≥98% (may contain 1-5% *trans*)
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max}: 286 nm



Laboratory Procedures

For long term storage, we suggest that *cis*-resveratrol be stored as supplied at -20°C. It will be stable for at least one year.

cis-Resveratrol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of *cis*-resveratrol 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. If an organic solvent-free solution of *cis*-resveratrol is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of *cis*-resveratrol in PBS, pH 7.2, is approximately <0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Resveratrol is a potent phenolic antioxidant found in grapes and red wine that also has antiproliferative and anti-inflammatory activity.¹ *cis*-Resveratrol is the double bond isomer of *trans*-resveratrol, the more often studied and naturally abundant of the two resveratrol isomers. *cis*-Resveratrol exhibits antioxidant activity in the micromolar range similar to that observed with *trans*-resveratrol.² It blocks production of reactive oxygen species (ROS) by inhibition of NAD(P)H oxidase and also inhibits production of nitric oxide.² At a concentration of 100 μM, *cis*-resveratrol significantly inhibits the expression of genes related to the Rel/NF-κB/IκB family, adhesion molecules, and acute-phase proteins in LPS and INF-γ-stimulated murine peritoneal macrophages.³ *cis*-Resveratrol inhibits uptake of noradrenaline and 5-HT by synaptosomes from rat brain with IC₅₀ values of 79 and 51 μM, respectively.⁴ It also inhibits human monoamine oxidase-A (MOA-A) and MOA-B with IC₅₀ values of 25 and 61 μM, respectively, which is similar to, but slightly less effective than, values obtained with *trans*-resveratrol.⁴

References

1. Rotondo, S., Rajtar, G., Manarini, S., *et al.* Effect of *trans*-resveratrol, a natural polyphenolic compound, on human polymorphonuclear leukocyte function. *Br. J. Pharmacol.* **123**, 1691-1699 (1998).
2. Orallo, F. Comparative studies of the antioxidant effects of *cis*- and *trans*-resveratrol. *Current Medicinal Chemistry* **13**, 87-98 (2006).
3. Leiro, J., Arranz, J.A., Fraiz, N., *et al.* Effect of *cis*-resveratrol on genes involved in nuclear factor κ B signaling. *International Immunopharmacology* **5**, 393-406 (2005).
4. Yáñez, M., Fraiz, N., Cano, E., *et al.* Inhibitory effects of *cis*- and *trans*-resveratrol on noradrenaline and 5-hydroxytryptamine uptake and on monoamine oxidase activity. *Biochem. Biophys. Res. Commun.* **344**, 688-695 (2006).

Related Products

Trismethoxy Resveratrol - Item No. 10188 • Trismethoxy Resveratrol-d4 - Item No. 13129 • *trans*-Resveratrol-d4 - Item No. 13130 • *trans*-Resveratrol - Item No. 70675 • CAY10591 - Item No. 10009797 • SIRT1 Direct Fluorescent Screening Assay Kit - Item No. 10010401 • SIRT1 FRET-Based Screening Assay Kit - Item No. 10010991 • SIRT3 Direct Fluorescent Screening Assay Kit - Item No. 10011566 • SIRT1 (human recombinant) - Item No. 10011190 •

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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