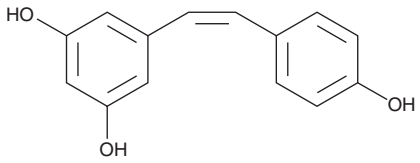
PRODUCT INFORMATION

cis-Resveratrol

Item No. 10004235

CAS Registry No.:	61434-67-1
Formal Name:	5[(1Z)-2-(4-hydroxyphenyl)ethenyl]-1,3-benzenediol
Synonyms:	(Z)-Resveratrol
MF:	$C_{14}H_{12}O_3$
FW:	228.2
Purity:	≥98% (may contain 1-5% trans)
UV/Vis.:	λ_{max}: 286 nm
Supplied as:	A solution in ethanol
Storage:	-80°C
Stability:	≥2 years



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

Laboratory Procedures

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.

Description

Resveratrol is a potent phenolic antioxidant found in grapes, red wine, and various berries 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-kB/IkB family, adhesion molecules, and acute-phase proteins in LPS and INF-g-stimulated murine peritoneal macrophages.[3] *cis*-Resveratrol inhibits uptake of noradrenaline and 5-HT by synaptosomes from rat brain with IC_{50} values of 79 and 51 µM, respectively.[4] It also inhibits human monoamine oxidase-A (MOA-A) and MOA-B with IC_{50} 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. Br. J. Pharmacol.* **123**, 1691-1699 (1998).
2. Orallo, F. *Current Medicinal Chemistry* **13**, 87-98 (2006).
3. Leiro, J., Arranz, J.A., Fraiz, N., *et al. International Immunopharmacology* **5**, 393-406 (2005).
4. Yáñez, M., Fraiz, N., Cano, E., *et al. Biochem. Biophys. Res. Commun.* **344**, 688-695 (2006).

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