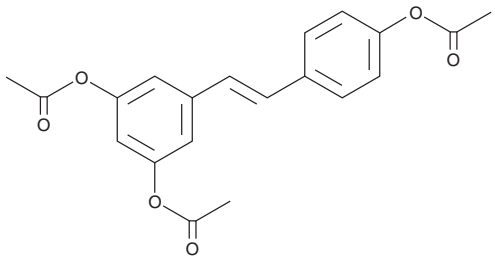
PRODUCT INFORMATION

Acetyl Resveratrol

Item No. 26379

CAS Registry No.:	42206-94-0
Formal Name:	5-[(1E)-2-[4-(acetyloxy)phenyl]ethenyl]-1,3-benzenediol, 1,3-diacetate
Synonyms:	Resveratrol triacetate, Triacetylresveratrol, 3,5,4'-Tri-O-acetylresveratrol
MF:	$C_{20}H_{18}O_6$
FW:	354.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 224, 300, 310 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

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

Description

Acetyl resveratrol is a triacetylated derivative of resveratrol that has diverse biological activities, including anticancer and antioxidant properties.[1-3] It inhibits the growth of LNCaP, DU145, and PC3M prostate cancer cells (IC_{50}s = 10.5, 14.2, and 26.8 µM, respectively).[2] Acetyl resveratrol induces cytotoxicity in ALL-5 acute lymphoblastic leukemia cells (IC_{50} = 3.4 µM) and induces cell cycle arrest at the G_1 phase when used at a concentration of 17 µM.[1] It also increases survival in mice exposed to total body γ-irradiation when administered at a dose of 10 mg/kg prior to irradiation.[3]

References

1. Urbaniak, A., Delgado, M., Kacprzak, K., *et al.* Activity of resveratrol triesters against primary acute lymphoblastic leukemia cells. *Bioor. Med. Chem. Lett.* **27(12)**, 2766-2770 (2017).
2. Dias, S.J., Li, K., Rimando, A.M., *et al.* Trimethoxy-resveratrol and piceatannol administered orally suppress and inhibit tumor formation and growth in prostate cancer xenografts. *Prostate* **73(11)**, 1135-1146 (2016).
3. Koide, K., Osman, S., Garner, A.L., *et al.* The use of 3,5,4'-Tri-O-acetylresveratrol as a potential pro-drug for resveratrol protects mice from γ-irradiation-induced death. *ACS Med. Chem. Lett.* **2(4)**, 270-274 (2011).

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