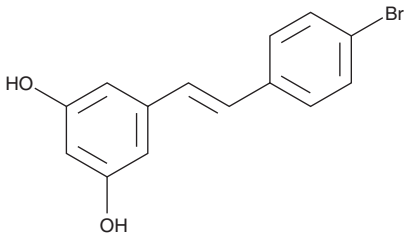
PRODUCT INFORMATION

4’-bromo-Resveratrol

Item No. 20541



CAS Registry No.: 1224713-90-9
Formal Name: 5-[(1E)-2-(4-bromophenyl)ethenyl]-1,3-benzenediol
MF: $C_{14}H_{11}BrO_2$
FW: 291.1
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 303, 316 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

4’-bromo-Resveratrol is supplied as a crystalline solid. A stock solution may be made by dissolving the 4’-bromo-resveratrol in the solvent of choice, which should be purged with an inert gas. 4’-bromo-Resveratrol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 4’-bromo-resveratrol in in DMF is approximately 100 mg/ml and approximately 50 mg/ml in ethanol and DMSO.

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 4’-bromo-resveratrol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4’-bromo-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

4’-bromo-Resveratrol is a potent inhibitor of the deacetylases sirtuin 1 (SIRT1) and 3 (SIRT3).[1] It is a brominated derivative of resveratrol, a polyphenol found in red wine, which activates SIRT1 and inhibits SIRT3. The use of 4’-bromo-resveratrol in an SIRT3 crystal binding study revealed two compound binding sites which, combined with homology modeling, suggested that the second site may account for the paradoxical activation of SIRT1 by unmodified resveratrol.[1]

Reference

1. Nguyen, G.T.T., Gertz, M., and Steegborn, C. Crystal structures of Sirt3 complexes with 4’-bromo-resveratrol reveal binding sites and inhibition mechanism. *Chem. Biol.* **20(11)**, 1375-1385 (2013).

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