PRODUCT INFORMATION

4'-hydroxy Chalcone
Item No. 22898

CAS Registry No.: 2657-25-2
Formal Name: 1-(4-hydroxyphenyl)-3-phenyl-2-propen-1-one
Synonyms: 2-Benzal-4'-hydroxyacetophenone, 2-Benzylidene-4'-hydroxyacetophenone, p-Cinnamoylphenol, NSC 242264
MF: C_{15}H_{12}O_{2}
FW: 224.3
Purity: ≥98%
UV/Vis.: λ_{max}: 228, 322 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

4'-hydroxy Chalcone is supplied as a crystalline solid. A stock solution may be made by dissolving the 4'-hydroxy chalcone in the solvent of choice. 4'-hydroxy Chalcone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4'-hydroxy chalcone in these solvents is approximately 30 mg/ml.

4'-hydroxy Chalcone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4'-hydroxy chalcone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4'-hydroxy Chalcone has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4'-hydroxy Chalcone is a chalcone metabolite with diverse biological activities. It is formed when chalcone is metabolized by the cytochrome P450 (CYP) isoform CYP1A1 or CYP2C6.1 4'-hydroxy Chalcone is estrogenic in MCF-7 cells and is cytotoxic at concentrations higher than 100 nM. It inhibits TNF-α-induced NF-κB signaling and the trypsin-, chymotrypsin-, and caspase-like proteolytic activities of the 26S proteasome in K562 cells in a dose-dependent manner.2 4'-hydroxy Chalcone reduces growth of K562, U937, and Jurkat cancer cell lines in a dose-dependent manner without effecting viability of peripheral blood mononuclear cells (PBMCs). It also inhibits glutathione reductase (GSH-RD; IC_{50} = 47.3 μM) in vitro in a reversible and non-competitive manner.3

References