Quercetin
Item No. 10005169

CAS Registry No.: 117-39-5
Formal Name: 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-1-benzopyran-4-one
MF: C_{15}H_{10}O_{7}
FW: 302.2
Purity: ≥95%
UV/Vis.: \(\lambda_{max}^\text{nm}\): 256, 368 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥2 years

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

Labortory Procedures

Quercetin is supplied as a crystalline solid. A stock solution may be made by dissolving the quercetin in the solvent purged with an inert gas. Quercetin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of quercetin in these solvents is approximately 2 mg/ml in ethanol and 30 mg/ml in DMSO and DMF. Quercetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, quercetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Quercetin has a solubility of approximately 1 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Quercetin is an abundant flavonoid that has been isolated from a variety of fruits and vegetables and has diverse biological activities, including antioxidant, anticancer, and anti-inflammatory properties.\(^1\)\(^-\)\(^3\) Quercetin (5-100 mg/kg) reduces autophagy, decreases the levels of reactive oxygen species (ROS) and malondialdehyde (MDA) content, and increases total antioxidant capacity in the kidney in a mouse model of cadmium-induced autophagy.\(^2\) It reduces tumor growth, induces apoptosis, and halts the cell cycle at the G\(_1\) phase in an HL60 mouse xenograft model when administered at a dose of 120 mg/kg every four days.\(^1\) Quercetin (30 \(\mu\)M) also inhibits histamine release from antigen-stimulated RBL-2H3 cells and decreases the expression of TNF-\(\alpha\), IL-1\(\beta\), IL-6, and IL-8 induced by PMACI in HMC-1 cells.\(^3\)

References