PRODUCT INFORMATION

Apigenin

Item No. 10010275

CAS Registry No.: 520-36-5
Formal Name: 5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: Chamomile, Flavone, NSC 83244, Versulin
MF: C₁₅H₁₀O₅
FW: 270.2
Purity: ≥98%
UV/Vis.: λ_max: 212, 269, 334 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

Apigenin is supplied as a crystalline solid. A stock solution may be made by dissolving the apigenin in the solvent of choice. Apigenin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of apigenin in these solvents is approximately 0.3, 15, and 25 mg/ml.

Apigenin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, apigenin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Apigenin has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Apigenin is a flavonoid compound found in many fruits and vegetables that selectively inhibits casein kinase 2 (CK2). Apigenin inhibits CK2 activity in the renal cortex with an IC_{50} value of 30 µM to improve renal function in a rat model of glomerulonephritis.\textsuperscript{1} CK2 inhibition by 20 µM apigenin decreases the degradation of IκBα and down-regulates NF-κB levels in WEHI-231 cells.\textsuperscript{2} Apigenin at 5 µM is a potent inhibitor of the synthesis of the inflammatory mediators nitric oxide and prostaglandin E\textsubscript{2}, reducing inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) expression by 56% and 64%, respectively, in the macrophage cell line J774A.1.\textsuperscript{3}

References