Genistein
Item No. 10005167

CAS Registry No.: 446-72-0
Formal Name: 5,7-dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: C.I. 75610, NSC 36586
MF: C_{15}H_{10}O_{5}
FW: 270.2
Purity: ≥98%
UV/Vis.: λ_{max}: 261 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

Genistein is supplied as a crystalline solid. A stock solution may be made by dissolving the genistein in an organic solvent purged with an inert gas. Genistein is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of genistein in these solvents is approximately 30 mg/ml.

Genistein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, genistein should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Genistein has a solubility of approximately 1 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Genistein is an isoflavonoid phytoestrogenic compound found in soybeans, pea pods, and other legumes. The estimated human normal dietary intake of genistein, primarily as glycosides, is 0 to 0.5 mg/kg. Genistein is present in much greater amounts in nutritional supplements. Genistein is carcinogenic in female neonatal mice, inducing endocrine-dependent uterine tumors in a fashion similar to diethylstilbestrol (DES). Genistein is a tyrosine-specific inhibitor of protein kinase activity, blocking the tyrosine-phosphorylation of histone H2B. In adult animals, dietary genistein has chemopreventive effects on breast, prostate, and other endocrine-dependent tumors.

References