

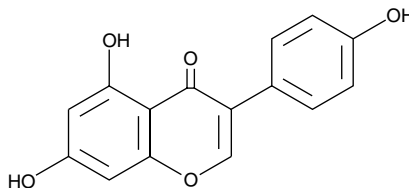
Product Information



Genistein

Item No. 10005167

CAS Registry No.: 446-72-0
Formal Name: 5,7-dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
MF: C₁₅H₁₀O₅
FW: 270.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 261 nm



Laboratory Procedures

For long term storage, we suggest that genistein be stored as supplied at -20°C. It should be stable for at least two years.

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.

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).¹ Genistein is a tyrosine-specific inhibitor of protein kinase activity, blocking the tyrosine-phosphorylation of histone H2B.² In adult animals, dietary genistein has chemopreventive effects on breast, prostate, and other endocrine-dependent tumors.³

References

1. Newbold, R.R., Banks, E.P., Bullock, B., *et al.* Uterine adenocarcinoma in mice treated neonatally with genistein. *Cancer Res.* **61**, 4325-4328 (2001).
2. Akiyama, T., Ishida, J., Nakagawa, S., *et al.* Genistein, a specific inhibitor of tyrosine-specific protein kinases. *J. Biol. Chem.* **262**(1), 5592-5595 (1987).
3. Lamartiniere, C.A., Cotroneo, M.S., Fritz, W.A., *et al.* Genistein chemoprevention: timing and mechanisms of action in murine mammary and prostate. *J. Nutr.* **132**, 552S-558S (2002).

Related Products

Daidzein - Item No. 10005166 • Quercetin - Item No. 10005169

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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