



Product Information

Product ID G1652

CAS No. 446-72-0

Chemical Name 5,7-Dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

Synonym Prunetol, Genisteol

Formula C₁₅H₁₀O₅

Formula Wt. 270.24

Melting Point 297-298°C (slight dec.)

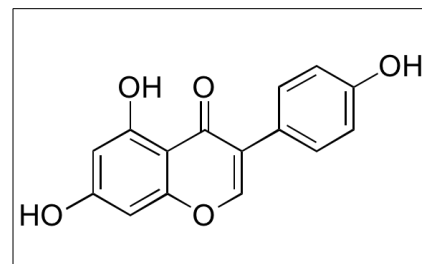
Purity ≥98%

Solubility Soluble in acetone or methanol. DMSO to 100 mM, ethanol to 2 mg/mL. Insoluble in water.

Store Temp -20°C

Ship Temp Ambient

Description Genistein is an isoflavone and phytoestrogen that was originally found in *Genista* but has since been found in many other plant sources, including soy. Genistein exhibits anti-resorptive, anti-osteoporotic, antioxidative, anti-obesity, anti-diabetic, anti-hyperlipidemic, neuroprotective, anti-inflammatory, anticancer, and anti-metastatic activities. Genistein inhibits osteoclast formation in macrophages and induces phase II enzymes such as superoxide dismutase, heme oxygenase 1 (HO-1) and Nrf2 in other cellular models. In high fat diet fed animal models, genistein decreases body weight, liver weight, lipid levels, and insulin dysregulation by inhibiting S6K1 signaling. In animal models of cerebral occlusion, genistein decreases infarct volume and neuronal apoptosis, increases activation of ERK1/2, and improves neurological and survival outcomes. In cellular models of Alzheimer's disease, genistein increases PKC signaling and inhibits amyloid-β (Aβ)-induced neurotoxicity. In other cellular models, this compound decreases activation of NF-κB and expression of IL-1β, IL-6, and IL-8 in an AMPK-dependent manner. In colon cancer cells, genistein induces G2/M phase cell cycle arrest and apoptosis, decreases the mitochondrial membrane potential, and inhibits cellular proliferation. In hepatocellular carcinoma cells, genistein decreases production of matrix metalloproteinase 9 (MMP9) and inhibits cellular invasion; it also downregulates hedgehog (Hh) signaling. TEST!!!!!!



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
G1652	100 mg	\$50.00
G1652	500 mg	\$88.20
G1652	1 g	\$165.40

References Lee SH, Kim JK, Jang HD. Genistein inhibits osteoclastic differentiation of RAW 264.7 cells via regulation of ROS production and scavenging. *Int J Mol Sci.* 2014 Jun 12;15(6):10605-21. PMID: 24927148.

Wang S, Wei H, Cai M, et al. Genistein attenuates brain damage induced by transient cerebral ischemia through up-regulation of ERK activity in ovariectomized mice. *Int J Biol Sci.* 2014 Apr 8;10(4):457-65. PMID: 24719563.

Li J, Li J, Yue Y, et al. Genistein suppresses tumor necrosis factor α-induced inflammation via modulating reactive oxygen species/Akt/nuclear factor κB and adenosine monophosphate-activated protein kinase signal pathways in human synovial cells. *Drug Des Devel Ther.* 2014 Mar 17;8:315-23. PMID: 24669186.

Wu J, Xu J, Han S, et al. Effects of genistein on apoptosis in HCT-116 human colon cancer cells and its mechanism. *Wei Sheng Yan Jiu.* 2014 Jan;43(1):1-5. PMID: 24564102.

Wang SD, Chen BC, Kao ST, et al. Genistein inhibits tumor invasion by suppressing multiple signal transduction pathways in human hepatocellular carcinoma cells. *BMC Complement Altern Med.* 2014 Jan 16;14:26. PMID: 24433534.

Fan P, Fan S, Wang H, et al. Genistein decreases the breast cancer stem-like cell population through Hedgehog pathway. *Stem Cell Res Ther.* 2013;4(6):146. PMID: 24331293.

Arunkumar E, Karthik D, Anuradha CV. Genistein sensitizes hepatic insulin signaling and modulates lipid regulatory genes

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.