LKT Laboratories, Inc.

Genistein

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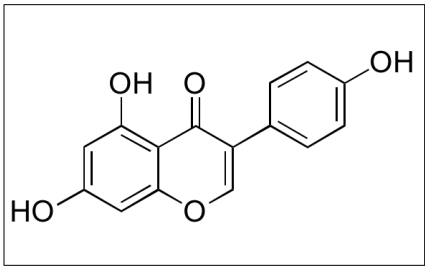
Product Information

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 $C_{15}H_{10}O_5$
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

Bulk quanitites available upon request

Product ID	Size
G1652	100 mg
G1652	500 mg
G1652	1 g

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 (Aß)-induced neurotoxicity. In other cellular models, this compound decreases activation of NF-κB and expression of IL-1ß, 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.

References

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