



LKT Laboratories, Inc.

Glycitein

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## Product Information

Product ID G4798

CAS No. 40957-83-3

Chemical Name 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxychromen-4-one

### Synonym

Formula  $C_{16}H_{12}O_5$

Formula Wt. 284.26

Melting Point

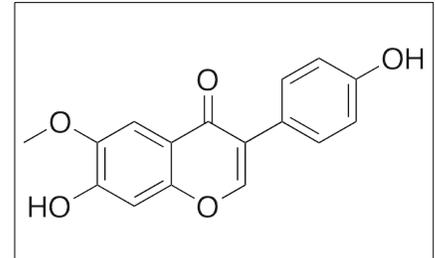
Purity  $\geq 98\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Glycitein is an aglycone isoflavone found in soy and red clover; it exhibits a wide variety of beneficial properties, including neuroprotective, antioxidative, anticancer, anti-osteoporotic, and anti-atherosclerotic activities. This compound also acts as a phytoestrogen. Glycitein inhibits generation of ROS, increases expression of heme oxygenase-1 (HO-1) and NADPH quinone reductase, and increases Nrf2-related antioxidative signaling. In vitro, glycitein downregulates expression of matrix metalloproteinases 3 and 9, preventing invasion of glioma cells. Additionally, this compound increases ERK1/2 activity and decreases cell proliferation in prostate cells. In aortic smooth muscle cells, glycitein inhibits DNA synthesis and cell proliferation, attenuating a pathology that occurs in atherosclerosis. In cellular models of Alzheimer's disease, glycitein also binds to amyloid-B (AB) monomers, oligomers, and fibrils, destabilizing AB aggregates and preventing fibril assembly. Glycitein also affects bone formation, inhibiting osteoclast generation and decreasing expression of IL-6 and RANKL in bone marrow-derived osteoclasts.



## Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
G4798	1 mg	\$98.50
G4798	5 mg	\$162.10
G4798	10 mg	\$259.70
G4798	25 mg	\$535.00

**References** Hirohata M, Ono K, Takasaki J, et al. Anti-amyloidogenic effects of soybean isoflavones in vitro: Fluorescence spectroscopy demonstrating direct binding to AB monomers, oligomers and fibrils. *Biochim Biophys Acta*. 2012 Aug;1822(8):1316-24. PMID: 22587837.

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Winzer M, Rauner M, Pietschmann P. Glycitein decreases the generation of murine osteoclasts and increases apoptosis. *Wien Med Wochenschr*. 2010 Sep;160(17-18):446-51. PMID: 20714813.

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Clubbs EA, Bomser JA. Glycitein activates extracellular signal-regulated kinase via vascular endothelial growth factor receptor signaling in nontumorigenic (RWPE-1) prostate epithelial cells. *J Nutr Biochem*. 2007 Aug;18(8):525-32. PMID: 17156992.

Pan W, Ikeda K, Takebe M, et al. Genistein, daidzein and glycitein inhibit growth and DNA synthesis of aortic smooth muscle cells from stroke-prone spontaneously hypertensive rats. *J Nutr*. 2001 Apr;131(4):1154-8. PMID: 11285318.

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