

Glycitein Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Glycitein

Catalog No.: CFN99106

Cas No.: 40957-83-3

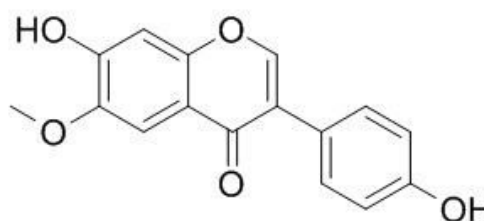
Purity: > 98%

M.F: C₁₆H₁₂O₅

M.W: 284.26

Physical Description: Yellow Powder

Synonyms: 7-Hydroxy-3-(4-hydroxyphenyl)-6-methoxy-1-benzopyran-4-one.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Others.

[Source]

The fruits of *Glycine max* (L.) merr.

[Biological Activity or Inhibitors]

Glycitein accounts for 5-10% of the total isoflavones in soy food products, has weak estrogenic activity, comparable to that of the other soy isoflavones but much lower than that of DES and 17beta-estradiol.^[1]

Glycitein, daidzein and genistein, with their inhibitory effects on natural and PDGF-BB-induced SMC proliferation, may be useful in attenuating such proliferation, a basic mechanism involved in atherosclerotic vascular change, thereby preventing atherosclerotic cardiovascular diseases.^[2]

Glycitein has antioxidant effects, may suppress Abeta toxicity through combined antioxidative activity and inhibition of Abeta deposition, thus may have therapeutic potential for prevention of Abeta associated neurodegenerative disorders.^[3]

Glycitein has inhibitory effects on hydrogen peroxide induced cell damage by scavenging reactive oxygen species and inhibiting c-Jun N-terminal kinase.^[4]

Glycitein, the most potent activator of ERK1/2, decreases RWPE-1 cell proliferation by 40% ; it induces ERK1/2 activation was dependent, in part, on tyrosine kinase activity associated with vascular endothelial growth factor receptor (VEGFR).^[5]

Glycitein suppresses PMA-induced phosphorylation of three types of MAP kinases, which are upstream signaling molecules in MMP gene expressions and NF-kappaB and AP-1 activities in glioma cells, therefore, the inhibition of MMP-3 and MMP-9 expression by glycitein may have therapeutic potential for controlling invasiveness of malignant gliomas.^[6]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone, etc.

[HPLC Method]^[7]

Mobile phase: Methanol-0.1% Acetic acid H₂O=52:48 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 254m.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

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- [2] Pan W, Ikeda K, Takebe M, *et al. J. Nutr.*, 2001, 131(4):1154-8.
- [3] Gutierrez-Zepeda A, Santell R, Wu Z, *et al. BMC Neurosci.*, 2004, 6(3):1-9.
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- [5] Clubbs E A, Bomser J A. *J. Nutr. Biochem.*, 2007, 18(8):525-32.
- [6] Lee E J, Kim S Y, Hyun J W, *et al. Chem. Biol. Interact.*, 2010, 185(1):18-24.
- [7] César I D C, Braga F C, Vianna-Soares C D, *et al. Rev.Bras.Farmacogn*, 2007, 17(4): 616-25.

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