

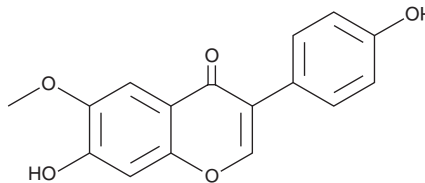
# PRODUCT INFORMATION



## Glycitein

Item No. 14162

**CAS Registry No.:** 40957-83-3  
**Formal Name:** 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy-4H-1-benzopyran-4-one  
**MF:** C<sub>16</sub>H<sub>12</sub>O<sub>5</sub>  
**FW:** 284.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 232, 261, 319 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Glycitein is supplied as a crystalline solid. A stock solution may be made by dissolving the glycitein in the solvent of choice, which should be purged with an inert gas. Glycitein is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of glycitein in these solvents is approximately 0.5 mg/ml.

### Description

Glycitein is an O-methylated isoflavone that comprises 5-10% of the total isoflavones in soy food products. This phytoestrogen is reported to have weak estrogenic activity, displacing estradiol binding at the estrogen receptor *in vitro* with an IC<sub>50</sub> value of 3.94 μM.<sup>1</sup> It suppresses the proliferation of osteoblasts and promotes differentiation from its progenitor.<sup>2</sup> It has also been used to attenuate proliferation (10 μM) of aortic smooth muscle cells related to atherosclerotic vascular change in stroke-prone hypertensive rats and to protect against beta amyloid (Aβ)-induced toxicity and oxidative stress (100 μg/ml) in *C. elegans* expressing human Aβ.<sup>3,4</sup>

### References

1. Song, T.T., Hendrich, S., and Murphy, P.A. Estrogenic activity of glycitein, a soy isoflavone. *J. Agric. Food Chem.* **47(4)**, 1607-1610 (1999).
2. Yoshida, H., Teramoto, T., Ikeda, K., et al. Glycitein effect on suppressing the proliferation and stimulating the differentiation of osteoblastic MC3T3-E1 cells. *Biosci. Biotechnol. Biochem.* **65(5)**, 1211-1213 (2001).
3. 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.* **131(4)**, 1154-1158 (2001).
4. Gutierrez-Zepeda, A., Santell, R., Wu, Z., et al. Soy isoflavone glycitein protects against βamyloid-induced toxicity and oxidative stress in transgenic Caenorhabditis elegans. *BMC Neurosci.* **6(54)**, (2005).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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