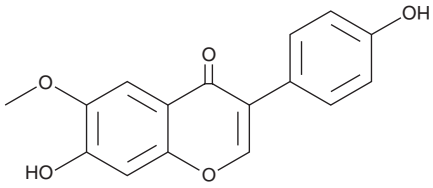
PRODUCT INFORMATION

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:	$C_{16}H_{12}O_5$
FW:	284.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 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_{50} value of 3.94 µM.[1] It suppresses the proliferation of osteoblasts and promotes differentiation from its progenitor.[2] 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.[3,4]

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 againstβamyloid-induced toxicity and oxidative stress in transgenic Caenorhabditis elegans. *BMC Neurosci.* **6(54)**, (2005).

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