

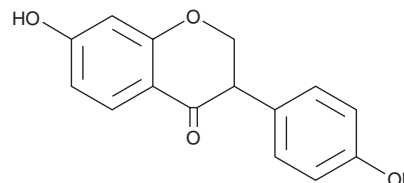
PRODUCT INFORMATION



Dihydrodaidzein

Item No. 17423

CAS Registry No.: 17238-05-0
Formal Name: 2,3-dihydro-7-hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: (±)-Dihydrodaidzein, 4',7-dihydroxy Isoflavanone
MF: C₁₅H₁₂O₄
FW: 256.3
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 276, 312 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

Dihydrodaidzein is supplied as a crystalline solid. A stock solution may be made by dissolving the dihydrodaidzein in the solvent of choice. Dihydrodaidzein is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of dihydrodaidzein in these solvents is approximately 0.1, 30, and 10 mg/ml, respectively.

Dihydrodaidzein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, dihydrodaidzein should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Dihydrodaidzein has a solubility of approximately 0.15 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Daidzein (Item No. 10005166) is an isoflavonoid phytoestrogenic compound found in soybeans, pea pods, clover, kudzu, and other legumes. Dihydrodaidzein is an active, estrogenic metabolite of daidzein.¹ It has vasodilatory action on rat isolated aortic rings at 1 µg/ml.² It stimulates the estrogen receptor-dependent growth of breast cancer MCF-7 cells at micromolar concentrations.³ Dihydrodaidzein is produced by the metabolism of daidzein in colonic bacteria and may be further metabolized to various bioactive compounds, including equol (Item No. 13184).^{4,5}

References

1. Franke, A.A., Lai, J.F., and Halm, B.M. Absorption, distribution, metabolism, and excretion of isoflavonoids after soy intake. *Arch. Biochem. Biophys.* **559**, 24-28 (2014).
2. Chin-Disting, J.P.F., Fisher, L.J., Lewis, T.V., et al. The vascular activity of some isoflavone metabolites: Implications for a cardioprotective role. *Br. J. Pharmacol.* **133(4)**, 595-605 (2001).
3. Kinjo, J., Tsuchihashi, R., Morita, K., et al. Interactions of phytoestrogens with estrogen receptors α and β (III). Estrogenic activities of soy isoflavone aglycones and their metabolites isolated from human urine. *Biol. Pharm. Bull.* **27(2)**, 185-188 (2004).
4. Ráfii, F. The role of colonic bacteria in the metabolism of the natural isoflavone daidzin to equol. *Metabolites* **5(1)**, 56-73 (2015).
5. Schröder, D., Matthies, A., Engst, W., et al. Identification and expression of genes involved in the conversion of daidzein and genistein by the equol-forming bacterium *Slackia isoflavoniconvertens*. *Appl. Environ. Microbiol.* **79(11)**, 3494-3502 (2013).

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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