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- Trockeneiszuschlag
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- Expressversand

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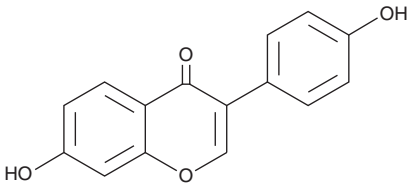
PRODUCT INFORMATION

Daidzein

Item No. 10005166

CAS Registry No.:	486-66-8
Formal Name:	7-hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
MF:	$C_{15}H_{10}O_4$
FW:	254.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 249, 301 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years
Item Origin:	Synthetic



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

Laboratory Procedures

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

Daidzein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, daidzein should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Daidzein 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 is an isoflavone phytoestrogenic compound that has been found in soybeans and other legumes.[1] It binds to estrogen receptor β (ERβ; K_i = 2.8 µM) but not ERα at concentrations up to 1 mM.[2] It is estrogenic *in vitro*, increasing gene transcription mediated by the estrogen response element (ERE) in a reporter assay in an ERβ-dependent manner (EC_{50} = 2.8 µM for MCF-7 cells expressing ERβ).[1] Daidzein is an inhibitor of carbonic anhydrase (CA) that is selective for carbonic CAVII and CAXII (K_is = 4.2 and 56 nM, respectively) over CAI, II, and IV (K_is = >10,000, >10,000, and 718.7 nM, respectively).[3] It reduces tumor growth in a PC3 prostate cancer mouse orthotopic model when administered at a dose of 50 mg/kg per day and potentiates the effects of radiation therapy.[4]

References

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2. Zhao, L. and Brinton, R.D. Structure-based virtual screening for plant-based ERβ-selective ligands as potential preventative therapy against age-related neurodegenerative diseases. *J. Med. Chem.* **48(10)**, 3463-3466 (2005).
3. Karioti, A., Ceruso, M., Carta, F., *et al.* New natural product carbonic anhydrase inhibitors incorporating phenol moieties. *Bioorg. Med. Chem.* **23(22)**, 7219-7225 (2015).
4. Singh-Gupta, V., Zhang, H., Yunker, C.K., *et al.* Daidzein effect on hormone refractory prostate cancer *in vitro* and *in vivo* compared to genistein and soy extract: Potentiation of radiotherapy. *Pharm. Res.* **27(6)**, 1115-1127 (2010).

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