

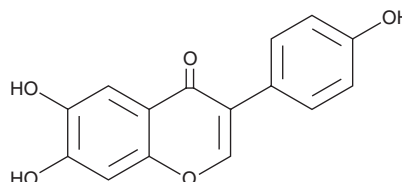
PRODUCT INFORMATION



6,7,4'-Trihydroxyisoflavone

Item No. 35405

CAS Registry No.:	17817-31-1
Formal Name:	6,7-dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms:	6-hydroxy Daidzein, 6,7,4'-THIF
MF:	C ₁₅ H ₁₀ O ₅
FW:	270.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 259 nm
Supplied as:	A 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

6,7,4'-Trihydroxyisoflavone is supplied as a solid. A stock solution may be made by dissolving the 6,7,4'-trihydroxyisoflavone in the solvent of choice, which should be purged with an inert gas. 6,7,4'-Trihydroxyisoflavone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6,7,4'-trihydroxyisoflavone in DMSO is approximately 12 mg/ml and approximately 14 mg/ml in DMF. 6,7,4'-Trihydroxyisoflavone is slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 6,7,4'-trihydroxyisoflavone can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 6,7,4'-trihydroxyisoflavone in PBS (pH 7.2) is approximately 0.11 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

6,7,4'-Trihydroxyisoflavone is an active metabolite of the phytoestrogen daidzein (Item No. 10005166).¹⁻⁴ It suppresses anchorage-dependent and -independent growth of HCT116 and DLD-1 colon cancer cells, as well as induces cell cycle arrest at the S and G₂/M phases in HCT116 cells when used at concentrations ranging from 12.5 to 100 μM.¹ 6,7,4'-Trihydroxyisoflavone (40 and 80 μM) inhibits adipogenesis in 3T3-L1 preadipocytes induced by isobutylmethylxanthine, dexamethasone, and insulin (MDI).² *In vivo*, 6,7,4'-trihydroxyisoflavone (5 mg/kg) reverses scopolamine-induced memory impairments and increases hippocampal brain-derived neurotrophic factor (BDNF) and CREB levels in mice.³ It also prevents LPS-induced bone loss in mice.⁴

References

1. Lee, D.E., Lee, K.W., Jung, S.K., et al. *Carcinogenesis* **32**(4), 629-635 (2011).
2. Seo, S.G., Yang, H., Shin, S.H., et al. *Mol. Nutr. Food Res.* **57**(8), 1446-1455 (2013).
3. Ko, Y.-H., Kim, S.Y., Lee, S.-Y., et al. *Eur. J. Pharmacol.* **826**, 140-147 (2018).
4. Kim, E.-N., Kim, Y.G., Lee, J.-H., et al. *Phytother. Res.* **33**(11), 2948-2959 (2019).

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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