

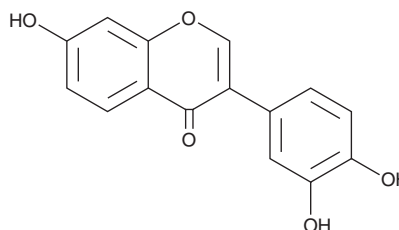
PRODUCT INFORMATION



3',4',7-Trihydroxyisoflavone

Item No. 20930

CAS Registry No.:	485-63-2
Formal Name:	3-(3,4-dihydroxyphenyl)-7-hydroxy-4H-1-benzopyran-4-one
Synonyms:	3'-hydroxy Daidzein, 3',4',7-THIF
MF:	C ₁₅ H ₁₀ O ₅
FW:	270.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 219, 249, 261, 293 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

3',4',7-Trihydroxyisoflavone is supplied as a crystalline solid. A stock solution may be made by dissolving the 3',4',7-trihydroxyisoflavone in the solvent of choice. 3',4',7-Trihydroxyisoflavone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3',4',7-trihydroxyisoflavone in these solvents is approximately 1, 10, and 20 mg/ml, respectively.

3',4',7-Trihydroxyisoflavone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3',4',7-trihydroxyisoflavone should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 3',4',7-Trihydroxyisoflavone has a solubility of approximately 0.1 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

3',4',7-Trihydroxyisoflavone is a natural isoflavonoid that has antioxidant activity.¹ It can be produced by the metabolism of daidzein (Item No. 10005166) or daidzin (Item No. 13202).^{2,3} 3',4',7-Trihydroxyisoflavone inhibits several signaling pathways in cells, including tyrosinase-mediated melanin formation (IC₅₀ = 5.2 μM), casein kinase II-mediated phosphorylation of 60S acidic ribosomal P proteins, and cyclin-dependent, kinase-regulated cell proliferation.⁴⁻⁶

References

1. Komiyama, K., Funayama, S., Anraku, Y., *et al.* *J. Antibiot. (Tokyo)* **42(9)**, 1344-1349 (1989).
2. Choi, K.-Y., Kim, T.-j., Koh, S.-K., *et al.* *Biotechnol. J.* **4(11)**, 1586-1595 (2009).
3. Yasuda, T. and Ohsawa, K. *Biol. Pharm. Bull.* **21(9)**, 953-957 (1998).
4. Park, J.-S., Kim, D.H., Lee, J.K., *et al.* *Bioorg. Med. Chem. Lett.* **20(3)**, 1162-1164 (2010).
5. Maekawa, T., Kosuge, S., Sakamoto, S., *et al.* *Biol. Pharm. Bull.* **22(7)**, 667-673 (1999).
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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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