

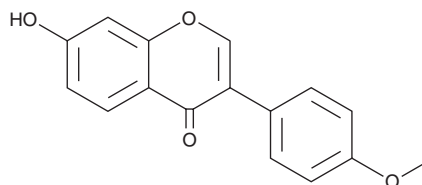
PRODUCT INFORMATION



Formononetin

Item No. 17558

CAS Registry No.: 485-72-3
Formal Name: 7-hydroxy-3-(4-methoxyphenyl)-4H-1-benzopyran-4-one
Synonyms: Biochanin B, NSC 93360
MF: C₁₆H₁₂O₄
FW: 268.3
Purity: ≥98%
UV/Vis.: λ_{max}: 249, 301 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/Radix Astragali



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

Laboratory Procedures

Formononetin is supplied as a crystalline solid. A stock solution may be made by dissolving the formononetin in the solvent of choice, which should be purged with an inert gas. Formononetin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of formononetin in these solvents is approximately 25 and 30 mg/ml, respectively.

Formononetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, formononetin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Formononetin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Formononetin is an isoflavonoid phytoestrogenic compound found in soy-based foods and is the precursor of daidzein (Item No. 10005166).¹ It acts as an agonist of the aryl hydrocarbon receptor with an EC₅₀ value of 0.13 μM.² Formononetin has been reported to possess antitumor and antiviral activity.^{3,4}

References

1. Patisaul, H.B. and Jefferson, W. The pros and cons of phytoestrogens. *Front. Neuroendocrinol.* **31(4)**, 400-419 (2010).
2. Medjakovic, S. and Jungbauer, A. Red clover isoflavones biochanin A and formononetin are potent ligands of the human aryl hydrocarbon receptor. *J. Steroid Biochem. Mol. Biol.* **108(1-2)**, 171-177 (2008).
3. Yang, Y., Zhao, Y., Ai, X., et al. Formononetin suppresses the proliferation of human non-small cell lung cancer through induction of cell cycle arrest and apoptosis. *Int. J. Clin. Exp. Pathol.* **7(12)**, 8453-8461 (2014).
4. Wang, H., Zhang, D., Ge, M., et al. Formononetin inhibits enterovirus 71 replication by regulating COX-2/PGE₂ expression. *Virology* **12**, 35 (2015).

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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