

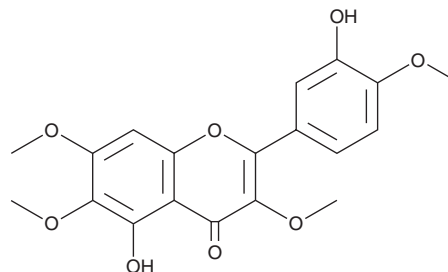
PRODUCT INFORMATION



Casticin

Item No. 16976

CAS Registry No.: 479-91-4
Formal Name: 5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-3,6,7-trimethoxy-4H-1-benzopyran-4-one
Synonym: Vitexicarpin
MF: C₁₉H₁₈O₈
FW: 374.3
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 258, 350 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

Casticin is supplied as a crystalline solid. A stock solution may be made by dissolving the casticin in the solvent of choice, which should be purged with an inert gas. Casticin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of casticin in these solvents is approximately 5, 10, and 20 mg/ml, respectively.

Casticin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, casticin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Casticin has a solubility of approximately 1 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Casticin is a flavonol isolated from *A. annua*, *V. trifolia*, and *V. agnus-castus* that decreases proliferation in K562, HL-60, and Kasumi-1 leukemia cell lines (IC₅₀s = 5.95, 4.82, and 15.56 μM, respectively).¹ It blocks TGF-β/SMAD signaling in LX2 cells preventing activation, inhibiting proliferation, and inducing apoptosis of these hepatic stellate cells.² In a mouse model of liver fibrosis, casticin (20 mg/kg) decreases TGF-β1 mRNA and phosphorylated SMAD (p-SMAD) levels. Casticin induces apoptosis in hepatocellular carcinoma (HCC) and breast cancer cells.^{3,4} It also downregulates Twist and prevents the epithelial-mesenchymal transition (EMT) in human HCC SMMC-7721 cells.³

References

1. Shen, J.-K., Du, H.-P., Yang, M., *et al.* Casticin induces leukemic cell death through apoptosis and mitotic catastrophe. *Ann. Hematol.* **88**(8), 743-752 (2009).
2. Zhou, L., Dong, X., Wang, L., *et al.* Casticin attenuates liver fibrosis and hepatic stellate cell activation by blocking TGF-β/Smad signaling pathway. *Oncotarget* (2017).
3. He, M., Cao, X.C., He, G.C., *et al.* Casticin inhibits epithelial-mesenchymal transition of liver cancer stem cells of the SMMC-7721 cell line through downregulating Twist. *Oncol. Lett.* **7**(5), 1625-1631 (2014).
4. Liu, L.P., Cao, X.C., Liu, F., *et al.* Casticin induces breast cancer cell apoptosis by inhibiting the expression of forkhead box protein M1. *Oncol. Lett.* **7**(5), 1711-1717 (2014).

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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