

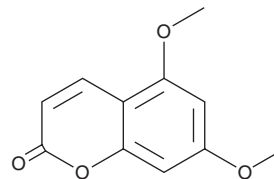
PRODUCT INFORMATION



Citropten

Item No. 29338

CAS Registry No.: 487-06-9
Formal Name: 5,7-dimethoxy-2H-1-benzopyran-2-one
Synonym: 5,7-Dimethoxycoumarin
MF: C₁₁H₁₀O₄
FW: 206.2
Purity: ≥95%
UV/Vis.: λ_{max}: 325 nm
Supplied as: A crystalline 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

Citropten is supplied as a crystalline solid. A stock solution may be made by dissolving the citropten in the solvent of choice, which should be purged with an inert gas. Citropten is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of citropten in these solvents is approximately 3, 14, and 25 mg/ml, respectively.

Citropten is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, citropten should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Citropten 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

Citropten is a coumarin that has been found in bergamot extracts and has diverse biological activities.¹⁻⁴ It reduces *IL-8* mRNA accumulation induced by TNF- α or heat-inactivated *P. aeruginosa* in IB3-1 cells derived from cystic fibrosis patients.¹ Citropten induces cell cycle arrest at the G₁ phase and inhibits proliferation of A375, MCF-7, PC3, and SW620 cancer cells (IC₅₀s = 250-325 μ M).² It is active against various Gram-positive and Gram-negative bacteria (MICs = 16-64 μ g/ml).³ Citropten increases prothrombin time in isolated rat platelet-poor plasma. *In vivo*, citropten (10 mg/kg) prevents decreases in locomotor activity and increases in hippocampal monoamine oxidase A (MAO-A) levels in a rat model of chronic mild stress-induced depression.⁴

References

1. Borgatti, M., Mancini, I., Bianchi, N., *et al.* Bergamot (*Citrus bergamia* Risso) fruit extracts and identified components alter expression of interleukin 8 gene in cystic fibrosis bronchial epithelial cell lines. *BMC Biochem.* **12**, 15 (2011).
2. Alesiani, D., Cicconi, R., Mattei, M., *et al.* Cell cycle arrest and differentiation induction by 5,7-dimethoxycoumarin in melanoma cell lines. *Int. J. Oncol.* **32(2)**, 425-434 (2008).
3. Rosselli, S., Maggio, A., Bellone, G., *et al.* Antibacterial and anticoagulant activities of coumarins isolated from the flowers of *Magydaris tomentosa*. *Planta Med.* **73(2)**, 116-120 (2006).
4. Yang, W. and Wang, H. 5,7-Dimethoxycoumarin prevents chronic mild stress induced depression in rats through increase in the expression of heat shock protein-70 and inhibition of monoamine oxidase-A levels. *Saudi J. Biol. Sci.* **25(2)**, 253-258 (2018).

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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