

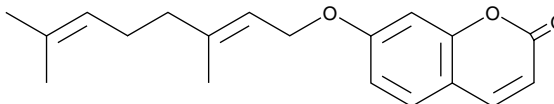
Product Information



Auraptene

Item No. 14000

CAS Registry No.: 495-02-3
Formal Name: 7-[[[(2E)-3,7-dimethyl-2,6-octadien-1-yl]oxy]-2H-1-benzopyran-2-one
Synonym: 7-Geranyloxycoumarin
MF: C₁₉H₂₂O₃
FW: 298.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 323 nm



Laboratory Procedures

For long term storage, we suggest that auraptene be stored as supplied at -20°C. It should be stable for at least two years.

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

Auraptene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, auraptene should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Auraptene has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Auraptene is a coumarin derived from citrus plants that bears a geranyloxyl moiety at its C-7. It has anti-inflammatory, anti-carcinogenic, anti-bacterial, neuroprotective, and hepatoprotective activities.¹⁻⁵ It inhibits leukocyte activation and induces phase II enzymes during the initiation phase of carcinogenesis.¹ When examined for its potential use in Alzheimer's disease treatment, auraptene was shown to inhibit β-secretase (BACE1) activity with an IC₅₀ value of 345.1 μM.⁶

References

1. Murakami, A., Nakamura, Y., Tanaka, T., *et al.* Suppression by citrus auraptene of phorbol ester- and endotoxin-induced inflammatory responses: Role of attenuation of leukocyte activation. *Carcinogenesis* **21(10)**, 1843-1850 (2000).
2. Krishnan, P., Yan, K.J., Windler, D., *et al.* Citrus auraptene suppresses cyclin D1 and significantly delays N-methyl nitrosourea induced mammary carcinogenesis in female Sprague-Dawley rats. *BMC Cancer* **9**, (2009).
3. Takeda, K., Utsunomiya, H., Kakiuchi, S., *et al.* Citrus auraptene reduces *Helicobacter pylori* colonization of glandular stomach lesions in Mongolian gerbils. *J. Oleo Sci.* **56(5)**, 253-260 (2007).
4. Furukawa, Y., Watanabe, S., Okuyama, S., *et al.* Neurotrophic effect of Citrus auraptene: Neuritogenic activity in PC12 cells. *Int. J. Mol. Sci.* **13**, 5338-5347 (2012).
5. Sahebkar, A. Citrus auraptene: A potential multifunctional therapeutic agent for nonalcoholic fatty liver disease. *Ann. Hepatol.* **10(4)**, 575-577 (2011).
6. Marumoto, S. and Miyazawa, M. Structure-activity relationships for naturally occurring coumarins as β-secretase inhibitor. *Bioorg. Med. Chem.* **20(2)**, 784-788 (2012).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14000

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog.**

Copyright Cayman Chemical Company, 12/18/2014

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com