

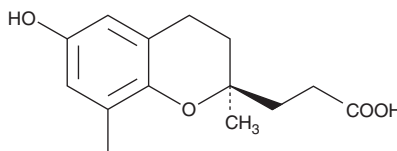
Product Information



δ-CEHC

Item No. 10007706

CAS Registry No.: 1221504-67-1
Formal Name: 3,4-dihydro-6-hydroxy-2,8-dimethyl-2H-1-benzopyran-2-propanoic acid
MF: C₁₄H₁₈O₄
FW: 250.3
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

δ-CEHC is supplied as a crystalline solid. A stock solution may be made by dissolving the δ-CEHC in an organic solvent purged with an inert gas. δ-CEHC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of δ-CEHC in these solvents is approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of δ-CEHC can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of δ-CEHC in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Molecules having vitamin E antioxidant activity include four tocopherols (α, β, γ, δ) and four tocotrienols (α, β, γ, δ).¹ One form, α-tocopherol has the highest biological activity based on fetal resorption assays.² δ-CEHC is a major β-oxidation metabolite of δ-tocopherol.^{3,4} Approximately 50% of a ³H-δ-tocopherol given as an intraperitoneal dose in rat is recovered in the urine as δ-CEHC, indicating this is the major route of metabolism.⁴

References

1. Kamal-Eldin, A. and Appelqvist, L.-Å. The chemistry and antioxidant properties of tocopherols and tocotrienols. *Lipids* **31**, 671-701 (1996).
2. Weiser, H., Riss, G., and Kormann, A.F. Biodiscrimination of the eight α-tocopherol stereoisomers results in preferential accumulation of the four 2R forms in tissues and plasma of rats. *J. Nutr.* **126(10)**, 2539-2549 (1996).
3. Christen, S., Woodall, A.A., Shigenaga, M.K., *et al.* γ-Tocopherol traps mutagenic electrophiles such as NO_x and complements α-tocopherol: Physiological implications. *Proc. Natl. Acad. Sci. USA* **94**, 3217-3222 (1997).
4. Burton, G.W., Joyce, A., and Ingold, K.U. Is vitamin E the only lipid-soluble, chain-breaking antioxidant in human blood plasma and erythrocyte membranes? *Arch. Biochem. Biophys.* **221(1)**, 281-290 (1983).

Related Products

γ-CEHC - Item No. 89630 • Elaidic Acid - Item No. 90250 • α-CEHC - Item No. 10007705

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

MATERIAL 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 Material 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.

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