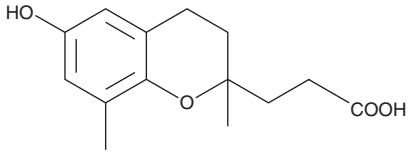
PRODUCT INFORMATION

δ-CEHC

Item No. 10007706

CAS Registry No.:	84599-16-6
Formal Name:	3,4-dihydro-6-hydroxy-2,8-dimethyl-2H-1-benzopyran-2-propanoic acid
MF:	$C_{14}H_{18}O_4$
FW:	250.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 205, 298 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

δ-CEHC is supplied as a crystalline solid. A stock solution may be made by dissolving the δ-CEHC in the solvent of choice, which should be 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 solid 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.

Description

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(7)**, 671-701 (1996).
2. Weiser, H., Riss, G., and Kormann, A.W. 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(7)**, 3217-3222 (1997).
4. Chiku, S., Hamamura, K., and Nakamura, T. Novel urinary metabolite of d-δ-tocopherol in rats. *J. Lipid Res.* **25(1)**, 40-48 (1984).

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