

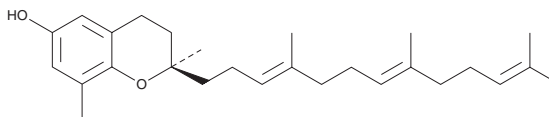
PRODUCT INFORMATION



δ-Tocotrienol

Item No. 10008513

CAS Registry No.: 25612-59-3
Formal Name: 3,4-dihydro-2,8-dimethyl-2R-[(3E,7E)-4,8,12-trimethyl-3,7,11-tridecatrienyl]-2H-1-benzopyran-6-ol
MF: C₂₇H₄₀O₂
FW: 396.6
Purity: ≥98%
UV/Vis.: λ_{max}: 298 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

δ-Tocotrienol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of δ-tocotrienol in these solvents is approximately 10 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

δ-Tocotrienol is a form of vitamin E that has been found in rice bran and has diverse biological activities.¹⁻⁴ It reduces cell death induced by hydrogen peroxide, paraquat, S-nitrocysteine, SIN-1 (Item No. 82220), or L-buthionine-(S,R)-sulfoximine (BSO; Item No. 14484) in rat striatal cultures when used at concentrations ranging from 0.1 to 10 μM.² δ-Tocotrienol (10 μM) reduces 25-hydroxycholesterol-induced surface expression of VCAM-1 in human aortic endothelial cells (HAECs), as well as reduces 25-hydroxycholesterol-induced HAEC adhesion to U937 monocytes.³ It inhibits LPS-induced production of nitric oxide (NO), TNF-α, IL-6, IL-1β, and IFN-γ in RAW 264.7 cells. δ-Tocotrienol (60 mg/kg) increases the glomerular filtration rate and decreases renal malondialdehyde (MDA) levels in a rat model of nephrotoxicity induced by ochratoxin A (Item No. 11439).⁵

References

1. Kamal-Eldin, A. and Appelqvist, L.-Å. *Lipids* **31**, 671-701 (1996).
2. Osakada, F., Hashino, A., Kume, T., et al. *Neuropharmacology* **47**, 904-915 (2004).
3. Naito, Y., Shimosawa, M., Kuroda, M., et al. *Atherosclerosis* **180**, 19-25 (2005).
4. Shen, J., Yang, T., Xu, Y., et al. *Int. J. Mol. Sci.* **19**(10), 3022 (2018).
5. Damiano, S., Navias, L., Lomabari, P., et al. *J. Cell. Physiol.* **233**(11), 7831-8739 (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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