**Product Information**

**α-Tocotrienol**

*Item No. 10008377*

**CAS Registry No.**: 58864-81-6

**Formal Name**: 3,4-dihydro-2,5,7,8-tetramethyl-2R-[(5E,7E)-4,8,12-trimethyl-3,7,11-tridecatrienylo]-2H-1-benzopyran-6-ol

**MF**: C_{29}H_{44}O_{2}

**FW**: 424.7

**Purity**: ≥98%

**Stability**: ≥1 year at -20°C

**Supplied as**: A solution in ethanol

**UV/Vis.**:

λ_{max}: 289 nm

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**Laboratory Procedures**

For long term storage, we suggest that α-tocotrienol be stored as supplied at -20°C. It should be stable for at least one year.

α-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 α-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.

The four tocopherols (α, β, δ, and γ) and four tocotrienols (α, β, δ, and γ) are forms of vitamin E, which is known for its antioxidant activity.1 Tocotrienols are found at high concentrations in palm oil and rice bran. Recent studies show tocotrienols may be more effective antioxidants than α-tocopherol, the most abundant form of vitamin E.2 Compared to other tocotrienols, α-tocotrienol exhibits the most potent neuroprotective actions in rat striatal neurons. At concentrations of 0.1-10 µM, α-tocotrienol significantly suppresses H_{2}O_{2}-induced cell death and provides protection against S-nitroscysteine-induced cell death and SIN-1 toxicity in a concentration dependent manner.3 HT4 cells, that are microinjected with 10^{-15} mol of α-tocotrienol into the cytosolic, are protected against glutamate-induced cell death by suppressing early activation of c-Src kinase and 12-lipoxygenase.4

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**References**


**Related Products**

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