

PRODUCT INFORMATION



(+)- γ -Tocopherol

Item No. 36362

CAS Registry No.: 54-28-4
Formal Name: (2R)-3,4-dihydro-2,7,8-trimethyl-2-
[[4R,8R)-4,8,12-trimethyltridecyl]-
2H-1-benzopyran-6-ol

Synonyms: all-(R)- γ -Tocopherol, D- γ -Tocopherol

MF: C₂₈H₄₈O₂

FW: 416.7

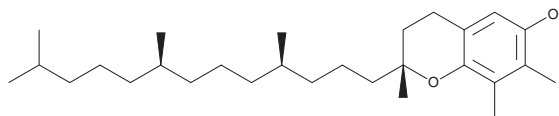
Purity: \geq 90%

Supplied as: A neat liquid

Storage: -20°C

Stability: \geq 2 years

Item Origin: Synthetic



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

Laboratory Procedures

(+)- γ -Tocopherol is supplied as a neat liquid. A stock solution may be made by dissolving the (+)- γ -tocopherol in the solvent of choice, which should be purged with an inert gas. (+)- γ -Tocopherol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (+)- γ -tocopherol in these solvents is approximately 15 mg/ml.

Description

(+)- γ -Tocopherol is a biologically active form of vitamin E.¹⁻³ It inhibits the growth of DU145, LNCaP, and Caco-2 cancer cells when used at a concentration of 25 μ M.¹ *In vivo*, (+)- γ -tocopherol (100 mg/kg) reduces airway eosinophil infiltration and levels of IL-6, IL-5, IL-13, and chemokine (C-C motif) ligand 2 (CCL2) in a rat model of ovalbumin-induced allergic inflammation and a rat model of ovalbumin- and ozone-induced asthma.² It also reduces lipid peroxidation in vitamin E-depleted, iron-loaded rats.³

References

1. Gysin, R., Azzi, A., and Visarius, T. γ -Tocopherol inhibits human cancer cell cycle progression and cell proliferation by down-regulation of cyclins. *FASEB J.* **16(14)**, 1952-1954 (2002).
2. Wagner, J.G., Jiang, Q., Harkema, J.R., *et al.* Ozone enhancement of lower airway allergic inflammation is prevented by γ -tocopherol. *Free Radic. Biol. Med.* **43(8)**, 1176-1188 (2007).
3. Dillard, C.J., Gavino, V.C., and Tappel, A.L. Relative antioxidant effectiveness of α -tocopherol and γ -tocopherol in iron-loaded rats. *J. Nutr.* **113(11)**, 2266-2273 (1983).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM