

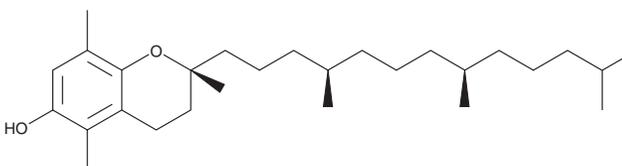
# PRODUCT INFORMATION



## (±)-β-Tocopherol

Item No. 26758

**CAS Registry No.:** 148-03-8  
**Formal Name:** (2R)-rel-3,4-dihydro-2,5,8-trimethyl-2-[4R,8R,12-trimethyltridecyl]-2H-1-benzopyran-6-ol  
**Synonyms:** DL-β-Tocopherol, rac-β-Tocopherol  
**MF:** C<sub>28</sub>H<sub>48</sub>O<sub>2</sub>  
**FW:** 416.7  
**Purity:** ≥95%  
**Supplied as:** A solution in hexane  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Item Origin:** Synthetic



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

### Laboratory Procedures

(±)-β-Tocopherol is supplied as a solution in hexane. To change the solvent, simply evaporate the hexane under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as chloroform, ethanol, and methanol purged with an inert gas can be used.

### Description

(±)-β-Tocopherol is a lipid-soluble form of vitamin E with antioxidant activity.<sup>1</sup> It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals with an EC<sub>50</sub> value of 68.2 μM.<sup>2</sup> (±)-β-Tocopherol (100 μM) inhibits LPS-induced COX-2 gene expression in mouse RAW 264.7 macrophage cells.<sup>3</sup> Unlike (±)-α-tocopherol (Item No. 25985), (±)-β-tocopherol does not inhibit smooth muscle cell proliferation, decrease PKC activity, increase phosphoprotein phosphatase 2A (PP2A) activity, or modify expression of the α-tropomyosin gene.<sup>1</sup>

### References

1. Brigelius-Flohé, R. and Traber, M.G. Vitamin E: Function and metabolism. *FASEB J.* **13(10)**, 1145-1155 (1999).
2. Chen, C.-R., Chao, L.-H., Pan, M.-H., *et al.* Tocopherols and triterpenoids from *Sida acuta*. *J. Chin. Chem. Soc.* **54(1)**, 41-45 (2007).
3. Murakami, Y., Kawata, A., Koh, T., *et al.* Inhibitory effects of tocopherols on expression of the cyclooxygenase-2 gene in RAW264.7 cells stimulated by lipopolysaccharide, tumor necrosis factor-α or *Porphyromonas gingivalis* fimbriae. *In Vivo* **27(4)**, 451-458 (2013).

#### 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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