



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

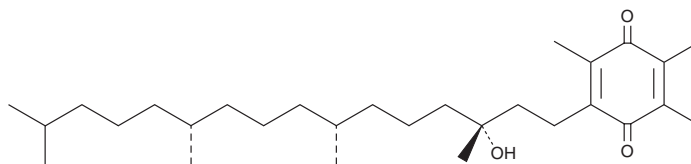
# PRODUCT INFORMATION



## D- $\alpha$ -Tocopheryl Quinone

Item No. 35365

**CAS Registry No.:** 7559-04-8  
**Formal Name:** 2-[(3R,7R,11R)-3-hydroxy-3,7,11,15-tetramethylhexadecyl]-3,5,6-trimethyl-2,5-cyclohexadiene-1,4-dione  
**Synonyms:**  $\alpha$ -Tocopherylquinone,  $\alpha$ -Tocoquinone,  $\alpha$ -TQ, Tocopherol Quinone  
**MF:** C<sub>29</sub>H<sub>50</sub>O<sub>3</sub>  
**FW:** 446.7  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 268 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

D- $\alpha$ -Tocopheryl quinone 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 D- $\alpha$ -tocopheryl quinone in these solvents is approximately 10 and 12 mg/ml, respectively.

### Description

D- $\alpha$ -Tocopheryl quinone is an active oxidative metabolite of vitamin E and an essential cofactor for mitochondrial fatty acid desaturases.<sup>1</sup> It has antioxidant activity in oxygen radical absorbance capacity (ORAC) and radical trapping assays when used at a concentration of 25  $\mu$ M and inhibits ferroptosis induced by (1S,3R)-RSL3 (Item No. 19288) in Q7 cells ( $EC_{50}$  = 0.233  $\mu$ M).<sup>3</sup> D- $\alpha$ -Tocopheryl quinone (20 mg/kg) decreases serum malondialdehyde (MDA) and blood glucose levels and restores the number and diversity of intestinal microflora in a rat model of high cholesterol and cholate diet-induced non-alcoholic steatohepatitis (NASH).<sup>2</sup>

### References

1. Infante, J.P. A function for the vitamin E metabolite alpha-tocopherol quinone as an essential enzyme cofactor for the mitochondrial fatty acid desaturases. *FEBS Lett.* **446(1)**, 1-5 (1999).
2. Sun, T., Zhang, B., Ru, Q.-J., *et al.* Tocopheryl quinone improves non-alcoholic steatohepatitis (NASH) associated dysmetabolism of glucose and lipids by upregulating the expression of glucagon-like peptide 1 (GLP-1) via restoring the balance of intestinal flora in rats. *Pharm. Biol.* **59(1)**, 723-731 (2021).
3. Hinman, A., Holst, C.R., Latham, J.C., *et al.* Vitamin E hydroquinone is an endogenous regulator of ferroptosis via redox control of 15-lipoxygenase. *PLoS One* **13(8)**, e0201369 (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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/08/2022

#### 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