



# 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) 

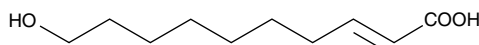
# Product Information



## 10-HDA

Item No. 10976

**CAS Registry No.:** 14113-05-4  
**Formal Name:** 10-hydroxy-2E-decenoic acid  
**MF:** C<sub>10</sub>H<sub>18</sub>O<sub>3</sub>  
**FW:** 186.3  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 209 nm



### Laboratory Procedures

For long term storage, we suggest that 10-HDA be stored as supplied at -20°C. It should be stable for at least two years. 10-HDA is supplied as a crystalline solid. A stock solution may be made by dissolving the 10-HDA in the solvent of choice. 10-HDA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 10-HDA in ethanol is approximately 20 mg/ml, and in DMSO and DMF it is approximately 30 mg/ml.

10-HDA is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure 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.

10-HDA is an unsaturated fatty acid found in royal jelly produced from the hypopharyngeal and mandibular gland secretions of honeybees.<sup>1</sup> 10-HDA has longevity-promoting effects in *C. elegans* at a concentration of 25 μM.<sup>2</sup> It down-regulates matrix metalloproteinases (MMPs) in rheumatoid arthritis synovial fibroblasts at a concentration of 1.25 nM and inhibits VEGF-induced angiogenesis in HUVECs at 500 μM.<sup>3,4</sup> 10-HDA also facilitates differentiation of neurons from neural stem/progenitor cells and promotes collagen production by skin fibroblasts at concentrations of 100 μM and 1.5 mM, respectively.<sup>5,6</sup>

### References

1. Kodai, T., Umeyashiki, K., Nakatani, T., *et al.* Compositions of royal jelly II. Organic acid glycosides and sterols of the royal jelly of honeybees (*Apis mellifera*). *Chem. Pharm. Bull.* **55(10)**, 1528-1531 (2007).
2. Honda, Y., Fujita, Y., Maruyama, H., *et al.* Lifespan-extending effects of royal jelly and its related substances on the nematode *Caenorhabditis elegans*. *PLoS One* **6(8)**, 1-10 (2011).
3. Wang, J., Ruan, J., Li, C.-Y., *et al.* Connective tissue growth factor, a regulator related with 10-hydroxy-2-decenoic acid down-regulate MMPs in rheumatoid arthritis. *Rheumatol. Int.* (2011).
4. Izuta, H., Chikaraishi, Y., Shimazawa, M., *et al.* 10-Hydroxy-2-decenoic acid, a major fatty acid from royal jelly, inhibits VEGF-induced angiogenesis in human umbilical vein endothelial cells. *Evid. Based Complement. Alternat. Med.* **6(4)**, 489-494 (2009).
5. Hattori, N., Nomoto, H., Fukumitsu, H., *et al.* Royal jelly and its unique fatty acid, 10-hydroxy-trans-2-decenoic acid, promote neurogenesis by neural stem/progenitor cells *in vitro*. *Biomed. Res.* **28(5)**, 261-266 (2007).
6. Koya-Miyata, S., Okamoto, I., Ushio, S., *et al.* Identification of a collagen production-promoting factor from an extract of royal jelly and its possible mechanism. *Biosci. Biotechnol. Biochem.* **68(4)**, 767-773 (2004).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10976](http://www.caymanchem.com/catalog/10976)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 07/23/2013

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

[custserv@caymanchem.com](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)