

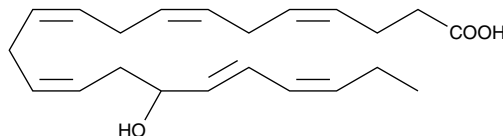
# Product Information



## (±)16-HDoHE

Item No. 33600

**CAS Registry No.:** 90780-51-1  
**Formal Name:** (±)16-hydroxy-4Z,7Z,10Z,13Z,17E,19Z-docosahexaenoic acid  
**Synonym:** 16-hydroxy Docosahexaenoic Acid  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>3</sub>  
**FW:** 344.5  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A solution in ethanol  
**UV/Vis:** λ<sub>max</sub>: 234 nm ε: 20,000



### Laboratory Procedures

For long term storage, we suggest that (±)16-HDoHE be stored as supplied at -20°C. It should be stable for at least two years.

(±)16-HDoHE 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. (±)16-HDoHE is miscible in these solvents.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of (±)16-HDoHE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)16-HDoHE in PBS (pH 7.2) is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

(±)16-HDoHE is an autoxidation product of docosahexaenoic acid (DHA) *in vitro*.<sup>1,2</sup> It is also produced from incubations of DHA in rat liver, brain, and intestinal microsomes.<sup>3-5</sup> (±)16-HDoHE is a potential marker of oxidative stress in brain and retina where DHA is an abundant polyunsaturated fatty acid.

### References

1. VanRollins, M. and Murphy, R.C. Autooxidation of docosahexaenoic acid: Analysis of ten isomers of hydroxydocosahexaenoate. *J. Lipid Res.* **25**, 507-517 (1984).
2. Reynaud, D., Thickett, C.P., and Pace-Asciak, C.R. Facile preparation and structural determination of monohydroxy derivatives of docosahexaenoic acid (HDoHE) by α-tocopherol-directed autoxidation. *Anal. Biochem.* **214**, 165-170 (1993).
3. VanRollins, M., Baker, R.C., Sprecher, H., *et al.* Oxidation of docosahexaenoic acid by rat liver microsomes. *J. Biol. Chem.* **259**, 5776-5783 (1984).
4. Yamane, M., Abe, A., and Yamane, S. High-performance liquid chromatography-thermospray mass spectrometry of epoxy polyunsaturated fatty acids and epoxyhydroxy polyunsaturated fatty acids from an incubation mixture of rat tissue homogenate. *Journal of Chromatography B* **652**, 123-136 (1994).
5. Kim, H.Y., Karanian, J.W., Shingu, T., *et al.* Stereochemical analysis of hydroxylated docosahexaenoates produced by human platelets and rat brain homogenate. *Prostaglandins* **40**, 473-491 (1990).

### Related Products

(±)5-HEPE - Item No. 32200 • (±)8-HEPE - Item No. 32340 • (±)11-HEPE - Item No. 32500 • (±)12-HEPE - Item No. 32540 • (±)15-HEPE - Item No. 32700 • (±)4-HDoHE - Item No. 33200 • (±)7-HDoHE - Item No. 33300 • (±)8-HDoHE - Item No. 33350 • (±)10-HDoHE - Item No. 33400 • (±)11-HDoHE - Item No. 33450 • (±)13-HDoHE - Item No. 33500 • (±)14-HDoHE - Item No. 33550 • (±)17-HDoHE - Item No. 33650 • (±)20-HDoHE - Item No. 33750 • (±)5-HETE - Item No. 34210 • (±)8-HETE - Item No. 34340 • (±)9-HETE - Item No. 34400 • (±)11-HETE - Item No. 34500 • (±)12-HETE - Item No. 34550 • (±)15-HETE - Item No. 34700 • (±)9-HODE - Item No. 38400 • (±)13-HODE - Item No. 38600 • Docosahexaenoic

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

### MATERIAL 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, 03/29/2011

## 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

### Web

www.caymanchem.com