

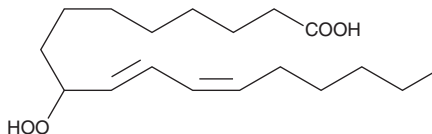
# Product Information



## (±)9-HpODE

Item No. 10705

**CAS Registry No.:** 5502-91-0  
**Formal Name:** (±)9-hydroperoxy-10E,12Z-octadecadienoic acid  
**MF:** C<sub>18</sub>H<sub>32</sub>O<sub>4</sub>  
**FW:** 312.4  
**Purity:** ≥98%  
**Stability:** ≥1 year at -80°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

For long term storage, we suggest that (±)9-HpODE be stored as supplied at -80°C. It should be stable for at least one year.

(±)9-HpODE 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 (±)9-HpODE in these solvents is approximately 50 mg/ml.

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 (±)9-HpODE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)9-HpODE in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

(±)9-HpODE is a racemic mixture of the fatty acid hydroperoxide product (9(S)-HpODE) formed from lipoxygenase action on linoleic acid. It shows antimicrobial activity against various fungal and bacterial pathogens and thus may play a role in plant defense.<sup>1</sup> In mammalian species, monocyte-induced oxidation of LDL generates significant amounts of esterified 9-HpODE, which is rapidly reduced to 9-HODE.<sup>2</sup>

### References

- Sucharitha, A. and Devi, P.U.M. Antimicrobial properties of chilli lipoxygenase products. *African Journal of Microbiology Research* **4(9)**, 748-752 (2010).
- Folcik, V.A. and Cathcart, M.K. Predominance of esterified hydroperoxy-linoleic acid in human monocyte-oxidized LDL. *J. Lipid Res.* **35**, 1570-1582 (1994).

### Related Products

(±)9-HODE - Item No. 38400 • 9(R)-HODE - Item No. 38405 • 9(S)-HODE - Item No. 38410 • 9(S)-HpODE - Item No. 48410 • 13(S)-HpODE - Item No. 48610

**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.

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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.

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