

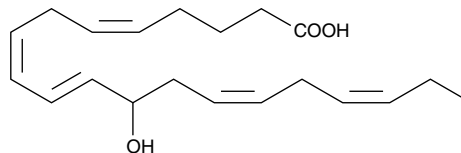
# Product Information



## (±)12-HEPE

Item No. 32540

**CAS Registry No.:** 81187-21-5  
**Formal Name:** (±)-12-hydroxy-5Z,8Z,10E,14Z,17Z-eicosapentaenoic acid  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>3</sub>  
**FW:** 318.5  
**Purity:** ≥ 98%  
**Stability:** ≥ 1 year at -20°C  
**Supplied as:** A solution in ethanol  
**UV/Vis.:** λ<sub>max</sub>: 237 nm ε: 23,000



### Laboratory Procedures

For long term storage, we suggest that (±)12-HEPE be stored as supplied at -20°C. It should be stable for at least one year.

(±)12-HEPE 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 (±)12-HEPE 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 (±)12-HEPE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)12-HEPE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

(±)12-HEPE is produced by non-enzymatic oxidation of EPA. It contains equal amounts of 12(S)-HEPE and 12(R)-HEPE. The biological activity of (±)12-HEPE is likely mediated by one of the individual isomers, most commonly the 12(S) isomer in mammalian systems. 12-HEPE inhibits platelet aggregation with the same potency as 12-HETE, exhibiting IC<sub>50</sub> values of 24 and 25 μM, respectively.<sup>1</sup> These compounds are also equipotent as inhibitors of U-46619-induced contraction of rat aorta (IC<sub>50</sub>s = 8.6-8.8 μM).<sup>2</sup>

### References

1. Takenaga, M., Hirai, A., Terano, T., *et al.* Comparison of the *in vitro* effect of eicosapentaenoic acid (EPA)-derived lipoxygenase metabolites on human platelet function with those of arachidonic acid. *Thromb. Res.* **37**, 373-384 (1986).
2. Karanian, J.W., Kim, H.Y., and Salem, N., Jr. Inhibitory effects of n-6 and n-3 hydroxy fatty acids on thromboxane (U46619)-induced smooth muscle contraction. *J. Pharmacol. Exp. Ther.* **270**, 1105-1109 (1994).

### Related Products

12(R)-HEPE - Item No. 32545 • x12(S)-HEPE - Item No. 32550 • Eicosapentaenoic Acid - Item No. 90110

**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

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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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