

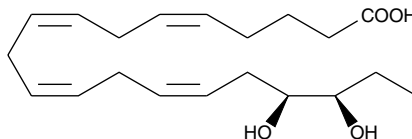
Product Information



(±)17,18-DiHETE

Item No. 10006999

Formal Name: 17,18-dihydroxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid
Synonym: (±)17,18-dihydroxy-eicosa-5,8,11,14-Tetraenoic Acid
MF: C₂₀H₃₂O₄
FW: 336.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that (±)17,18-DiHETE be stored as supplied at -20°C. It should be stable for at least two years.

(±)17,18-DiHETE 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 (±)17,18-DiHETE in these solvents is approximately 30 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 (±)17,18-DiHETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)17,18-DiHETE in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Eicosapentaenoic acid (EPA) is an ω-3 fatty acid abundantly available in marine organisms. 17,18-DiHETE is one of the major metabolites produced when EPA is incubated with various rat tissue homogenates or cynomolgus monkey seminal vesicles.¹⁻⁴ The route of production of 17,18-DiHETE likely proceeds through cytochrome P450-catalyzed epoxidation at the ω-3 double bond followed by conversion to the vicinal diols by epoxide hydrolase. EPA is also metabolized preferentially by *Gaeumannomyces graminis* to 17,18-DiHETE.⁵

References

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3. Oliw, E.H. Biosynthesis of 18(RD)-hydroxyeicosatetraenoic acid from arachidonic acid by microsomes of monkey seminal vesicles. Some properties of a novel fatty acid ω3-hydroxylase and ω3-epoxygenase. *J. Biol. Chem.* **264**(30), 17845-17853 (1989).
4. Oliw, E.H. and Sprecher, H.W. Metabolism of polyunsaturated (n-3) fatty acids by monkey seminal vesicles: Isolation and biosynthesis of ω-3 epoxides. *Biochim. Biophys. Acta* **1086**, 287-294 (1991).
5. Brodowsky, I.D. and Oliw, E.H. Metabolism of 18:2(n-3), 20:4(n-6), and 20:5(n-3) by the fungus *Gaeumannomyces graminis*: Identification of metabolites formed by 8-hydroxylation and by ω2 and ω3 oxygenation. *Biochim. Biophys. Acta* **1124**, 59-65 (1992).

Related Products

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

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