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# Produktinformation

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## Lieferung & Zahlungsart

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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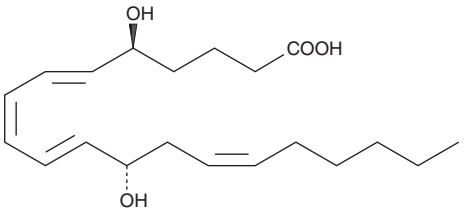
# PRODUCT INFORMATION

## 5(S),12(S)-DiHETE

*Item No. 35260*

**CAS Registry No.:** 79056-01-2
**Formal Name:** 5S,12S-dihydroxy-6E,8Z,10E,14Z-eicosatetraenoic acid
**MF:** $C_{20}H_{32}O_4$
**FW:** 336.5
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 268 nm
**Supplied as:** A solution in ethanol
**Storage:** -20°C
**Stability:** ≥1 year
**Special Conditions:** Oxygen and light sensitive




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

5(S),12(S)-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 5(S),12(S)-DiHETE 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 5(S),12(S)-DiHETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 5(S),12(S)-DiHETE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

5(S),12(S)-DiHETE is a natural bioactive lipid derived from arachidonic acid (AA; Item No. 10006607). It is synthesized by glycogen-induced rabbit peritoneal polymorphonuclear leukocytes (PMNLs) incubated with AA.[1] 5(S),12(S)-DiHETE can be produced by successive oxygenation of AA by 5-lipoxygenase (5-LO) in platelets and 12-LO in leukocytes.[2] It can also be synthesized from 12(S)-HETE by 5-LO, in the presence of 5-LO activating protein (FLAP), activated with calcium ionophore.[3] 5(S),12(S)-DiHETE is an epimer of leukotriene $B_4$ (Item No. 20110) that is weakly chemotactic for PMNL.[4]

### References


1. Borgeat, P. and Samuelsson, B. Metabolism of arachidonic acid in polymorphonuclear leukocytes. *J. Biol. Chem.* **254(16)**, 7865-7869 (1979).
2. Borgeat, P., Fruteau De Laclos, B., Picard, S., *et al.* Studies on the mechanism of formation of the 5S,12S-dihydroxy-6,8,10,14 (E,Z,E,Z)-eicosatetraenoic acid in leukocytes. *Prostaglandins* **23(5)**, 713-724 (1982).
3. Mancini, J.A., Waterman, H., and Riendeau, D. Cellular oxygenation of 12-hydroxyeicosatetraenoic acid and 15-hydroxyeicosatetraenoic acid by 5-lipoxygenase is stimulated by 5-lipoxygenase-activating protein. *J. Biol. Chem.* **273(49)**, 32842-32847 (1998).
4. Lee, T.H., Mencia-Huerta, J.M., Shih, C., *et al.* Characterization and biologic properties of 5,12-dihydroxy derivatives of eicosapentaenoic acid, including leukotriene $B_5$ and the double lipoxygenase product. *J. Biol. Chem.* **259(4)**, 2383-2389 (1984).





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