

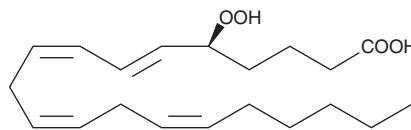
# PRODUCT INFORMATION



## 5(S)-HpETE

Item No. 44230

**CAS Registry No.:** 71774-08-8  
**Formal Name:** 5S-hydroperoxy-6E,8Z,11Z,14Z-eicosatetraenoic acid  
**MF:** C<sub>20</sub>H<sub>32</sub>O<sub>4</sub>  
**FW:** 336.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 236 nm  
**Supplied as:** A 250 µg/ml solution in ethanol  
**Storage:** -80°C  
**Stability:** ≥2 years  
**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)-HpETE is supplied as a solution in ethanol. To change the solvent, 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. 5(S)-HpETE 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 5(S)-HpETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 5(S)-HpETE in PBS, pH 7.2, is approximately 0.8 mg/ml. For greater aqueous solubility, 5(S)-HpETE can be directly dissolved in 0.1 M Na<sub>2</sub>CO<sub>3</sub> (solubility of 2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. 5(S)-HpETE is highly unstable in aqueous solutions. We recommend that aqueous solutions of 5(S)-HpETE be kept on ice and used as soon as possible, preferably within 15 minutes.

### Description

5(S)-HpETE is a monohydroperoxy polyunsaturated fatty acid (PUFA) produced by the action of 5(S)-lipoxygenase on arachidonic acid. 5(S)-HpETE is metabolized to leukotriene A<sub>4</sub> (LTA<sub>4</sub>), a key intermediate in the formation of LTs.<sup>1</sup> Alternatively, 5(S)-HpETE is reduced to 5(S)-HETE by either a peroxidase or nonenzymatic reaction. 5(S)-HpETE (1 µM) mediates the induction of the proto-oncogene *c-fos* in TNF-stimulated TA1 cells.<sup>2</sup>

### References

1. Shimizu, T., Rådmark, O., Samuelsson, B. Enzyme with dual lipoxygenase activities catalyzes leukotriene A<sub>4</sub> synthesis from arachidonic acid. *Proc. Natl. Acad. Sci. USA* **81**, 689-693 (1984).
2. Haliday, E.M., Ramesha, C.S., Ringold, G. TNF induces *c-fos* via a novel pathway requiring conversion of arachidonic acid to a lipoxygenase metabolite. *EMBO J.* **10**, 109-115 (1991).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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