

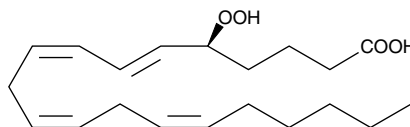
# Product Information



## 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%  
**Stability:** ≥6 months at -80°C  
**Supplied as:** A solution in ethanol  
**UV/Vis:** λ<sub>max</sub>: 236 nm ε: 27,000  
**Misc:** Oxygen and light sensitive



### Laboratory Procedures

For long term storage, we suggest that 5(S)-HpETE be stored as supplied at -80°C. It should be stable for at least six months.

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 or dimethyl formamide purged with an inert gas can be used. The solubility of 5(S)-HpETE in these solvents is approximately 50 mg/ml. 5(S)-HpETE will be stable in these solvents for at least three months if stored at -80°C.

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, evaporate the ethanol under a gentle stream of nitrogen and dissolve the neat oil in the buffer of choice. The solubility of 5(S)-HpETE in PBS, pH 7.2, is approximately 1 mg/ml. 5(S)-HpETE is highly unstable in an aqueous solution. We recommend an aqueous solution of 5(S)-HpETE be used within fifteen minutes.

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).

### 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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### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

[custserv@caymanchem.com](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)