

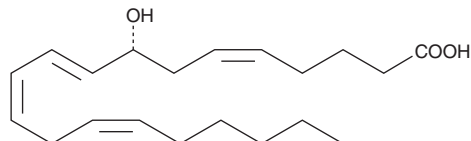
# PRODUCT INFORMATION



## 8(R)-HETE

Item No. 34350

CAS Registry No.: 105500-09-2  
Formal Name: 8R-hydroxy-5Z,9E,11Z,14Z-eicosatetraenoic acid  
MF:  $C_{20}H_{32}O_3$   
FW: 320.5  
Purity:  $\geq 98\%$   
Stability:  $\geq 1$  year at  $-20^{\circ}C$   
Supplied as: A solution in ethanol  
Special Conditions: Oxygen and light sensitive



### Laboratory Procedures

For long term storage, we suggest that 8(R)-HETE be stored as supplied at  $-20^{\circ}C$ . It should be stable for at least one year.

8(R)-HETE 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 8(R)-HETE 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 8(R)-HETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 8(R)-HETE in PBS (pH 7.2) is approximately 1 mg/ml. Store aqueous solutions of 8(R)-HETE on ice and use within 12 hours of preparation.

### Description

8(R)-HETE is a metabolite of arachidonic acid by the 8-lipoxygenase pathway in marine organisms.<sup>1,2</sup> It induces maturation of starfish oocytes at a concentration of  $0.071 \mu M$ .<sup>1</sup> This activity is negligible in the 8(S)-enantiomer.<sup>1</sup> The precursor of 8(R)-HETE, 8(R)-HpETE, is the putative intermediate in the biosynthesis of marine prostaglandins via the allene oxide synthase pathway.<sup>2</sup> Stereochemical assignment of the (R) enantiomer is based on comparison of chiral HPLC retention times to published results.<sup>3</sup>

### References

1. Meijer, L., Brash, A.R., Bryant, R.W., *et al.* Stereospecific induction of starfish oocyte maturation by (8R)-hydroxyeicosatetraenoic acid. *J. Biol. Chem.* **261**, 17040-17047 (1986).
2. Brash, A.R., Baertschi, S.W., Ingram, C.D., *et al.* On non-cyclooxygenase prostaglandin synthesis in the sea whip coral, *Plexaura Homomalla*: an 8(R)-lipoxygenase pathway leads to formation of an  $\alpha$ -ketol and a racemic prostanoid. *J. Biol. Chem.* **262**, 15829-15839 (1987).
3. Schneider, C., Yu, Z., Boeglin, W.E., *et al.* Enantiomeric separation of hydroxy and hydroperoxy eicosanoids by chiral column chromatography. *Method. Enzymol.* **433**, 145-157 (2015).

#### 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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