

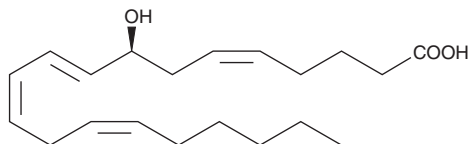
PRODUCT INFORMATION



8(S)-HETE

Item No. 34360

CAS Registry No.: 98462-03-4
Formal Name: 8S-hydroxy-5Z,9E,11Z,14Z-eicosatetraenoic acid
MF: $C_{20}H_{32}O_3$
FW: 320.5
Purity: $\geq 98\%$
Stability: ≥ 1 year at $-20^{\circ}C$
Supplied as: A solution in ethanol
Special Conditions: Oxygen and light sensitive
UV/Vis.: λ_{max} : 237 nm



Laboratory Procedures

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

8(S)-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. 8(S)-HETE 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 8(S)-HETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 8(S)-HETE in PBS (pH 7.2) is approximately 0.8 mg/ml. For greater aqueous solubility, 8(S)-HETE can be directly dissolved in 0.1 M Na_2CO_3 (2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. Store aqueous solutions of 8(S)-HETE on ice and use within 12 hours of preparation. Although the aqueous solutions of 8(S)-HETE may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

8(S)-HETE is a major lipoxygenase product in PMA-treated mouse epidermis.¹ It activates murine keratinocyte protein kinase C with an IC_{50} value of $100 \mu M$.² 8(S)-HETE also activates peroxisome proliferator-activated receptor α selectively at concentrations as low as $0.3 \mu M$.³ Stereochemical assignment of the (S) enantiomer is based on comparison of chiral HPLC retention times to published results.⁴

References

1. Hughes, M.A. and Brash, A.R. Investigation of the mechanism of biosynthesis of 8-hydroxyeicosatetraenoic acid in mouse skin. *Biochim. Biophys. Acta* **1081**, 347-354 (1991).
2. Lo, H.-H., Bartek, G.A., and Fischer, S.M. *In vitro* activation of mouse skin protein kinase C by fatty acids and their hydroxylated metabolites. *Lipids* **29**, 547-553 (1994).
3. Yu, K., Bayona, W., Kallen, C.B., *et al.* Differential activation of peroxisome proliferator-activated receptors by eicosanoids. *J. Biol. Chem.* **270**, 23975-23983 (1995).
4. Schneider, C., Yu, Z., Boegli, 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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