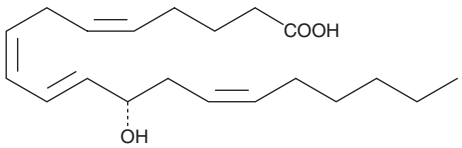
PRODUCT INFORMATION

12(S)-HETE

Item No. 34570

CAS Registry No.: 54397-83-0
Formal Name: 12S-hydroxy-5Z,8Z,10E,14Z-eicosatetraenoic acid
Synonym: 12(S)-Hydroxyeicosatetraenoic Acid
MF: $C_{20}H_{32}O_3$
FW: 320.5
Purity: ≥98%
UV/Vis.: λ_{max}: 237 nm ε: 27,000
Supplied as: A solution in ethanol
Storage: -20°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

12(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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. 12(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 12(S)-HETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 12(S)-HETE in PBS, pH 7.2, is approximately 0.8 mg/ml. For greater aqueous solubility, 12(S)-HETE can be directly dissolved in 0.1 M Na_2CO_3 (solubility of 2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Description

12(S)-HETE is the predominant lipoxygenase product of mammalian platelets.[1] It enhances tumor cell adhesion to endothelial cells, fibronectin, and the subendothelial matrix at 0.1 µM.[2,3]

References

1. Hamberg, M. and Samuelsson, B. Prostaglandin endoperoxides. Novel transformations of arachidonic acid in human platelets. *Proc. Natl. Acad. Sci. USA* **71**, 3400-3404 (1974).
2. Grossi, I.M., Fitzgerald, L.A., Umbarger, L.A., *et al*. Bidirectional control of membrane expression and/or activation of the tumor cell IRGpIIb/IIIa receptor and tumor cell adhesion by lipoxygenase products of arachidonic acid and linoleic acid. *Cancer Res.* **49**, 1029-1037 (1989).
3. Honn, K.V., Nelson, K.K., Renaud, C., *et al*. Fatty acid modulation of tumor cell adhesion to microvessel endothelium and experimental metastasis. *Prostaglandins* **44**, 413-429 (1992).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM