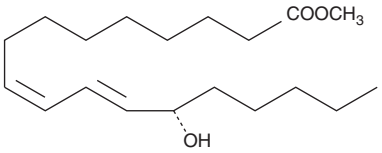
PRODUCT INFORMATION

13(S)-HODE methyl ester

Item No. 10008875

CAS Registry No.:	109837-85-6
Formal Name:	13S-hydroxy-9Z,11E-octadecadienoic acid, methyl ester
MF:	$C_{19}H_{34}O_3$
FW:	310.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 234 nm
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

13(S)-HODE methyl ester 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 13(S)-HODE methyl ester 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 13(S)-HODE methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13(S)-HODE methyl ester in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

13(S)-hydroxyoctadecadienoic acid (13(S)-HODE) is a 15-lipoxygenase metabolite of linoleic acid produced in endothelial cells, leukocytes, and tumor cells. The biological effects of 13(S)-HODE include inhibition of tumor cell adhesion to the endothelium at concentrations around 1 µM,[1,2] and down regulation of IRGpIIb/IIIa receptor expression.[3] 13(S)-HODE methyl ester is a neutral, more lipophilic form of the free acid that has been used as an analytical standard for 13(S)-HODE.

References

1. Buchanan, M.R., Haas, T.A., Lagarde, M., *et al.* 13-Hydroxyoctadecadienoic acid is the vessel wall chemorepellant factor, LOX. *J. Biol. Chem.* **260**, 16056-16059 (1985).
2. 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).
3. 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).

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