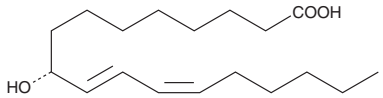
PRODUCT INFORMATION

9(R)-HODE

Item No. 38405

CAS Registry No.: 10075-11-3
Formal Name: 9R-hydroxy-10E,12Z-octadecadienoic acid
Synonym: 9(R)-Hydroxyoctadecadienoic Acid
MF: $C_{18}H_{32}O_3$
FW: 296.5
Purity: ≥98%
UV/Vis.: λ_{max}: 234 nm ε: 23,000
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

9(R)-HODE 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 9(R)-HODE in these solvents is approximately 50 mg/ml.

9(R)-HODE is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 9(R)-HODE should be diluted with the aqueous buffer of choice. The solubility of 9(R)-HODE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

9(R)-HODE is a monohydroxy fatty acid and metabolite of linoleic acid (Item Nos. 90150 | 90150.1 | 21909).[1,2] It is formed from linoleic acid by COX and lipoxygenase (LO).[3,4] 9(R)-HODE induces chemotaxis, increases the levels of chemokine (C-C motif) receptor 9 (CCR9) and chemokine (C-X-C motif) receptor 4 (CXCR4), and inhibits IL-6 release in primary human monocytes.[5] It inhibits CD3α- and CD28-induced proliferation of isolated human peripheral blood lymphocytes when used at a concentration of 25 µg/ml.[6]

References

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2. Camacho, M., Godessart, N., Anton, R., *et al.* Interleukin-1 enhances the ability of cultured human umbilical vein endothelial cells to oxidize linoleic acid. *J. Biol. Chem.* **270(29)**, 17279-17286 (1995).
3. Hamberg, M. Stereochemistry of oxygenation of linoleic acid catalyzed by prostaglandin-endoperoxide H synthase-2. *Arch. Biochem. Biophys.* **349(2)**, 376-380 (1998).
4. Kühn, H., Belkner, J., and Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191(1)**, 221-227 (1990).
5. Rolin, J., Vego, H., and Maghazachi, A.A. Oxidized lipids and lysophosphatidylcholine induce the chemotaxis, up-regulate the expression of CCR9 and CXCR4 and abrogate the release of IL-6 in human monocytes. *Toxins (Basel)* **6(9)**, 2840-2856 (2014).
6. Wefers, C., Duiveman-de Boer, T., Zusterzeel, P.L.M., *et al.* Different lipid regulation in ovarian cancer: Inhibition of the immune system. *Int. J. Mol. Sci.* **19(1)**, 273 (2018).

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