

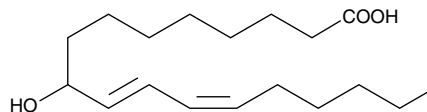
Product Information



(±)9-HODE

Item No. 38400

CAS Registry No.:	98524-19-7
Formal Name:	(±)-9-hydroxy-10E,12Z-octadecadienoic acid
MF:	C ₁₈ H ₃₂ O ₃
FW:	296.5
Purity:	≥98%
Stability:	≥1 year at -20°C
Supplied as:	A solution in ethanol
UV/Vis:	λ _{max} : 234 nm ε: 23,000



Laboratory Procedures

For long term storage, we suggest that (±)9-HODE be stored as supplied at -20°C. It should be stable for at least one year.

(±)9-HODE is supplied as a solution in ethanol. To change the solvent, evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as dimethyl formamide or DMSO purged with an inert gas can be used. The solubility of (±)9-HODE 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 (±)9-HODE is needed, the ethanol can be evaporated under a stream of nitrogen and the neat oil dissolved in the buffer of choice. The solubility of (±)9-HODE in PBS (pH 7.2) is approximately 1 mg/ml. More concentrated aqueous solutions of (±)9-HODE can be prepared using basic buffers (pH > 8.0 and ionic strength ≥0.1 M). Add 400 µl of cold buffer (0°C) per mg of (±)9-HODE and vortex vigorously until completely dissolved. We do not recommend storing the aqueous solution for more than one day.

(±)9-HODE is one of the two racemic monohydroxy fatty acids resulting from the non-enzymatic oxidation of linoleic acid. Approximately equal proportions of both isomers are found in mitochondrial and plasma membranes of rabbit reticulocytes.^{1,2} Oxidized LDL contains significant amounts of esterified 9- and 13-HpODEs and HODEs.^{3,4}

References

1. Kühn, H., Belkner, J., Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191**, 221-227 (1990).
2. Kühn, H., Belkner, J., Wiesner, R. Metabolism of polyenoic fatty acids by rabbit reticulocytes. Intracellular action of the erythroid lipoxygenase on membrane lipids. *Biomed. Biochim. Acta* **49**, S25-S30 (1990).
3. Folcik, V.A. and Cathcart, M.K. Predominance of esterified hydroperoxy-linoleic acid in human monocyte-oxidized LDL. *J. Lipid Res.* **35**, 1570-1582 (1994).
4. Ku, G., Thomas, C.E., Akeson, A.L., *et al.* Induction of interleukin 1β expression from human peripheral blood monocyte-derived macrophages by 9-hydroxyoctadecadienoic acid. *J. Biol. Chem.* **267**, 14183-14188 (1992).

Related Product

(±)9-HpODE - Item No. 10705

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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