

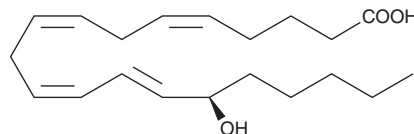
PRODUCT INFORMATION



15(R)-HETE

Item No. 34710

CAS Registry No.: 83603-31-0
Formal Name: 15R-hydroxy-5Z,8Z,11Z,13E-eicosatetraenoic acid
Synonym: 15(R)-Hydroxyeicosatetraenoic Acid
MF: C₂₀H₃₂O₃
FW: 320.5
Purity: ≥98%
UV/Vis.: λ_{max}: 236 nm
Supplied as: A 100 µg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 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

15(R)-HETE is supplied as a solution in ethanol. A stock solution may be made by dissolving the 15(R)-HETE in the solvent of choice, which should be purged with an inert gas. 15(R)-HETE is soluble in the organic solvent 0.1 M sodium carbonate at a concentration of approximately 2 mg/ml.

To change the solvent, simply evaporate the 15(R)-HETE 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. 15(R)-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 15(R)-HETE is needed, it can be prepared by evaporating the 15(R)-HETE and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R)-HETE in PBS (pH 7.2) is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

15(R)-HETE is a monohydroxy fatty acid. It is produced by aspirin-acetylated COX-2 from arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) and converted into the specialized pro-resolving mediator 15(R)-lipoxin A₄ (Item No. 90415) and 15(R)-lipoxin B₄ in a transcellular process via 5-lipoxygenase (5-LO).¹⁻⁵ It is also produced by the cytochrome P450 (CYP) isoform CYP2C9.^{1,2,4,6} 15(R)-HETE can also be formed from arachidonic acid by COX-1 in stimulated human mast cells and accumulates because, unlike 15(S)-HETE (Item No. 34720), it is not converted to 15-KETE (15-OxoETE; Item No. 34730) by 15-hydroxyprostaglandin dehydrogenase (15-PGDH).⁷ It is an agonist of PPARβ/δ, inducing expression of a PPARβ/δ target gene in a reporter assay using NIH3T3 cells.⁸

References

1. Lecomte, M., Laneuville, O., Ji, C., et al. *J. Biol. Chem.* **269**(18), 13207-13215 (1994).
2. Capdevila, J.H., Morrow, J.D., Belosludtsev, Y.Y., et al. *Biochemistry* **34**, 3325-3337 (1995).
3. Clària, J. and Serhan, C.N. *PNAS USA* **92**(21), 9475-9479 (1995).
4. Schneider, C. and Brash, A.R. *J. Biol. Chem.* **275**, 4743-4746 (2000).
5. Serhan, C.N., Hamberg, M., Samuelsson, B., et al. *Proc. Nat. Acad. Sci. USA* **83**(7), 1983-1987 (1986).
6. Bylund, J., Ericsson, J., and Oliw, E.H. *Anal. Biochem.* **265**(1), 55-68 (1998).
7. Johnsson, A.-K., Rönnerberg, E., Fuchs, D., et al. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids.* **1866**(5), 158886 (2021).
8. Naruhn, S., Meissner, W., Adhikary, T., et al. *Mol. Pharmacol.* **77**(2), 171-184 (2010).

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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