

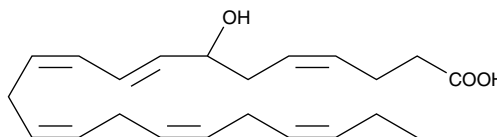
Product Information



(±)7-HDHA

Item No. 33300

CAS Registry No.: 90780-55-5
Formal Name: (±)7-hydroxy-4Z,8E,10Z,13Z,16Z,19Z-docosahexaenoic acid
Synonyms: 7-hydroxy Docosahexaenoic Acid, (±)7-HDoHE
MF: C₂₂H₃₂O₃
FW: 344.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in ethanol
UV/Vis: λ_{max}: 237 nm ε: 28,000



Laboratory Procedures

For long term storage, we suggest that (±)7-HDHA be stored as supplied at -20°C. It should be stable for at least two years.

(±)7-HDHA 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. (±)7-HDHA 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 (±)7-HDHA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)7-HDHA in PBS (pH 7.2) is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

(±)7-HDHA is an autooxidation product of docosahexaenoic acid (DHA) *in vitro*.^{1,2} It is also produced from incubations of DHA in rat liver, brain, and intestinal microsomes.³⁻⁵ Enzymatic transformation of DHA by RBL-1 cells also produces 7-HDHA.^{6,7} However, the enzymatic product is most likely the S-isomer. (±)7-HDHA is a potential marker of oxidative stress in brain and retina where DHA is an abundant polyunsaturated fatty acid.

References

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