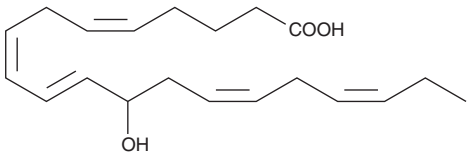
PRODUCT INFORMATION

(±)12-HEPE

Item No. 32540

CAS Registry No.: 81187-21-5
Formal Name: (±)-12-hydroxy-5Z,8Z,10E,14Z,17Z-eicosapentaenoic acid
MF: $C_{20}H_{30}O_3$
FW: 318.5
Purity: ≥ 98%
UV/Vis.: λ_{max}: 237 nm
Supplied as: A 100 µg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(±)12-HEPE 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. (±)12-HEPE 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 (±)12-HEPE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)12-HEPE in PBS (pH 7.2) is approximately 0.8 mg/ml. For greater aqueous solubility, (±)12-HEPE can be directly disolved in 0.1M Na_2CO_3 (2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Description

(±)12-HEPE is produced by non-enzymatic oxidation of EPA. It contains equal amounts of 12(S)-HEPE and 12(R)-HEPE. The biological activity of (±)12-HEPE is likely mediated by one of the individual isomers, most commonly the 12(S) isomer in mammalian systems. 12-HEPE inhibits platelet aggregation with the same potency as 12-HETE, exhibiting IC_{50} values of 24 and 25 µM, respectively.[1] These compounds are also equipotent as inhibitors of U-46619-induced contraction of rat aorta (IC_{50}s = 8.6-8.8 µM).[2]

References

1. Takenaga, M., Hirai, A., Terano, T., *et al.* Comparison of the *in vitro* effect of eicosapentaenoic acid (EPA)-derived lipoxygenase metabolites on human platelet function with those of arachidonic acid. *Thromb. Res.* **37,** 373-384 (1986).
2. Karanian, J.W., Kim, H.Y., and Salem, N., Jr. Inhibitory effects of n-6 and n-3 hydroxy fatty acids on thromboxane (U46619)-induced smooth muscle contraction. *J. Pharmacol. Exp. Ther.* **270,** 1105-1109 (1994).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM