

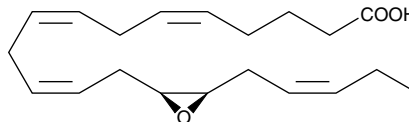
Product Information



14(15)-EpETE

Item No. 10173

CAS Registry No.: 131339-24-7
Formal Name: (±)14(15)-epoxy-5Z,8Z,11Z,17Z-eicosatetraenoic acid
Synonyms: 14,15 EEQ, 14(15)-epoxy Eicosatetraenoic Acid
MF: C₂₀H₃₀O₃
FW: 318.5
Purity: ≥90%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



NOTE: Relative stereochemistry shown in chemical structure

Laboratory Procedures

For long term storage, we suggest that 14(15)-EpETE be stored as supplied at -20°C. It should be stable for at least one year.

14(15)-EpETE 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 14(15)-EpETE 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 14(15)-EpETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 14(15)-EpETE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

EDHF (endothelium-derived hyperpolarizing factor) is an unidentified mediator released from vascular endothelial cells in response to acetylcholine and bradykinin which is distinct from the NOS- (NO) and COX-derived (prostacyclin) vasodilators.^{1,2} CYP450 metabolism of PUFAs, produces epoxides such as 14(15)-EpETE which are prime candidates for the actual active mediator.³ However, the CYP450 metabolites of EPA and DHA have been little studied relative to arachidonate epoxygenase metabolites. 14(15)-EpETE is the ω-3 homolog of 14(15)-EpETE, derived *via* epoxidation of the 14,15-double bond of EPA. The EDHF activity of 14(15)-EpETE has not yet been determined.

References

1. Chataigneau, T., Féléto, M., Duhault, J., *et al.* Epoxyeicosatrienoic acids, potassium channel blockers and endothelium-dependent hyperpolarization in the guinea-pig carotid artery. *Br. J. Pharmacol.* **123**, 574-580 (1998).
2. Fisslthaler, B., Popp, R., Kiss, L., *et al.* Cytochrome P450 2C is an EDHF synthase in coronary arteries. *Nature* **401**, 493-497 (1999).
3. Baron, A., Frieden, M., and Béný, J.-L. Epoxyeicosatrienoic acids activate a high-conductance, Ca²⁺-dependent K⁺ channel on pig coronary artery endothelial cells. *J. Physiol.* **504**, 537-543 (1997).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10173

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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