

# 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: C<sub>20</sub>H<sub>30</sub>O<sub>3</sub>

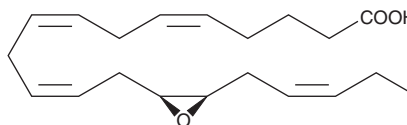
FW: 318.5

Purity: ≥90%

Supplied as: A solution in ethanol

Storage: -20°C

Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly



NOTE: Relative stereochemistry shown in chemical structure

### Laboratory Procedures

(±)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.

### Description

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- (nitric oxide) and COX-derived (prostacyclin) vasodilators.<sup>1,2</sup> CYP450 metabolism of PUFAs, produces epoxides such as (±)14(15)-EpETE (Item No. 50651) which are prime candidates for the actual active mediator.<sup>3</sup> However, the CYP450 metabolites of eicosapentaenoic acid (EPA; Item No. 90110) and docosahexaenoic acid (DHA; Item No. 90310) 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., Félétou, 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 Bény, J.-L. Epoxyeicosatrienoic acids activate a high-conductance, Ca<sup>2+</sup>-dependent K<sup>+</sup> channel on pig coronary artery endothelial cells. *J. Physiol.* **504**, 537-543 (1997).

#### 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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