

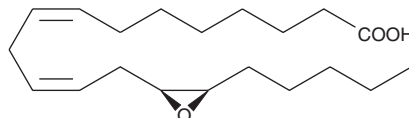
# PRODUCT INFORMATION



## (±)14(15)-EpEDE

Item No. 10007527

**CAS Registry No.:** 351533-80-7  
**Formal Name:** (±)13-(3-pentyl-2-oxiranyl)-8Z,11Z-tridecadienoic acid  
**Synonym:** (±)14,15-Epoxyeicosadienoic Acid  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>3</sub>  
**FW:** 322.5  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**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)-EpEDE is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)14(15)-EpEDE in the solvent of choice. (±)14(15)-EpEDE is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of (±)14(15)-EpEDE in these solvents is approximately 20 mg/ml.

(±)14(15)-EpEDE is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)14(15)-EpEDE should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (±)14(15)-EpEDE has a solubility of approximately 0.5 mg in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

8,11,14-Eicosatrienoic acid, also known as dihomo- $\gamma$ -linolenic acid (Item No. 90230), is a polyunsaturated fatty acid (PUFA) produced from  $\gamma$ -linolenic acid by the action of fatty acid elongases. It can be metabolized by the cyclooxygenase pathway to produce 1-series prostaglandins (PGs) (e.g., PGE<sub>1</sub>).<sup>1</sup> (±)14(15)-EpEDE is an EpEDE acid formed from 8,11,14-eicosatrienoic acid. This monoepoxide can be generated from the PUFA, *in vitro*, by the action of a strong oxidizing agent.<sup>2</sup> Alternatively, this compound may be produced, *in vivo*, by epoxidation of the PUFA by cytochrome P450 epoxygenases. The biological properties of this compound are poorly understood.

### References

1. Levin, G., Duffin, K.L., Obukowicz, M.G., *et al.* Differential metabolism of dihomo- $\gamma$ -linolenic acid and arachidonic acid by cyclo-oxygenase-1 and cyclo-oxygenase-2: Implications for cellular synthesis of prostaglandin E<sub>1</sub> and prostaglandin E<sub>2</sub>. *Biochem. J.* **365**, 489-496 (2002).
2. Fer, M., Goullitquer, S., Dréano, Y., *et al.* Determination of polyunsaturated fatty acid monoepoxides by high performance liquid chromatography-mass spectrometry. *J. Chromatogr. A* **1115**, 1-7 (2006).

#### 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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