**Product Information**

*trans-EKODE-(E)-Ib*

**Item No. 10004224**

**CAS Registry No.:** 478931-82-7

**Formal Name:** 9-oxo-11-(3-pentyl-2-oxiranyl)-10E-undecenoic acid

**Synonym:** 12,13-epoxy-9-keto-10(trans)-Octadecenoic Acid

**MF:** C_{18}H_{30}O_{4}

**FW:** 310.2

**Purity:** ≥98%

**Stability:** ≥1 year at -20°C

**Supplied as:** A solution in ethanol

**Laboratory Procedures**

For long term storage, we suggest that *trans-EKODE-(E)-Ib* be stored as supplied at -20°C. It should be stable for at least one year.

*trans-EKODE-(E)-Ib* 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 *trans-EKODE-(E)-Ib* 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. The solubility of *trans-EKODE-(E)-Ib* in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

During oxidative stress, the abundant unsaturated fatty acid linoleic acid undergoes lipid peroxidation to produce α,β-unsaturated epoxy-keto-undecadecenoic acids (EKODEs). Nonenzymatic autoxidation of linoleic acid generates six major EKODE isomers, which differ from one another in the positioning and the orientation of the epoxy group relative to the keto moiety. *trans-EKODE-(E)-Ib* is a biologically active peroxidation product of linoleic acid that is characterized, structurally, by having a *trans* carbon-carbon double bond between the 9-keto and 12,13-epoxy groups. It activates an antioxidant response element (ARE) in neuronal cells and induces the expression of ARE-regulated cytoprotective genes like NQO1. This EKODE also stimulates the synthesis of aldosterone and corticosterone in adrenal cells when supplied at 1-5 μM. This effect appears to be mediated by a rise in intracellular calcium.

**References**


**Related Products**

For a list of related products please visit: [www.caymanchem.com/catalog/10004224](http://www.caymanchem.com/catalog/10004224)

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**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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