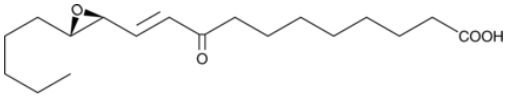
Product Data Sheet

Product Name: trans-EKODE-(E)-Ib
Cat. No.: GC45071

Chemical Properties

Cas. No.	478931-82-7		
SMILES	CCCCCC(O1)C1/C=C/C(CCCCCCCC(O)=O)=O		
Formula	C18H30O4	M.Wt	310.4
Solubility	DMF: 50 mg/ml,DMSO: 50 mg/ml,Ethanol: 50 mg/ml,PBS (pH 7.2): .5 mg/ml	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

NOTE: Relative stereochemistry shown in chemical structure

Background

During oxidative stress, the abundant unsaturated fatty acid linoleic acid undergoes lipid peroxidation to produce α,β-unsaturated epoxy-keto-octadecenoic acids (EKODEs). Nonenzymatic autooxidation 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.

Caution: Product has not been fully validated for medical applications. For research use only.
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