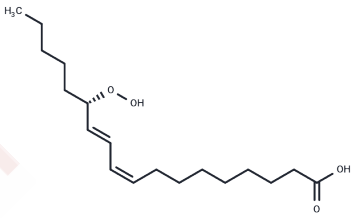
Data Sheet (Cat.No.T37393)

TargetMol

13(S)-HpODE

Chemical Properties



CAS No. : 33964-75-9

Formula: C18H32O4

Molecular Weight: 312.44

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	13(S)-HpODE, a metabolite present in potato and Homo sapiens, is the (S)-enantiomer of 13-HpODE, a fatty acid containing a peroxy group, IL-13/13(S)HpODE stimulates MAO-A-mediated intracellular ROS generation and induction of p53 as well as p21 during apoptosis of A549 cancer cells and promotes apoptosis of HCT116 and CCF52 cells by upregulating p53 and p21 expression promoted apoptosis in HCT116 and CCF52 cells, constituting the IL-13 > 15-LO > 13(S)HpODE > PPARγ > MAO-A > ROS > p53 > p21 axis.
Targets(IC50)	EGFR,MAO,Endogenous Metabolite,p53
In vivo	**Methods**: Wild-type C57BL/6J mice were injected subcutaneously in the back with 200 μL of vehicle containing 0, 0.75, 1.5, 3, and 6 μg of 13(S)-HpODE per mouse. **Results**: 13(S)-HpODE administration dose-dependently reduced the anti-inflammatory properties of HDL in mice. [4]

Solubility Information

Solubility	PBS (pH 7.2): 1 mg/mL (3.2 mM),Sonication is recommended. DMSO: 10 mg/mL (32.01 mM),Sonication is recommended. Ethanol: 10 mg/mL (32.01 mM),Sonication is recommended. DMF: 10 mg/mL (32.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2006 mL	16.0031 mL	32.0061 mL
5 mM	0.6401 mL	3.2006 mL	6.4012 mL
10 mM	0.3201 mL	1.6003 mL	3.2006 mL
50 mM	0.064 mL	0.3201 mL	0.6401 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Gardner, H.W. Soybean lipoxygenase-1 enzymically forms both (9S)- and (13S)-hydroperoxides from linoleic acid by a pH-dependent mechanism Biochim. Biophys. Acta 1001(3), 274-281 (1989).
Reinaud O, et al. Oxidative metabolism of linoleic acid by human leukocytes. Biochem Biophys Res Commun. 1989 Jun 15;161(2):883-91.
Glasgow WC, et al. The linoleic acid metabolite, (13S)-hydroperoxyoctadecadienoic acid, augments the epidermal growth factor receptor signaling pathway by attenuation of receptor dephosphorylation. Differential response in Syrian hamster embryo tumor suppressor phenotypes. J Biol Chem. 1997 Aug 1;272(31):19269-76.
Imaizumi S, et al. L-4F differentially alters plasma levels of oxidized fatty acids resulting in more anti-inflammatory HDL in mice. Drug Metab Lett. 2010 Aug;4(3):139-48.
Glasgow, W.C., Hui, R., Everhart, A.L., et al. The linoleic acid metabolite, (13S)-hydroperoxyoctadecadienoic acid, augments the epidermal growth factor receptor signaling pathway by attenuation of receptor dephosphorylation. Differential response in Syrian hamster embryo tumor suppressor phenotypes The Journal of Biological Chemisty 272, 19269-19276 (1997).
Folcik, V.A., Nivar-Aristy, R.A., Krajewski, L.P., et al. Lipoxygenase contributes to the oxidation of lipids in human atherosclerotic plaques Journal of Clinical Investigation 96, 504-510 (1995).