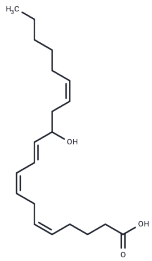
Data Sheet (Cat.No.T35507)

TargetMol

12-HETE

Chemical Properties



CAS No. : 71030-37-0

Formula: C20H32O3

Molecular Weight: 320.47

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	12-HETE ((±)12-HETE) is a modulator of PGE2, with both anti-thrombotic and pro-thrombotic effects, inducing PGE2 release and COX-2 expression via phospholipase A2 (sPLA2-IIA) inducers. It is also a neuroregulator activating retinal cell endothelial dysfunction in diabetic retinopathy.
Targets(IC50)	Apoptosis
In vitro	12-HETE (0.1 μM) activates Muller cells (MCs), enhances glutamate production, and induces inflammation and oxidation. [1] 1 μM exogenous 12-HETE significantly reduced SD-induced cell viability. 12-HETE inhibited SD-induced caspase-3 activity in a concentration-dependent manner with IC50 of 1.13 μM. In OVCAR-3 cells, treatment with 1 μM 12-HETE resulted in increased ILK expression. 1 μM 12-HETE induced the expression of Bcl-2, an anti-apoptotic protein, and inhibited the expression of Bax, a pro-apoptotic protein, and these effects were attenuated by ILK siRNA. [2]

Solubility Information

Solubility	Ethanol: Miscible DMSO: Miscible PBS (pH 7.2): 0.8 mg/mL (2.5 mM),Sonication is recommended. 0.1 M Na2CO3: 2 mg/mL (6.24 mM),Sonication is recommended. DMF: Miscible (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1204 mL	15.6021 mL	31.2042 mL
5 mM	0.6241 mL	3.1204 mL	6.2408 mL
10 mM	0.312 mL	1.5602 mL	3.1204 mL
50 mM	0.0624 mL	0.312 mL	0.6241 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

Moustafa M, et al. 12-HETE activates Müller glial cells: The potential role of GPR31 and miR-29. Prostaglandins Other Lipid Mediat. 2024 Apr;171:106805.
Liu Q, Tan W, et al. 12-HETE facilitates cell survival by activating the integrin-linked kinase/NF-κB pathway in ovarian cancer. Cancer Manag Res. 2018 Nov 16;10:5825-5838.