Didocosahexaenoin

Cat. No.: HY-148944

CAS No.: 124538-05-2

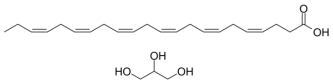
Molecular Formula: $C_{25}H_{40}O_5$

Molecular Weight: 420.58

Target: Reactive Oxygen Species; Apoptosis

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Didocosahexaenoin, an omega-3 derivative, is a diglyceride of DHA and can be synthesised from DHA triglycerides. Didocosahexaenoin causes significant loss of mitochondrial membrane potential and induces ROS production. Didocosahexaenoin induces apoptosis. Didocosahexaenoin induces stronger cytotoxicity than DHA in human prostate carcinoma cells[1].

In Vitro

Didocosahexaenoin (10-50 μM; 96 hours) induces cell apoptosis in PC3 cells[1].
Didocosahexaenoin (1 nM-100 μM; 96 hours) induces dose-dependent cytotoxicity on human prostate cells[1].
Didocosahexaenoin (30, 50 μM; 24 hours) causes a significant fold change increase in the loss of mitochondrial membrane potential[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	PC3 cells
Concentration:	10, 20, 30, 40, 50 μM
Incubation Time:	24, 48 hours
Result:	Caused elevated levels of early apoptotic cells. Significantly increased the level of activated caspase 3/7 for 6 h at 30 and 50 μM.

Cell Cytotoxicity Assay[1]

Cell Line:	PC3, DU145, A2780 and A2780-CP70 carcinoma cells and MCF-7 and LNCaP cells
Concentration:	1 nM-100 μM
Incubation Time:	96 hours
Result:	Induced dose-dependent cytotoxicity with the strongest toxicity under 10.0 μM on DU145 and PC3 cells, A2780 and A2780-CP70 with IC_{50} of 3.20 and 3.82 μM, 4.6, 5.53 μM, respectively.

REFERENCES

[1]. Glenn F Robinson, et al. Investigation of the cytotoxicity induced by didocosahexaenoin, an omega 3 derivative, in human prostate carcinoma cell lines. Curr Res Pharmacol Drug Discov. 2022 Jan 19;3:100085.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA