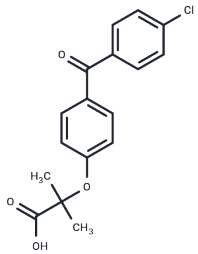
Data Sheet (Cat.No.T1402)

TargetMol

Fenofibric acid

Chemical Properties



CAS No. : 42017-89-0

Formula: C17H15ClO4

Molecular Weight: 318.75

Storage: 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	Fenofibric acid (FNF acid) is the active form of fenofibrate, a synthetic phenoxy-isobutyric acid derivate with antihyperlipidemic activity.
Targets(IC50)	MMP,COX,PPAR
In vitro	Fibric acids, active forms of fibrate drugs and activators of peroxisome proliferator-activated receptor-alpha (PPARα), are also known for an HDL-raising effect. Fibric acids enhance fatty acid catabolism and accordingly reduce plasma lipid level, predominantly triglyceride (TG). Fenofibric acid increases the expression of ABCA1 and apoA-I-mediated HDL production. The effect on ABCA1 expression was through the enhancement of the transcription of the ABCA1 gene being dependent on LXR[1].
In vivo	Fenofibric acid attenuates aberrant increases of circulating EPC(Endothelial Progenitor Cells) in OIR mice. Inhibitory effect of Fenofibric acid on EPC mobilization in the OIR model is PPARα-dependent.Fenofibric acid Inhibits hypoxia-induced retinal EPC increase in a PPARα-dependent manner. Fenofibric acid decreases CXCR4-positive EPC in the circulation, downregulates the serum SDF-1 level and suppresses HIF-1a and SDF-1 overexpression in the retina[1].
Cell Research	PPAR activators fenofibric acid is dissolved in DMSO and added to the culture medium containing 0.2% BSA. RAW264 cells are washed with PBS and cultured an additional 48 hours in the presence of fenofibric acid in DMEM/F-12(1:1) medium containing 2% TCM and 0.2% BSA. During the last 24 hours of the drug treatment, 300 mol/L of dibutyryl cAMP and apoA-I (10 μg/mL) are added to the medium. THP-1 cells are also treated with the compound and apoA-I in 0.2% BSA-RPMI 1640 medium and 0.1% BSA-MEM. Cholesterol and choline-phospholipid released into the medium by apoA-I are determined enzymatically. Adherent cells are dissolved in 0.1 N NaOH for protein determination by bicinchoninic acid protein assay system. (Only for Reference)

Solubility Information

Solubility	DMSO: 60 mg/mL (188.24 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.27 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1373 mL	15.6863 mL	31.3725 mL
5 mM	0.6275 mL	3.1373 mL	6.2745 mL
10 mM	0.3137 mL	1.5686 mL	3.1373 mL
50 mM	0.0627 mL	0.3137 mL	0.6275 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

Arakawa R, et al. Arterioscler Thromb Vasc Biol. 2005, 25(6):1193-1197.
Wang Z, et al. Invest Ophthalmol Vis Sci. 2014, 55(6):3820-3832.