Clinofibrate

Cat. No.: HY-13528

CAS No.: 30299-08-2

Molecular Formula: $C_{28}H_{36}O_6$

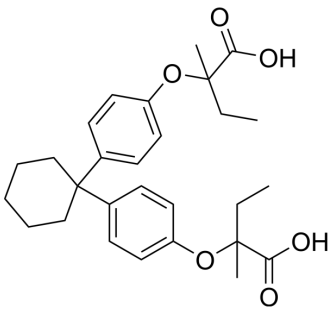
Molecular Weight: 468.58

Target: HMG-CoA Reductase (HMGCR); Autophagy

Pathway: Metabolic Enzyme/Protease; Autophagy

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (213.41 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1341 mL	10.6705 mL	21.3411 mL
	5 mM	0.4268 mL	2.1341 mL	4.2682 mL
	10 mM	0.2134 mL	1.0671 mL	2.1341 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (5.34 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.34 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.34 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Clinofibrate (S-8527) is a hypelipidemic agent and a HMG-CoA reductase inhibitor.

In Vivo

Clinofibrate administration (50 and 100 mg/kg/day, p.o.) significantly inhibits the increase in plasma fibrinogen level as well as serum- and VLDL-LDL-lipids[1]. Clinofibrate significantly decreases the high plasma cholesterol level of atherosclerotic rats, which is 823±256 mg/dl, or about ten times that of control rats (85±11 mg/dl). On treatment with clinofibrate, the cholesterol level is reduced most in the very low density lipoprotein (VLDL) fraction[2]. In rats which are refed either a fat-free diet or a 5% fat diet after a 2-day fast. clinofibrate at 30 mg/kg results in reductions of serum and liver triglyceride levels[3].

Oral ingestion of S-8527 to normal rats for 7 days lowers serum triglycerides and cholesterol by about 27% at 1 mg/kg and 20% at 3 mg/kg, respectively. S-8527 at 3 mg/kg decreases liver triglyceride concentration by about 20%[4].

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

PROTOCOL

Animal Administration [4]

Rats: Male Wistar rats weighing 100-160 g are used. S-8527 and clofibrate are suspended in an appropriate amount of 5 gum arabic solution so that the daily dose would be 0.5 mL per 100 g of body weight. The drugs are given to the rats via stomach tube every a.m. for 7 days. Control groups are on an equal volume of vehicle. During the experimental period, the animals are fed on a commercial chow pellet ad libitum. About 24 hr after the last dose, the rats are anesthetized with ether and blood samples are obtained from the inferior venacava. After sacrifice, the livers are removed, washed with physiological saline, blotted on filter paper and weighed[4].

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

REFERENCES

[1]. Okazaki M, et al. Effects of clinofibrate on plasma fibrinogen level in high fructose diet-induced hyperlipidemic rats. In Vivo. 1994 Nov-Dec;8(6):1057-61.

[2]. Shirai K, et al. Effect of clinofibrate on lipid metabolism of aorta in atherosclerotic rats. Artery. 1983;12(3):145-55.

[3]. Suzuki K, et al. Effects of S-8527 (1,1-bis4'-(1"-carboxy'1"-methylpropoxy)-phenyl)-cyclohexane), a new hypolipidemic compound, on triglyceride metablolism in rats. Biochem Pharmacol. 1975 Jun 15;24(11-12):1203-7.

[4]. Suzuki K, et al. Hypolipidemic effect of a new aryloxy compound, S-8527, in experimental animals. Jpn J Pharmacol. 1974 Jun;24(3):407-14.

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