Clinofibrate

Cat. No.: HY-13528
CAS No.: 30299-08-2
Molecular Formula: C₂₈H₃₆O₆
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  6 months
        -20°C  1 month

SOLVENT & SOLUBILITY

In Vitro
DMSO : ≥ 30 mg/mL (64.02 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>2.1341 mL</td>
<td>10.6705 mL</td>
<td>21.3411 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4268 mL</td>
<td>2.1341 mL</td>
<td>4.2682 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2134 mL</td>
<td>1.0671 mL</td>
<td>2.1341 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description
Clinofibrate (S-8527) is a hypolipidemic 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
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].

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REFERENCES


