Fluvastatin

Cat. No.: A3419
CAS No.: 93957-54-1
Formula: C24H26FNO4
M.Wt.: 411.47
Synonyms: Leschol
Target: Metabolism
Pathway: HMG-CoA Reductase
Storage: Store at -20°C

Solvent & Solubility

≥20.57 mg/mL in DMSO, ≥42.2 mg/mL in EtOH with gentle warming, ≥32.53 mg/mL in H2O with gentle warming

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Mass</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.4303 mL</td>
<td>12.1516 mL</td>
<td>24.3031 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4861 mL</td>
<td>2.4303 mL</td>
<td>4.8606 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2430 mL</td>
<td>1.2152 mL</td>
<td>2.4303 mL</td>
</tr>
</tbody>
</table>

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

Biological Activity

Shortsummary

HMGCR inhibitor

IC₅₀ & Target

Cell Viability Assay

Cell Line: Human smooth muscle cells, human monocyte U937 cell line
Preparation method: The solubility of this compound in DMSO is >20.6 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions: 40 mg, 6 days
### Applications:
In human smooth muscle cells, addition of serum from patients (40 mg of fluvastatin a day for the 6 days) treated with fluvastatin caused a significant reduction in cell proliferation. Fluvastatin (100 nM) attenuated the expression of both ICAM-1 and LFA-1. Fluvastatin (10 μM) showed no effect on cell viability.

Fluvastatin induced apoptosis in cardiac myocytes in a time- and dose-dependent manner. Fluvastatin decreased RhoA protein in the membrane fraction, whereas there were no significant changes of the RhoA protein in the cytosol fraction. Fluvastatin completely inhibited interleukin-1β-stimulated 3H-leucine incorporation.

### Animal experiment

**Animal models:** Sprague–Dawley male rats

**Dosage form:** Oral administration, 5, 10 and 20 mg/kg

**Applications:** In hypercholesterolemic rats, treatment with fluvastatin (10 mg/kg/day) significantly attenuated the leukocyte-adherence responses to PAF and LTB4 as well as the leukocyte emigration response to LTB4. Fluvastatin treatment inhibited the PAF- and LTB4-induced reductions in leukocyte rolling velocity.

Oral administration of fluvastatin (5, 10 and 20 mg/kg) significantly prevented almost all the parameters of isoproterenol-induced heart failure and myocardial injury. Compared with control group, any indexes in sham rats treated with fluvastatin (20 mg/kg) alone were unaltered. Treatment with fluvastatin resulted in a significant decrease in the urinary protein excretion. Fluvastatin treatment significantly ameliorated the decreased expression of nephrin in PAN nephrosis rats. Fluvastatin markedly attenuated tubulointerstitial damage in the presence of moderate proteinuria.

**Other notes:** Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

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**Product Citations**

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**References**


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