Product Name: Fluvastatin  
Revision Date: 2/26/2019

Product Data Sheet

Chemical Properties

Product Name: Fluvastatin
Cas No.: 93957-54-1
M.Wt: 411.47
Formula: C24H26FNO4
Synonyms: Leschol

Chemical Name: (E,3R,5S)-7-[3-(4-fluorophenyl)-1-propan-2-ylindol-2-yl]-3,5-dihydroxyhept-6-enoic acid
Canonical SMILES: CC(C)N1C2=CC=CC2C(=C1C=CC(CC(=O)O)O)O)C3=CC=C(C=C3)F

Solubility: $\geq 20.57$ mg/mL in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice 
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Metabolism
Pathways: HMG-CoA Reductase

Description:

Fluvastatin is a competitive inhibitor of hydroxymethylglutaryl-coenzyme A reductase (HMGCR), the enzyme that catalyzes the conversion of HMG-CoA to mevalonic acid, the rate-limiting step in cholesterol biosynthesis. Human hepatocellular carcinoma cell (HCC) studies indicate that Fluvastatin induces G2/M phase arrest. In the presence of Fluvastatin, HCC cells show a decrease of Bcl-2 and procaspase-9 expression, and an increase in Bax, cleaved caspase-3, and cytochrome c. Fluvastatin is antilipemic and is used to reduce plasma cholesterol levels and prevent
Cardiovascular disease.

Reference:

**Protocol**

**Cell experiment:**

<table>
<thead>
<tr>
<th>Cell lines</th>
<th>Human smooth muscle cells, human monocyte U937 cell line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation method</td>
<td>The solubility of this compound in DMSO is &gt;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.</td>
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<tr>
<td>Reacting conditions</td>
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<tr>
<td>Applications</td>
<td>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.</td>
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</tbody>
</table>

**Animal experiment [3]:**

<table>
<thead>
<tr>
<th>Animal models</th>
<th>Sprague–Dawley male rats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form</td>
<td>Oral administration, 5, 10 and 20 mg/kg</td>
</tr>
<tr>
<td>Applications</td>
<td>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</td>
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</table>
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.

Reference:

Caution
FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.