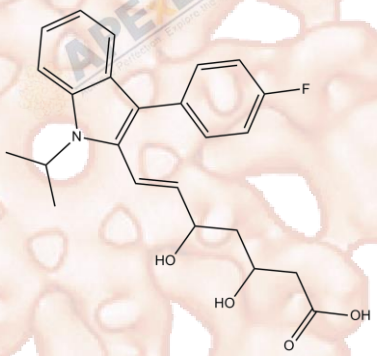
Product Data Sheet

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

In Vitro

⩾20.57 mg/mL in DMSO; ⩾32.53 mg/mL in H2O with gentle warming; ⩾42.2 mg/mL in EtOH with gentle warming

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.4303 mL	12.1516 mL	24.3031 mL
5 mM	0.4861 mL	2.4303 mL	4.8606 mL
10 mM	0.2430 mL	1.2152 mL	2.4303 mL

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

Biological Activity

Shortsummary	HMGCR inhibitor
IC_{50} & Target	

In Vitro

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.
In Vivo	**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 markly 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.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Buemi M, Allegra A, Senatore M, et al. Pro-apoptotic effect of fluvastatin on human smooth muscle cells[J]. European journal of pharmacology, 1999, 370(2): 201-203.

[2]. Niwa S, Totsuka T, Hayashi S. Inhibitory effect of fluvastatin, an HMG-CoA reductase inhibitor, on the expression of adhesion molecules on human monocyte cell line[J]. International journal of immunopharmacology, 1996, 18(11): 669-675.
[3]. Ogata Y, Takahashi M, Takeuchi K, et al. Fluvastatin induces apoptosis in rat neonatal cardiac myocytes: a possible mechanism of statin-attenuated cardiac hypertrophy[J]. Journal of cardiovascular pharmacology, 2002, 40(6): 907-915.
[4]. Zhou R, Xu Q, Zheng P, et al. Cardioprotective effect of fluvastatin on isoproterenol-induced myocardial infarction in rat[J]. European journal of pharmacology, 2008, 586(1): 244-250.
[5]. Kimura M, Kurose I, Russell J, et al. Effects of fluvastatin on leukocyte–endothelial cell adhesion in hypercholesterolemic rats[J]. Arteriosclerosis, Thrombosis, and Vascular Biology, 1997, 17(8): 1521-1526.
[6]. Shibata S, Nagase M, Fujita T. Fluvastatin ameliorates podocyte injury in proteinuric rats via modulation of excessive Rho signaling[J]. Journal of the American Society of Nephrology, 2006, 17(3): 754-764.

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. Shortterm 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.

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