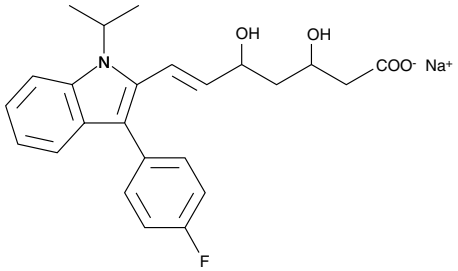
Product Information

Fluvastatin (sodium salt)

Item No. 10010337

CAS Registry No.: 93957-55-2
Formal Name: 7-[3-(4-fluorophenyl)-1-(1-methylethyl)-1H-indol-2-yl]-3,5-dihydroxy-6-heptenoic acid, sodium salt
MF: $C_{24}H_{25}FNO_4 \cdot Na$
FW: 433.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 233, 305 nm



Laboratory Procedures

For long term storage, we suggest that fluvastatin (sodium salt) be stored as supplied at -20°C. It should be stable for at least two years.

Fluvastatin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the fluvastatin (sodium salt) in an organic solvent purged with an inert gas. Fluvastatin (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of fluvastatin (sodium salt) in ethanol is approximately 0.5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. The solubility of fluvastatin (sodium salt) in PBS, pH 7.2, is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Hydroxymethylglutaryl-coenzyme A (HMG-CoA) reductase is the rate-limiting enzyme in the cholesterol biosynthetic pathway and the target of the 'statin' class of cholesterol-lowering drugs.[1] Fluvastatin acts as a competitive inhibitor of HMG-CoA reductase with respect to binding of the substrate HMG-CoA (K_i = 0.3 nM) but not with respect to binding of NADPH.[2,3] It is marketed under the trade name Lescol™ for the treatment of hypercholesterolemia in the prevention of cardiovascular disease. When fluvastatin was administered in a clinical trial to patients undergoing percutaneous coronary intervention, LDL cholesterol levels were reduced by 27% after six weeks of treatment with a dose of 40 mg/kg twice a day compared to placebo.[4]

References

1. Tobert, J.A. Lovastatin and beyond: The history of the HMG-CoA reductase inhibitors. *Nature Reviews Drug Discovery* **2**, 517-526 (2003).
2. Istvan, E.S. and Deisenhofer, J. Structural mechanism for statin inhibition of HMG-CoA reductase. *Science* **292**, 1160-1164 (2001).
3. Corsini, A., Maggi, F.M., and Catapano, A.L. Pharmacology of competitive inhibitors of HMG-CoA reductase. *Pharmacol. Res.* **31(1)**, 9-27 (1995).
4. Serruys, P.W.J.C., de Feyter, P., Macaya, C., *et al.* Fluvastatin for prevention of cardiac events following successful first percutaneous coronary intervention: A randomized controlled trial. *JAMA* **287(24)**, 3215-3222 (2002).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10010337

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com