Product Data Sheet

Product Name: Fluvastatin D6 sodium
Cat. No.: GC36061

Chemical Properties

Cas. No.			
SMILES	O=C([O-])C[C@H](O)C[C@H](O)/C=C/C(N1C(C([2H])([2H])[2H])C([2H])([2H])[2H])=C(C2=CC=C(F)C=C2)C3=C1C=CC=C3.[Na+]		
Formula	$C_{24}H_{19}D_6FNNaO_4$	M.Wt	439.48
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Fluvastatin D6 sodium		

Background

Fluvastatin-d_6 is intended for use as an internal standard for the quantification of fluvastatin by GC- or LC-MS. Fluvastatin is an inhibitor of HMG-CoA reductase (K_i = 0.3 nM for the rat enzyme).[1,2] It also inhibits the human cytochrome P450 (CYP) isoform CYP2C9 (IC_{50} = 100 nM).[3] Fluvastatin inhibits oxidized LDL-induced ferroptosis and reverses oxidized LDL-induced decreases in glutathione peroxidase 4 (GPX4) and system X_c^- cystine-glutamate antiporter levels in human umbilical vein endothelial cells (HUVECs).[4] *In vivo*, fluvastatin (2 mg/kg per day) decreases serum cholesterol, triglyceride, and phospholipid levels, the formation of thiobarbituric acid-reactive substances (TBARS), and vascular angiotensin-converting enzyme (ACE) activity in rabbits fed a high-cholesterol diet.[5] It increases survival in a mouse model of myocardial infarction when administered at a dose of 10 mg/kg per day.[6] Formulations containing fluvastatin have been used in the treatment of hypercholesterolemia and the prevention of cardiovascular disease.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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1.Istvan, E.S., and Deisenhofer, J.Structural mechanism for statin inhibition of HMG-CoA reductaseScience292(5519)1160-1164(2001) 2.Corsini, A., Maggi, F.M., and Catapano, A.L.Pharmacology of competitive inhibitors of HMG-CoA reductasePharmacol. Res.31(1)9-27(1995) 3.Transon, C., Leemann, T., and Dayer, P.In vitro comparative inhibition profiles of major human drug metabolising cytochrome P450 isozymes (CYP2C9, CYP2D6 and CYP3A4) by HMG-CoA reductase inhibitorsEur. J. Clin. Pharmacol.50(3)209-215(1996) 4.Li, Q., Liu, C., Deng, L., et al.Novel function of fluvastatin in attenuating oxidized low-density lipoprotein-induced endothelial cell ferroptosis in a glutathione peroxidase4- and cystine-glutamate antiporter-dependent mannerExp. Ther. Med.22(5)1275(2021) 5.Mitani, H., Bandoh, T., Ishikawa, J., et al.Inhibitory effects of fluvastatin, a new HMG-CoA reductase inhibitor, on the increase in vascular ACE activity in cholesterol-fed rabbitsBr. J. Pharmacol.119(6)1269-1275(1996) 6.Hayashidani, S., Tsutsui, H., Shiomi, T., et al.Fluvastatin, a 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitor, attenuates left ventricular remodeling and failure after experimental myocardial infarctionCirculation105(7)868-873(2002)

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