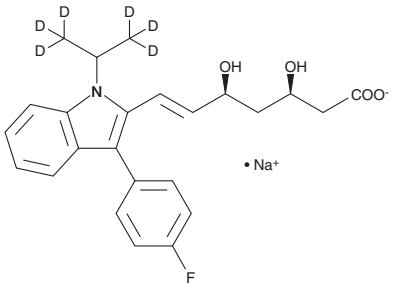
PRODUCT INFORMATION

Fluvastatin-d_6 (sodium salt)

Item No. 25433



Formal Name: (3R,5S,E)-7-(3-(4-fluorophenyl)-1-(propan-2-yl-1,1,1,3,3,3-d_6)-1H-indol-2-yl)-3,5-dihydroxyhept-6-enoate, monosodium salt
MF: $C_{24}H_{19}D_6FNO_4$ • Na
FW: 439.5
Purity: ≥95% (mixture of enantiomers)
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Fluvastatin-d_6 is intended for use as an internal standard for the quantification of fluvastatin (Item Nos. 10010334 | 10010337) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Fluvastatin-d_6 (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the fluvastatin-d_6 (sodium salt) in the solvent of choice, which should be purged with an inert gas. Fluvastatin-d_6 (sodium salt) is slightly soluble in methanol.

Description

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.

References

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4. Li, Q., Liu, C., Deng, L., *et al. Exp. Ther. Med.* **22(5)**, 1275 (2021).
5. Mitani, H., Bandoh, T., Ishikawa, J., *et al. Br. J. Pharmacol.* **119(6)**, 1269-1275 (1996).
6. Hayashidani, S., Tsutsui, H., Shiomi, T., *et al. Circulation* **105(7)**, 868-873 (2002).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM