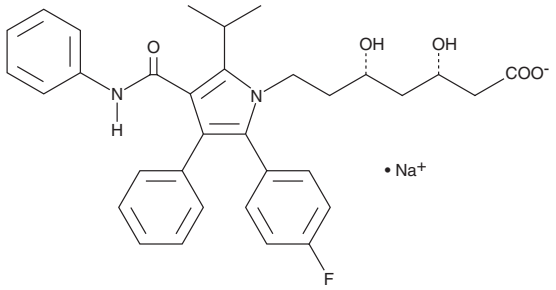
PRODUCT INFORMATION

(3S,5S)-Atorvastatin (sodium salt)

Item No. 18465

CAS Registry No.: 1428118-38-0
Formal Name: 2-(4-fluorophenyl)-β,δ-dihydroxy-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrole-1-heptanoic acid, monosodium salt
MF: $C_{33}H_{34}FN_2O_5 \bullet Na$
FW: 580.6
Purity: ≥98%
UV/Vis.: λ_{max}: 246 nm
Supplied as: A crystalline 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

(3S,5S)-Atorvastatin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the (3S,5S)-atorvastatin (sodium salt) in the solvent of choice, which should be purged with an inert gas. (3S,5S)-Atorvastatin (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (3S,5S)-atorvastatin (sodium salt) in these solvents is approximately 0.5, 15, and 25 mg/ml, respectively.

(3S,5S)-Atorvastatin (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (3S,5S)-atorvastatin (sodium salt) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (3S,5S)-Atorvastatin (sodium salt) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Atorvastatin (Item No. 10493) is an HMG-CoA reductase inhibitor (IC_{50} = 154 nM) that is effective against hypercholesterolemia and certain dyslipidemias.[1-3] Atorvastatin can exist in four optical forms, with the 3R,5R enantiomer displaying the greatest activity against HMG-CoA reductase. (3S,5S)-Atorvastatin is an enantiomer of atorvastatin that has little or no inhibitory activity against HMG-CoA reductase.[4] It also differs from other atorvastatin enantiomers in cytotoxicity, activation of the pregnane X receptor, and induction of cytochrome P450 isoforms.[4,5]

References

1. Dart, A., Jerums, G., Nicholson, G., *et al. Am. J. Cardiol.* **80**, 39-44 (1997).
2. The Diabetes Atorvastatin Lipid Intervention (DALI) Study Group. *Diabetes Care* **24(8)**, 1335-1341 (2001).
3. van Dam, M., Zwart, M., de Beer, F., *et al. Heart* **88**, 234-238 (2002).
4. Kocarek, T.A., Dahn, M.S., Cai, H., *et al. Drug Metab. Dispos.* **30(12)**, 1400-1405 (2002).
5. Korhonova, M., Doricakova, A., and Dvorak, Z. *PLoS One* **10(9)**, (2015).

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