

PRODUCT INFORMATION



4-hydroxy Atorvastatin lactone

Item No. 23358

CAS Registry No.: 163217-70-7

Formal Name: 5-(4-fluorophenyl)-N-(4-hydroxyphenyl)-2-(1-methylethyl)-4-phenyl-1-[2-[(2R,4R)-tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-yl]ethyl]-1H-pyrrole-3-carboxamide

Synonyms: *p*-hydroxy Atorvastatin lactone, *para*-hydroxy Atorvastatin lactone

MF: C₃₃H₃₃FN₂O₅

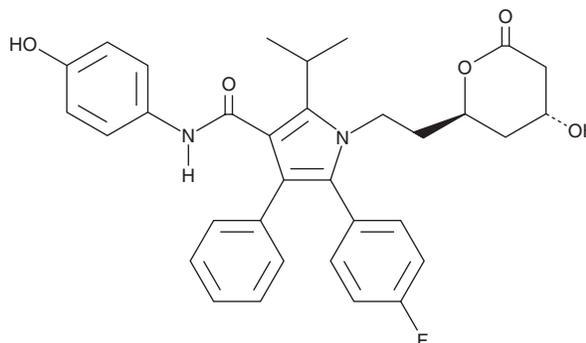
FW: 556.6

Purity: ≥98%

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

4-hydroxy Atorvastatin lactone is supplied as a solid. A stock solution may be made by dissolving the 4-hydroxy atorvastatin lactone in the solvent of choice, which should be purged with an inert gas. 4-hydroxy Atorvastatin lactone is soluble in DMSO. 4-hydroxy Atorvastatin lactone is slightly soluble in methanol.

Description

4-hydroxy Atorvastatin lactone is a metabolite of atorvastatin (Item No. 10493), an HMG-CoA reductase inhibitor present in formulations that have been used to treat hypercholesterolemia and certain dyslipidemias.¹⁻⁴ Atorvastatin is metabolized by the cytochrome P450 (CYP) isoform CYP3A4 to form 4-hydroxy atorvastatin (Item No. 22575) and 2-hydroxy atorvastatin, which can be interconverted between their acid and lactone forms.¹ Atorvastatin can itself be lactonized to atorvastatin lactone (Item No. 20951) then metabolized by CYP3A4 directly to 4-hydroxy atorvastatin lactone and 2-hydroxy atorvastatin lactone.

References

1. Lennernäs, H. Clinical pharmacokinetics of atorvastatin. *Clin. Pharmacokinet.* **42**(13), 1141-1160 (2003).
2. Dart, A., Jerums, G., Nicholson, G., *et al.* A multicenter, double-blind, one-year study comparing safety and efficacy of atorvastatin versus simvastatin in patients with hypercholesterolemia. *Am. J. Cardiol.* **80**(1), 39-44 (1997).
3. The Diabetes Atorvastatin Lipid Intervention Study Group. The effect of aggressive versus standard lipid lowering by atorvastatin on diabetic dyslipidemia. The DALI study: A double-blind, randomized, placebo-controlled trial in patients with type 2 diabetes and diabetic dyslipidemia. *Diabetes Care* **24**(8), 1335-1341 (2001).
4. van Dam, M., Zwart, M., de Beer, F., *et al.* Long term efficacy and safety of atorvastatin in the treatment of severe type III and combined dyslipidaemia. *Heart* **88**(3), 234-238 (2002).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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