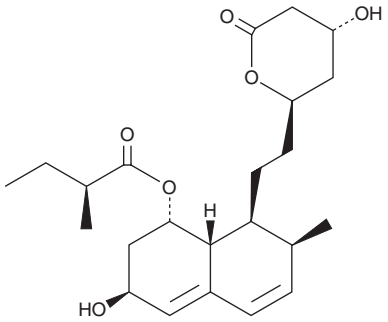
PRODUCT INFORMATION

Pravastatin lactone

Item No. 22572

CAS Registry No.:	85956-22-5
Formal Name:	(2S)-2-methyl-butanoic acid, (1S,3S,7S,8S,8aR)-1,2,3,7,8,8a-hexahydro-3-hydroxy-7-methyl-8-[2-[(2R,4R)-tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-yl]ethyl]-1-naphthalenyl ester
Synonyms:	R-414, SQ 31,369
MF:	$C_{23}H_{34}O_6$
FW:	406.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 238 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

Pravastatin lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the pravastatin lactone in the solvent of choice. Pravastatin lactone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of pravastatin lactone in these solvents is approximately 12.5, 20, and 25 mg/ml, respectively.

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. Organic solvent-free aqueous solutions of pravastatin lactone can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pravastatin lactone in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pravastatin lactone is a metabolite of pravastatin, a hydroxymethylglutaryl-coenzyme A (HMG-CoA) reductase inhibitor that is a ring-hydroxylated metabolite of mevastatin (Item No. 10010340).[1,2] Pravastatin lactone is formed when pravastatin undergoes acid-catalyzed non-enzymatic lactonization in the stomach following oral administration.[2]

References

1. Corsini, A., Maggi, F.M., and Catapano, A.L. Pharmacology of competitive inhibitors of HMG-CoA reductase. *Pharmacol. Res.* **31(1)**, 9-27 (1995).
2. van Haandel, L., Gibson, K.T., Leeder, J.S., *et al.* Quantification of pravastatin acid, lactone and isomers in human plasma by UHPLC-MS/MS and its application to a pediatric pharmacokinetic study. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **1012-1013**, 169-177 (2016).

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