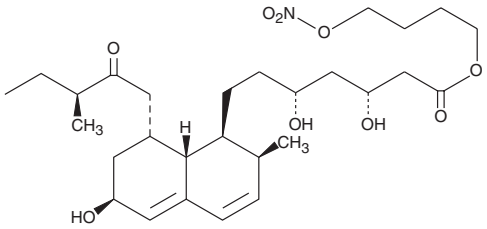
Product Information

NO-Pravastatin

Catalog No. 10006044

CAS Registry No.: 733034-46-3
Formal Name: 1S,2S,6S,7,8S,8aR-hexahydro-β,δ,6-trihydroxy-2-methyl-8-[(2S)-2-methyl-1-oxobutoxy]-4-(nitrooxy)butyl ester, 1-naphthaleneheptanoic acid
Synonym: NCX 6550
MF: $C_{28}H_{45}NO_9$
FW: 539.7
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that NO-pravastatin be stored as supplied at -20°C. It should be stable for at least two years.

NO-pravastatin is supplied as a crystalline solid. A stock solution may be made by dissolving the NO-pravastatin in an organic solvent purged with an inert gas. NO-pravastatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of NO-pravastatin in these solvents is approximately 30 mg/ml.

NO-pravastatin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NO-pravastatin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. NO-pravastatin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The 'statin' class of drugs, which includes lovastatin, simvastatin, fluvastatin, atorvastatin, cerivastatin, and pravastatin, inhibits the enzyme 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase and are widely used for the treatment of hypercholesterolemia.[1] NO-pravastatin is a hybrid molecule containing a nitric oxide (NO) releasing moiety combined with the HMG-CoA reductase inhibitor pravastatin.[2] These combined functionalities produce a compound with a unique spectrum of pharmacological activities. NO-pravastatin inhibits the proliferation of rat aortic smooth muscle cells with an IC_{50} value of 2.2 µM, whereas pravastatin showed minor inhibition even at 100 µM.[2] A potential anti-inflammatory effect of NO-pravastatin may result from its direct inhibition of iNOS and cyclooxygenase-2 gene expression in lipopolysaccharide-activated RAW 264.7 cells.

References

1. Maron, D.J., Fazio, S., and Linton, M.F. Current perspectives on statins. *Circulation* **101**, 207-213 (2000).
2. Ongini, E., Impagnatiello, F., Bonazzi, A., *et al.* Nitric oxide (NO)-releasing statin derivatives, a class of drugs showing enhanced antiproliferative and antiinflammatory properties. *Proc. Natl. Acad. Sci. USA* **101(22)**, 8497-8502 (2004).

Related Products

NO-Indomethacin - Cat. No. 10005705 • NO-Ibuprofen - Cat. No. 10005706 • NO-Aspirin 1 - Cat. No. 10005854 • NO-Aspirin 2 - Cat. No. 10005856 • NO-Flurbiprofen - Cat. No. 10005857 • NO-Fluvastatin - Cat. No. 10006043

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