

# PRODUCT INFORMATION



## Pravastatin (sodium salt)

Item No. 10010343

**CAS Registry No.:** 81131-70-6  
**Formal Name:** 1S,2S,6S,7S,8R,8aR-hexahydro- $\beta$ R, $\delta$ R,6-trihydroxy-2-methyl-8-[(2S)-2-methyl-1-oxobutoxy]-1-naphthaleneheptanoic acid, monosodium salt

**MF:** C<sub>23</sub>H<sub>35</sub>O<sub>7</sub> • Na

**FW:** 446.5

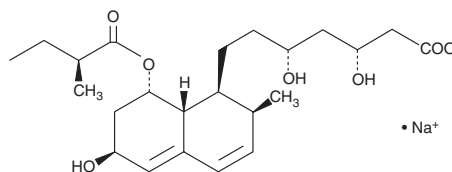
**Purity:** ≥98%

**UV/Vis.:**  $\lambda_{\text{max}}$ : 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 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the pravastatin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Pravastatin (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of pravastatin (sodium salt) in ethanol is approximately 2.5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

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 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pravastatin (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Hydroxymethylglutaryl-coenzyme A (HMG-CoA) reductase is the rate-limiting enzyme in the cholesterol biosynthetic pathway and the target of the “statin” class of cholesterol-lowering drugs.<sup>1</sup> Pravastatin is a HMG-CoA reductase inhibitor that is a ring hydroxylated metabolite of mevastatin.<sup>2</sup> It is a competitive inhibitor of HMG-CoA reductase with a K<sub>i</sub> value of 2.3 nM for the active, open ring form of the molecule.<sup>2</sup> Pravastatin, marketed as Pravachol™ or Lipostat™, is used to reduce LDL cholesterol and triglyceride levels and increase HDL cholesterol in the prevention of cardiovascular disease. In a study using dogs, five weeks of treatment with a dose 20 mg/kg per day reduced total plasma cholesterol levels by 29%.<sup>2</sup>

### References

1. Tobert, J.A. Lovastatin and beyond: The history of the HMG-CoA reductase inhibitors. *Nature Reviews Drug Discovery* **2**(7), 517-526 (2003).
3. Corsini, A., Maggi, F.M., and Catapano, A.L. Pharmacology of competitive inhibitors of HMG-CoA reductase. *Pharmacol. Res.* **31**(1), 9-27 (1995).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/26/2022

#### 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