

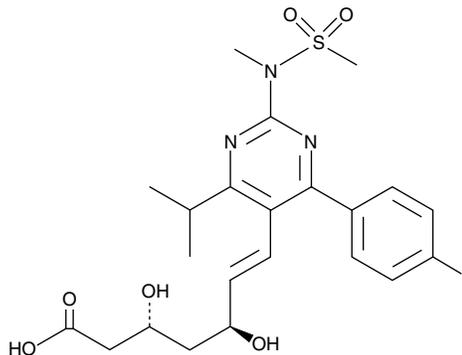
Product Information



Rosuvastatin

Item No. 12029

CAS Registry No.: 287714-41-4
Formal Name: 7-[4-(4-fluorophenyl)-6E-(1-methylethyl)-2-[methyl(methylsulfonyl)amino]-5-pyrimidinyl]-3R,5S-dihydroxy-6-heptenoic acid
Synonyms: X-Plended, ZD 4522
MF: C₂₂H₂₈FN₃O₆S
FW: 481.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 244 nm



Laboratory Procedures

For long term storage, we suggest that rosuvastatin be stored as supplied at -20°C. It should be stable for at least two years.

Rosuvastatin is supplied as a crystalline solid. A stock solution may be made by dissolving the rosuvastatin in the solvent of choice. Rosuvastatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of rosuvastatin in ethanol is approximately 1 mg/ml and approximately 5 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 rosuvastatin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of rosuvastatin in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

HMG-CoA reductase is the rate-limiting enzyme in the cholesterol biosynthetic pathway and the target of the "statin" class of cholesterol-lowering drugs.¹ Rosuvastatin is a synthetic statin that inhibits HMG-CoA reductase with an IC₅₀ value of 5 nM.² With a maximal effective dose at 40 mg/day, rosuvastatin was shown in the STELLAR clinical study to be more effective than atorvastatin (Item No. 10493), simvastatin (Item No. 10010344), or pravastatin (Item No. 10010343, sodium salt) in decreasing LDL cholesterol and increasing HDL cholesterol.³

References

1. Tobert, J.A. Lovastatin and beyond: The history of the HMG-CoA reductase inhibitors. *Nat. Rev. Drug Discov.* **2**, 517-526 (2003).
2. Istvan, E.S. and Deisenhofer, J. Structural mechanism for statin inhibition of HMG-CoA reductase. *Science* **292**, 1160-1164 (2001).
3. Asztalos, B.F., Maulf, F.L., Dallal, G.E., *et al.* Comparison of the effects of high doses of Rosuvastatin versus Atorvastatin on the subpopulations of high-density lipoproteins. *Am. J. Cardiol.* **99**, 681-685 (2007).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/12029

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com