

# Rosuvastatin

## Catalog No: tcsc2112



### Available Sizes

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



### Specifications

**CAS No:**

287714-41-4

**Formula:**

$C_{22}H_{28}FN_3O_6S$

**Pathway:**

Metabolic Enzyme/Protease

**Target:**

HMG-CoA Reductase (HMGCR)

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

ZD 4522

**Observed Molecular Weight:**

481.54

### Product Description

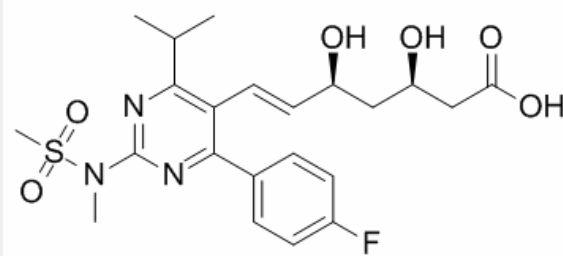
Rosuvastatin is a competitive inhibitor of HMG-CoA reductase with IC<sub>50</sub> of 11 nM.

IC<sub>50</sub> Value: 11 nM [1]

Target: HMG-CoA reductase

in vitro: Rosuvastatin is relatively hydrophilic and is highly selective for hepatic cells; its uptake is mediated by the liver-specific organic anion transporter OATP-C. Rosuvastatin is a high-affinity substrate for OATP-C with apparent association constant of 8.5  $\mu$ M [2]. Rosuvastatin inhibits cholesterol biosynthesis in rat liver isolated hepatocytes with IC<sub>50</sub> of 1.12 nM. Rosuvastatin causes approximately 10 times greater increase of mRNA of LDL receptors than pravastatin [1]. Rosuvastatin (100  $\mu$ M) decreases the extent of U937 adhesion to TNF- $\alpha$ -stimulated HUVEC. Rosuvastatin inhibits the expressions of ICAM-1, MCP-1, IL-8, IL-6, and COX-2 mRNA and protein levels through inhibition of c-Jun N-terminal kinase and nuclear factor-kB in endothelial cells [3].

in vivo: Rosuvastatin (3 mg/kg) daily administration for 14 days decreases plasma cholesterol levels by 26% in male beagle dogs with normal cholesterol levels. In cynomolgus monkeys, Rosuvastatin decreases plasma cholesterol levels by 22% [1]. Rosuvastatin (20 mg/kg/day) administration for 2 weeks, significantly reduces very low-density lipoproteins (VLDL) in diabetes mellitus rats induced by Streptozocin [4]. Rosuvastatin shows antiatherothrombotic effects in vivo. Rosuvastatin (1.25 mg/kg) significantly inhibits thrombin-induced transmigration of monocytes across mesenteric venules via inhibition of the endothelial cell surface expression of P-selectin, and increases the basal rate of nitric oxide in aortic segments by 2-fold times [5].



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