

## Datasheet

### Rosuvastatin

Product Name	Rosuvastatin
Catalogue Number	BSV-S5072
Chemical Formula	C <sub>22</sub> H <sub>28</sub> FN <sub>3</sub> O <sub>6</sub> S
Function	HMG-CoA reductase inhibitor
CAS No.:	287714-41-4

### Description:

Rosuvastatin is an inhibitor of **HMG-CoA reductase**, an enzyme that catalyzes the rate-limiting step in cholesterol biosynthesis, with  $K_i$  value (inhibition constant) of approximately 0.1 nM.

### Product Details:

**Target:** HMG-CoA reductase [\[1\]](#)

**Chemical name:** 6-Heptenoic acid, 7-[4-(4-fluorophenyl)-6-(1-methylethyl)-2-[methyl(methylsulfonyl)amino]-5-pyrimidinyl]-3,5-dihydroxy-, (3R,5S,6E)-

**Formula:** C<sub>22</sub>H<sub>28</sub>FN<sub>3</sub>O<sub>6</sub>S

**Molecular weight:** 481.54

**Purity:** 98.4 %

**Solubility:** 32 mg/mL (DMSO); 96 mg/mL (water)

**Storage:** 3 years -20°C powder, 2 years -80°C in solvent

### Preparing stock solutions

Concentration / Mass	1 mg	5 mg	10 mg
1 mM	2.0767 mL	10.3834 mL	20.7667 mL
5 mM	0.4153 mL	2.0767 mL	4.1533 mL
10 mM	0.2077 mL	1.0383 mL	2.0767 mL
50 mM	0.0415 mL	0.2077 mL	0.4153 mL

**Biological Activity:**

**In vitro:**

Rosuvastatin possesses a greater number of binding interactions with HMG-CoA reductase and has a high affinity for the active site of the enzyme. Rosuvastatin is relatively hydrophilic and is selectively taken up by, and active in, hepatic cells. Rosuvastatin has the longest terminal half-life of the statins and is only minimally metabolized by the cytochrome P450 (CYP 450) enzyme system with no significant involvement of the 3A4 enzyme<sup>[2]</sup>.

**In vivo:**

Rosuvastatin attenuates arterial thrombosis and neointima formation, and it may stabilise vascular lesions developing after endothelial injury in mice. These effects are independent of systemic lipid lowering<sup>[3]</sup>.

**References:**

- [1] Ikeda Y, et al. *J Cardiovasc Pharmacol.* 2003, 41(4):649-56.
- [2] Rosenson RS. *Expert Rev Cardiovasc Ther.* 2003, 1(4):495-505.
- [3] Schäfer K, et al. *Thromb Haemost.* 2005, 93(1):145-52.