# Rosuvastatin

**Cat. No.:** HY-17504A

**CAS No.:** 287714-41-4

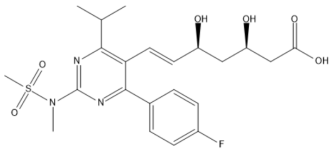
**Molecular Formula:** $C_{22}H_{28}FN_3O_6S$

**Molecular Weight:** 481.54

**Target:** HMG-CoA Reductase (HMGCR); Autophagy; Potassium Channel; Bacterial

**Pathway:** Metabolic Enzyme/Protease; Autophagy; Membrane Transporter/Ion Channel; Anti-infection

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

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| **Description** | Rosuvastatin (ZD 4522) is a competitive HMG-CoA reductase inhibitor with an $IC_{50}$ of 11 nM. Rosuvastatin potently blocks hERG current with an $IC_{50}$ of 195 nM, delayed cardiac repolarization, and thereby prolonged action potential durations (APDs) and corrected QT interval (QTc) intervals. Rosuvastatin reduces the expression of the mature hERG and the interaction of heat shock protein 70 (Hsp70) with the hERG protein. Rosuvastatin effectively lowers low-density lipoprotein (LDL) cholesterol, triglycerides, and C-reactive protein levels[1][2][3]. |
| **$IC_{50}$ & Target** | IC50: 11 nM (HMG-CoA), 195 nM (hERG)[1][2] |
| **In Vivo** | Rosuvastatin (10 mg/kg, intraperitoneal) prolonges QTc in conscious and unrestraines guinea pigs from 201±1 to 210±2 ms[2] .<br>Rosuvastatin (20 mg/kg/day, for 2 weeks) significantly reduces very low-density lipoproteins (VLDL) in diabetes mellitus rats induced by Streptozocin[4].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## CUSTOMER VALIDATION

- Front Cell Dev Biol. 2022 Mar 3;10:806081.
- Front Cell Dev Biol. 2021 May 6;9:651579.
- J Inflamm Res. 2021,14: 1537-1549.
- Front Oncol. 2021 May 10;11:595285.
- Front Oncol. 10 May 2021.

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## REFERENCES

[1]. Watanabe, M., et al., Synthesis and biological activity of methanesulfonamide pyrimidine- and N-methanesulfonyl pyrrole-substituted 3,5-dihydroxy-6-heptenoates, a novel series of HMG-CoA reductase inhibitors. Bioorg Med Chem, 1997. 5(2): p. 437-44.

[2]. Plante I, et al. Rosuvastatin blocks hERG current and prolongs cardiac repolarization. J Pharm Sci. 2012 Feb;101(2):868-78.

[3]. Feng PF, et al. Intracellular Mechanism of Rosuvastatin-Induced Decrease in Mature hERG Protein Expression on Membrane. Mol Pharm. 2019 Apr 1;16(4):1477-1488.

[4]. Carswell C.I., et al. Rosuvastatin. Drugs, 2002. 62(14): p. 2075-85; discussion 2086-7.



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