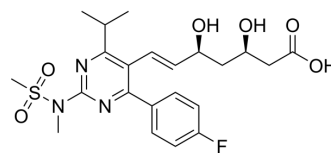


Rosuvastatin

Cat. No.:	HY-17504A
CAS No.:	287714-41-4
Molecular Formula:	C ₂₂ H ₂₈ FN ₃ O ₆ S
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

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]} .
IC₅₀ & Target	IC ₅₀ : 11 nM (HMG-CoA), 195 nM (hERG) ^{[1][2]}
In Vivo	Rosuvastatin (10 mg/kg, intraperitoneal) prolongs QTc in conscious and unrestrained guinea pigs from 201±1 to 210±2 ms ^[2] . Rosuvastatin (20 mg/kg/day, for 2 weeks) significantly reduces very low-density lipoproteins (VLDL) in diabetes mellitus rats induced by Streptozocin ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2023 Jan 31.
- Front Bioeng Biotechnol. 2022 Mar 17;10:826093.
- Front Cell Dev Biol. 2022 Mar 3;10:806081.
- Front Cell Dev Biol. 2021 May 6;9:651579.
- Eur J Pharmacol. 2023 Jul 13;955:175911.

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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.

Caution: Product has not been fully validated for medical applications. For research use only.

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