Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

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Rosuvastatin is a competitive inhibitor of HMG-CoA reductase with IC50 of 11 nM.

IC50 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 μM [2]. Rosuvastatin inhibits cholesterol biosynthesis in rat liver isolated hepatocytes with IC50 of 1.12 nM. Rosuvastatin causes approximately 10 times greater increase of mRNA of LDL receptors than pravastatin [1]. Rosuvastatin (100 μM) decreases the extent of U937 adhesion to TNF-α-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 antiatherothromhotic effects in vivo. Rosuvastatin (1.25 mg/kg) significantly inhibits thrombin-induced transmigration of monocvtes 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].