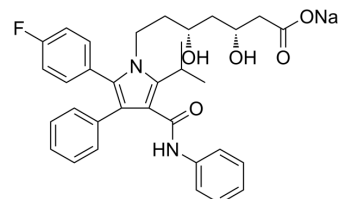


Atorvastatin sodium

Cat. No.:	HY-108257
CAS No.:	134523-01-6
Molecular Formula:	C ₃₃ H ₃₄ FN ₂ NaO ₅
Molecular Weight:	580.62
Target:	HMG-CoA Reductase (HMGCR); Autophagy
Pathway:	Metabolic Enzyme/Protease; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Atorvastatin sodium is an orally active HMG-CoA reductase inhibitor, has the ability to effectively decrease blood lipids. Atorvastatin sodium inhibits human SV-SMC proliferation and invasion with IC ₅₀ s of 0.39 μM and 2.39 μM, respectively ^{[1][2][3][4][5]} .
In Vitro	Atorvastatin sodium decreases apoptosis of myocardial cells by down-regulating GRP78, caspase-12 and CHOP expression in myocardial cells after myocardial infarction, and the endoplasmic reticulum (ER) stress is activated in response to heart failure and angiotensin II (Ang II) stimulation ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Atorvastatin (20-30 mg/kg; oral gavage; once a day; for 28 days; ApoE ^{-/-} mice) sodium significantly reduces endoplasmic reticulum (ER) stress signaling proteins, the number of apoptotic cells, and the activation of Caspase12 and Bax in the Ang II-induced ApoE ^{-/-} mice. Proinflammatory cytokines such as IL-6, IL-8, IL-1β are all remarkably inhibited after Atorvastatin sodium treatment ^[5] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Br J Pharmacol. 2006 Sep;149(1):14-22.
- [2]. Turner NA, et al. Comparison of the efficacies of five different statins on inhibition of human saphenous vein smooth muscle cell proliferation and invasion. J Cardiovasc Pharmacol. 2007 Oct;50(4):458-61.
- [3]. Nawrocki, J.W., et al., Reduction of LDL cholesterol by 25% to 60% in patients with primary hypercholesterolemia by atorvastatin, a new HMG-CoA reductase inhibitor. Arterioscler Thromb Vasc Biol, 1995. 15(5): p. 678-82.
- [4]. Song XJ, et al. Atorvastatin inhibits myocardial cell apoptosis in a rat model with post-myocardial infarction heart failure by downregulating ER stress response. Int J Med Sci. 2011;8(7):564-72.
- [5]. Li Y, et al. Inhibition of endoplasmic reticulum stress signaling pathway: A new mechanism of statins to suppress the development of abdominal aortic aneurysm. PLoS One. 2017 Apr 3;12(4):e0174821.
- [6]. Ming-Bai Hu, et al. Atorvastatin induces autophagy in MDA-MB-231 breast cancer cells. Ultrastruct Pathol. Sep-Oct 2018;42(5):409-415.

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

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