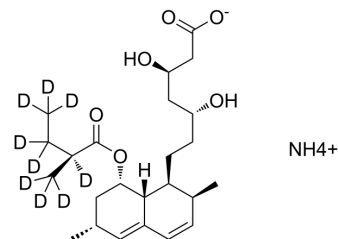


Simvastatin acid-d₉ ammonium

Cat. No.:	HY-119695AS1
Molecular Formula:	C ₂₄ H ₃₂ D ₉ NO ₆
Molecular Weight:	448.64
Target:	HMG-CoA Reductase (HMGCR); Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Simvastatin acid-d ₉ ammonium is deuterated labeled Simvastatin acid ammonium (HY-119695A). Simvastatin acid (Tenvastatin) ammonium is a potent HMG-CoA reductase (HMGCR) inhibitor. Simvastatin acid ammonium reduces Indoxyl sulfate-mediated reactive oxygen species (ROS) production in human cardiomyocytes. Simvastatin acid ammonium can also modulates OATP3A1 expression in cardiomyocytes and HEK293 cells transfected with the OATP3A1 gene ^{[1][2]} .
In Vitro	<p>Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].</p> <p>Simvastatin acid (0.1-20 μM; 24 h) significantly decreases ROS production between 8.9% and 43% in Indoxyl sulfate-treated hCM cells^[3].</p> <p>?Simvastatin acid (0.1-20 μM; 24 h) alters the protein expression of OATP3A1 in hCMs and OATP3A1-expressing HEK293 cells^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Eduardo Filipe Oliveira, et al. HMG-CoA Reductase inhibitors: an updated review of patents of novel compounds and formulations (2011-2015). *Expert Opin Ther Pat.* 2016 Nov;26(11):1257-1272.
- [2]. Atilano-Roque A, et al. Characterization of simvastatin acid uptake by organic anion transporting polypeptide 3A1 (OATP3A1) and influence of drug-drug interaction. *Toxicol In Vitro.* 2017 Dec;45(Pt 1):158-165.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

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

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