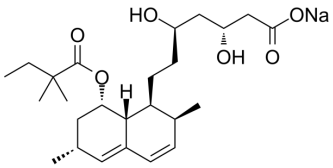
Simvastatin hydroxy acid sodium

Cat. No.:	HY-115292
CAS No.:	101314-97-0
Molecular Formula:	$C_{25}H_{39}NaO_6$
Molecular Weight:	458.56
Target:	HMG-CoA Reductase (HMGCR); Reactive Oxygen Species
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Simvastatin hydroxy acid (Tenivastatin) sodium is a potent HMG-CoA reductase (HMGCR) inhibitor. Simvastatin hydroxy acid sodium reduces Indoxyl sulfate-mediated reactive oxygen species (ROS) production in human cardiomyocytes. Simvastatin hydroxy acid sodium can also modulates OATP3A1 expression in cardiomyocytes and HEK293 cells transfected with the OATP3A1 gene[1][2].
IC_{50} & Target	HMG-CoA reductase, Reactive oxygen species[1][2]
In Vitro	Simvastatin acid (0.1-20 μM; 24 h) significantly decreases ROS production between 8.9% and 43% in Indoxyl sulfate-treated hCM cells[2]. Simvastatin acid (0.1-20 μM; 24 h) alters the protein expression of OATP3A1 in hCMs and OATP3A1-expressing HEK293 cells[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis[2]

Cell Line:	hCM and HEK293 (transfected with OATP3A1)
Concentration:	0.1, 1, 10 and 20 μM
Incubation Time:	24 h
Result:	Decreased 1.5% to 90% in OATP3A1 expression with a dose-dependent manner in both hCMs and OATP3A1-expressing cells.

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.

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

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