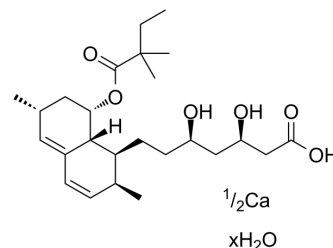


Simvastatin acid calcium hydrate

Cat. No.:	HY-119695B
CAS No.:	530112-57-3
Molecular Formula:	C ₂₅ H ₄₀ O ₆
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 acid (Tenvastatin) calcium hydrate is a potent HMG-CoA reductase (HMGCR) inhibitor. Simvastatin acid calcium hydrate reduces Indoxy sulfate-mediated reactive oxygen species (ROS) production in human cardiomyocytes. Simvastatin acid calcium hydrate can also modulates OATP3A1 expression in cardiomyocytes and HEK293 cells transfected with the OATP3A1 gene ^{[1][2]} .								
IC₅₀ & Target	HMG-CoA reductase, Reactive oxygen species ^{[1][2]}								
In Vitro	<p>Simvastatin acid (0.1-20 μM; 24 h) significantly decreases ROS production between 8.9% and 43% in Indoxy sulfate-treated hCM cells^[2].</p> <p>Simvastatin acid (0.1-20 μM; 24 h) alters the protein expression of OATP3A1 in hCMs and OATP3A1-expressing HEK293 cells^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>hCM and HEK293 (transfected with OATP3A1)</td> </tr> <tr> <td>Concentration:</td> <td>0.1, 1, 10 and 20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Decreased 1.5% to 90% in OATP3A1 expression with a dose-dependent manner in both hCMs and OATP3A1-expressing cells.</td> </tr> </table>	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.
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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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