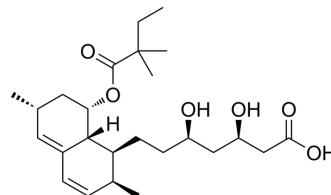


## Simvastatin acid

<b>Cat. No.:</b>	HY-119695
<b>CAS No.:</b>	121009-77-6
<b>Molecular Formula:</b>	C <sub>25</sub> H <sub>40</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	436.58
<b>Target:</b>	HMG-CoA Reductase (HMGCR); Reactive Oxygen Species
<b>Pathway:</b>	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	<p>Simvastatin acid (Tenvastatin), a hydrolysate of <a href="#">Simvastatin</a> (HY-17502), is a HMG-CoA reductase (HMGCR) inhibitor. Simvastatin acid reduces Indoxyl sulfate-mediated reactive oxygen species (ROS) production in human cardiomyocytes. Simvastatin acid can also modulates OATP3A1 expression in cardiomyocytes and HEK293 cells transfected with the OATP3A1 gene<sup>[1][2]</sup>.</p>								
<b>IC<sub>50</sub> &amp; Target</b>	HMG-CoA reductase, Reactive oxygen species <sup>[1][2]</sup>								
<b>In Vitro</b>	<p>Simvastatin acid (0.1-20 μM; 24 h) significantly decreases ROS production between 8.9% and 43% in Indoxyl sulfate-treated hCM cells<sup>[2]</sup>.</p> <p>Simvastatin acid (0.1-20 μM; 24 h) alters the protein expression of OATP3A1 in hCMs and OATP3A1-expressing HEK293 cells<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[2]</sup></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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### 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.

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

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