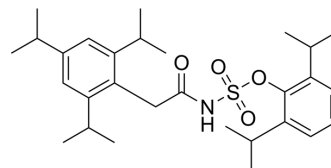


## Avasimibe

<b>Cat. No.:</b>	HY-13215		
<b>CAS No.:</b>	166518-60-1		
<b>Molecular Formula:</b>	C <sub>29</sub> H <sub>43</sub> NO <sub>4</sub> S		
<b>Molecular Weight:</b>	501.72		
<b>Target:</b>	Acyltransferase		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (199.31 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	1.9931 mL	9.9657 mL	19.9314 mL
	<b>5 mM</b>	0.3986 mL	1.9931 mL	3.9863 mL
	<b>10 mM</b>	0.1993 mL	0.9966 mL	1.9931 mL
Please refer to the solubility information to select the appropriate solvent.				
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: 7.5 mg/mL (14.95 mM); Suspended solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: 7.5 mg/mL (14.95 mM); Suspended solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: 7.5 mg/mL (14.95 mM); Clear solution; Need ultrasonic</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Avasimibe (CI-1011; PD-148515) is an orally active acyl coenzyme A-cholesterol acyltransferase (ACAT; also called SOAT) inhibitor with IC <sub>50</sub> s of 24 and 9.2 μM for ACAT1 and ACAT2, respectively <sup>[1]</sup> . Avasimibe can be used for the research of prostate cancer <sup>[2]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	ACAT1 24 μM (IC <sub>50</sub> )	ACAT2 9.2 μM (IC <sub>50</sub> )

## In Vitro

Avasimibe (0, 0.25, 5, 10, 20, 40 and 80  $\mu\text{M}$ ; for 1, 2, and 3 days) reduces proliferation in the prostate cancer (PCa) cells<sup>[2]</sup>.  
?Avasimibe (10 and 20  $\mu\text{M}$ ; 48 h) reduces the expression of  $\beta$ -catenin, Vimentin, N-cadherin, Snail and MMP9, which are tightly associated with epithelial-mesenchymal transition (EMT)<sup>[2]</sup>.  
?Avasimibe (10 and 20  $\mu\text{M}$ ) trigger cell cycle arrest via the E2F-1 signalling pathway in prostate cancer. Avasimibe induces G1 phase cell cycle arrest of PCa cells<sup>[2]</sup>.  
?Avasimibe (10 and 20  $\mu\text{M}$ ) inhibits the metastasis of PCa cells<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### Cell Viability Assay<sup>[2]</sup>

Cell Line:	PCa cells (PC-3 and DU 145)
Concentration:	0, 0.25, 5, 10, 20, 40 and 80 $\mu\text{M}$
Incubation Time:	1, 2, and 3 days
Result:	Dose dependently inhibited PC-3 and DU 145 cell viability.

### Western Blot Analysis<sup>[2]</sup>

Cell Line:	PCa cells (PC-3 and DU 145)
Concentration:	10 and 20 $\mu\text{M}$
Incubation Time:	48 hours
Result:	Reduced protein levels of EMT-related proteins ( $\beta$ -catenin, Vimentin, N-cadherin, Snail, MMP9 and E-cadherin).

### Cell Cycle Analysis<sup>[2]</sup>

Cell Line:	PCa cells (PC-3 and DU 145)
Concentration:	10 and 20 $\mu\text{M}$
Incubation Time:	48 hours
Result:	Induced G1 phase cycle arrest and altered the G1 phase-related protein levels in PCa cells.

## In Vivo

Avasimibe (30 mg/kg, intraperitoneally injected on alternate days for 7 weeks) suppresses PCa cell growth and metastasis in vivo. Avasimibe has good biocompatibility and low toxicity<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	SPF male mice (BALB/c-nude, 4 weeks old) bearing PCa cells <sup>[2]</sup>
Dosage:	30 mg/kg
Administration:	Intraperitoneally injected for 7 weeks
Result:	Reduced tumour volume compared with that of the control group. Inhibited PCa growth and migration in vivo.

## CUSTOMER VALIDATION

- Redox Biol. 2023 Jun.

- Metabolism. 2021 Aug 6;154861.
- Cell Death Dis. 2021 Mar 10;12(3):254.
- Biomed Pharmacother. 2020 Oct;130:110508.
- Cancer Cell Int. 2021 Aug 30;21(1):461.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

---

[1]. Taichi Ohshiro, et al. Pyripyropene A, an acyl-coenzyme A:cholesterol acyltransferase 2-selective inhibitor, attenuates hypercholesterolemia and atherosclerosis in murine models of hyperlipidemia. *Arterioscler Thromb Vasc Biol.* 2011 May;31(5):1108-15.

[2]. Kangping Xiong, et al. The cholesterol esterification inhibitor avasimibe suppresses tumour proliferation and metastasis via the E2F-1 signalling pathway in prostate cancer. *Cancer Cell Int.* 2021 Aug 30;21(1):461.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA