



# SZABO SCANDIC

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Laborgeräte & Service

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### Zuschläge

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### SZABO-SCANDIC HandelsgmbH

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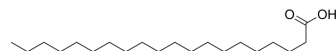
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## Arachidic acid

<b>Cat. No.:</b>	HY-W004260		
<b>CAS No.:</b>	506-30-9		
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>40</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	312.53		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 4.76 mg/mL (15.23 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	3.1997 mL	15.9985 mL	31.9969 mL
		5 mM	0.6399 mL	3.1997 mL	6.3994 mL
10 mM		0.3200 mL	1.5998 mL	3.1997 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: ≥ 1 mg/mL (3.20 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 1 mg/mL (3.20 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 1 mg/mL (3.20 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Arachidonic acid (Icosanoic acid), an orally active long-chain fatty acid, is present in all mammalian cells, typically esterified to membrane phospholipids, and is one of the most abundant polyunsaturated fatty acids present in human tissue. Moreover, Arachidonic acid is an important mediator of inflammation <sup>[1][2][3]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	Microbial Metabolite	Human Endogenous Metabolite
<b>In Vitro</b>	Arachidonic acid (0-100 μM, 24-72 h) decreases the viability of HL-60 cells in time- and dose-dependent manner <sup>[3]</sup> .	

Arachidonic acid (0-100  $\mu$ M, 6-24 h) reduces the G0-G1, S and G2-M DNA with increasing concentration and exposure time in HL-60 cells<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Arachidonic acid (240 mg/kg, p.o., daily, for 13 weeks) can increase reactive spontaneous motor activity and decrease motor function by aggravation of n-3 fatty acid deficiency in CD-1 mice<sup>[4]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Free Radic Biol Med. 2023 Mar 28;S0891-5849(23)00133-8.

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## REFERENCES

- [1]. Koppová I, et al. Analysis of fatty acid composition of anaerobic rumen fungi. Folia Microbiol (Praha). 2008;53(3):217-20.
- [2]. Martin SA, et al. The discovery and early structural studies of arachidonic acid. J Lipid Res. 2016 Jul;57(7):1126-32.
- [3]. Pompeia C, et al. Arachidonic acid cytotoxicity in leukocytes: implications of oxidative stress and eicosanoid synthesis. Biol Cell. 2002 Sep;94(4-5):251-65.
- [4]. Harauma A, et al. Effect of long-term administration of arachidonic acid on n-3 fatty acid deficient mice. Prostaglandins Leukot Essent Fatty Acids. 2015 Apr;95:41-5.

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

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