



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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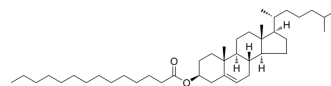
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## Cholesterol myristate

<b>Cat. No.:</b>	HY-N2338		
<b>CAS No.:</b>	1989-52-2		
<b>Molecular Formula:</b>	C <sub>41</sub> H <sub>72</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	597.01		
<b>Target:</b>	nAChR; GABA Receptor; Potassium Channel; Endogenous Metabolite		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

Ethanol : 3.33 mg/mL (5.58 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.6750 mL	8.3751 mL	16.7501 mL
5 mM	0.3350 mL	1.6750 mL	3.3500 mL
10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Cholesterol myristate is a natural steroid present in traditional Chinese medicine. Cholesterol myristate binds to several ion channels such as the nicotinic acetylcholine receptor, GABAA receptor, and the inward-rectifier potassium ion channel.

#### IC<sub>50</sub> & Target

Human Endogenous Metabolite

#### In Vitro

Mesenchymal stem cells (MSCs) transfected by the Id1 promoter reporter construct, cholesterol myristate increases the activity of Id1 promoter. Cholesterol myristate inhibits the apoptosis of MSCs induced by serum-free. Cholesterol myristate increases the expression of Id1 and its target gene bcl-x/l in MSCs treated with serum-free. Moreover, noggin, a BMP antagonist, reduces the anti-apoptotic effects of cholesterol myristate<sup>[1]</sup>. Cholesterol myristate inhibits the apoptosis of PC12 cells induced in serum-free condition. Cholesterol myristate significantly increases the expression of BMP4, BMPRIA, p-Smad1/5/8, Id1 and its antiapoptotic target gene Bcl-xL in PC12 cells treated in serum-free condition<sup>[1]</sup>.

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

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## PROTOCOL

### Cell Assay <sup>[1]</sup>

MSCs are cultured with or without serum in 96-well plates and treated with cholesterol myristate in various concentrations (0, 30 and 300 µg/mL) for 3 days. Each sample is repeated in five independent wells and is incubated for 72 h. After incubation, 20 µL MTT (5 mg/mL) is added and the culture is incubated for a further 4 h. The culture medium is discarded and replaced with 150 µL DMSO. The absorbance at 490nm is measured<sup>[1]</sup>.

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

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## REFERENCES

- [1]. Chen DF, et al. Cholesterol myristate suppresses the apoptosis of mesenchymal stem cells via upregulation of inhibitor of differentiation. *Steroids*. 2010 Dec 12;75(13-14):1119-26.
- [2]. Chen DF, et al. BMP-Id pathway targeted by cholesterol myristate suppresses the apoptosis of PC12 cells. *Brain Res*. 2011 Jan 7;1367:33-42.
- [3]. Levitan I, et al. Cholesterol binding to ion channels. *Front Physiol*. 2014 Feb 26;5:65.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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