



# 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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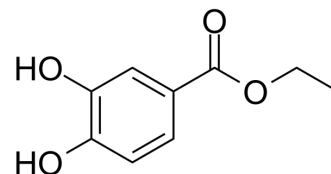
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## Ethyl 3,4-dihydroxybenzoate

<b>Cat. No.:</b>	HY-W016409
<b>CAS No.:</b>	3943-89-3
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>10</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	182.18
<b>Target:</b>	HIF/HIF Prolyl-Hydroxylase; Reactive Oxygen Species; NO Synthase; Autophagy; Apoptosis
<b>Pathway:</b>	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Autophagy; Apoptosis
<b>Storage:</b>	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (548.91 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	5.4891 mL	27.4454 mL	54.8908 mL
	<b>5 mM</b>	1.0978 mL	5.4891 mL	10.9782 mL
	<b>10 mM</b>	0.5489 mL	2.7445 mL	5.4891 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: ≥ 2.5 mg/mL (13.72 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Ethyl 3,4-dihydroxybenzoate (Ethyl protocatechuate), an antioxidant, is a prolyl-hydroxylase inhibitor found in the testa of peanut seeds. Ethyl 3,4-dihydroxybenzoate protects myocardium by activating NO synthase and generating mitochondrial ROS. Ethyl 3,4-dihydroxybenzoate induces cell autophagy and apoptosis in ESCC cells. Ethyl 3,4-dihydroxybenzoate is a collagen synthesis inhibitor and has a bone protecting-effect <sup>[1][2][3][4]</sup> .
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### REFERENCES

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- [1]. Bo Han, et al. A prolyl-hydroxylase inhibitor, ethyl-3,4-dihydroxybenzoate, induces cell autophagy and apoptosis in esophageal squamous cell carcinoma cells via up-regulation of BNIP3 and N-myc downstream-regulated gene-1. PLoS One. 2014 Sep 18;9(9):e1072
- [2]. Sebastian Philipp, et al. Desferoxamine and ethyl-3,4-dihydroxybenzoate protect myocardium by activating NOS and generating mitochondrial ROS. Am J Physiol Heart Circ Physiol. 2006 Jan;290(1):H450-7.
- [3]. Byeong-Ju Kwon, et al. Ethyl-3,4-dihydroxybenzoate with a dual function of induction of osteogenic differentiation and inhibition of osteoclast differentiation for bone tissue engineering. Tissue Eng Part A. 2014 Nov;20(21-22):2975-84.
- [4]. D Nandan, et al. Ethyl-3,4-dihydroxybenzoate inhibits myoblast differentiation: evidence for an essential role of collagen. J Cell Biol. 1990 May;110(5):1673-9.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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