



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

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

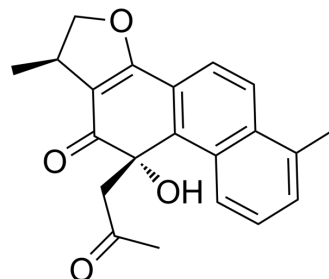
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Danshenol A

Cat. No.:	HY-122917
CAS No.:	189308-08-5
Molecular Formula:	C ₂₁ H ₂₀ O ₄
Molecular Weight:	336.38
Target:	Aldose Reductase; Reactive Oxygen Species
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 12.5 mg/mL (37.16 mM)					
	* "≥" means soluble, but saturation unknown.					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	2.9728 mL	14.8641 mL	29.7283 mL
			5 mM	0.5946 mL	2.9728 mL	5.9457 mL
10 mM			0.2973 mL	1.4864 mL	2.9728 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1.25 mg/mL (3.72 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (3.72 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Danshenol A, an abietane-type diterpenoid, is an aldose reductase (AR) inhibitor with an IC ₅₀ of 0.1 μM. Danshenol A can protect endothelial cells from oxidative stress by directly scavenging ROS. Danshenol A has anti-inflammatory and antitumor properties. Danshenol A can be used for atherosclerosis research ^{[1][2][3][4]} .
IC ₅₀ & Target	IC ₅₀ : 0.1 μM (Aldose reductase) ^[3]
In Vitro	Danshenol A (10 nM; pretreatment for 1 h) alone showed no effect on the ICAM-1 expression at both mRNA and protein levels. TNF-α-induced ICAM-1 expression and subsequent adhesion of monocytes, as well as elevated reactive oxygen species (ROS) generation and NOX4 expression are all significantly reversed by Danshenol A. Danshenol A inhibits TNF-α-induced ICAM-1 expression and subsequent monocyte adhesion to endothelial cells through the NOX4-dependent IKKβ/NF-

κ B pathway^[1].

Danshenol A (1, 3, and 10 μ M; pretreated for 35 min) restores apoptosis of cardiomyocytes induced by angiotensin II. Besides, Danshenol A inhibits mitochondrial redox signaling pathways in cardiomyocytes^[2].

Danshenol A shows inhibited growth of K562 (IC₅₀ = 0.53 μ g/mL), T-24 (IC₅₀ = 7.94 μ g/mL), QGY (IC₅₀ = 4.65 μ g/mL) and Me180 (IC₅₀ = 6.89 μ g/mL) cell lines^[4].

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

Western Blot Analysis^[1]

Cell Line:	HUVEC cells
Concentration:	10 nM
Incubation Time:	Pretreatment for 1 h
Result:	Showed no effect on the ICAM-1 expression at both mRNA and protein levels.

In Vivo

Danshenol A (0.3-3 mg/kg; p.o; daily; for 12 weeks) ameliorates blood pressure, cardiac injury, and myocardial collagen volume and improved cardiac function in SHR rats. Danshenol A repairs the structure/function of the mitochondria, alleviated oxidative stress in the myocardium^[2].

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

Animal Model:	Forty male spontaneously hypertensive rats (SHR) and eight male Wistar-Kyoto (WKY) rats at the age of 16 weeks ^[2]
Dosage:	0.3 mg/kg, 1 mg/kg, 3 mg/kg
Administration:	Orally administration; daily; for 12 weeks
Result:	Ameliorated blood pressure, cardiac injury, and myocardial collagen volume and improved cardiac function.

REFERENCES

[1]. Wenwen Zhao, et al. Danshenol A inhibits TNF- α -induced expression of intercellular adhesion molecule-1 (ICAM-1) mediated by NOX4 in endothelial cells. *Sci Rep.* 2017 Oct 11;7(1):12953.

[2]. Kai Chen, et al. Danshenol A Alleviates Hypertension-Induced Cardiac Remodeling by Ameliorating Mitochondrial Dysfunction and Suppressing Reactive Oxygen Species Production. *Oxid Med Cell Longev.* 2019 Sep 11;2019:2580409.

[3]. Y Tezuka, et al. Aldose reductase inhibitory constituents of the root of *Salvia miltiorhiza* Bunge. *Chem Pharm Bull (Tokyo).* 1997 Aug;45(8):1306-11.

[4]. Gang Xu, et al. Two new abietane diterpenoids from *Salvia yunnanensis*. *Planta Med.* 2006 Jan;72(1):84-6.

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

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