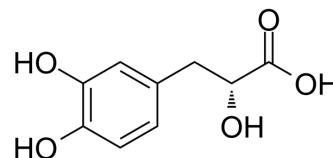


Danshensu

Cat. No.:	HY-N1913		
CAS No.:	76822-21-4		
Molecular Formula:	C ₉ H ₁₀ O ₅		
Molecular Weight:	198.17		
Target:	Keap1-Nrf2; Autophagy; Apoptosis		
Pathway:	NF-κB; Autophagy; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : 5 mg/mL (25.23 mM; Need ultrasonic)
 DMSO : 1 mg/mL (5.05 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	5.0462 mL	25.2309 mL	50.4617 mL
	5 mM	1.0092 mL	5.0462 mL	10.0923 mL
	10 mM	0.5046 mL	2.5231 mL	5.0462 mL

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

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 10 mg/mL (50.46 mM); Clear solution; Need ultrasonic and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Danshensu, an active ingredient of *Salvia miltiorrhiza*, shows wide cardiovascular benefit by activating Nrf2 signaling pathway.

In Vitro

Danshensu (DSS) significantly decreases the level of the marker enzymes (creatinase and lactate dehydrogenase) from the coronary effluents and myocardial infarction size. This could markedly contribute to the recovery of cardiac function after I/R injury. DSS also has ROS scavenging activity and boosts endogenous antioxidants such as SOD, CAT, MDA, GSH-PX and HO-1 activities by activating nuclear factor erythroid-2-related factor 2 (Nrf2) signaling pathway which is mediated by Akt and ERK1/2 in western blot analysis^[2].

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

In Vivo

Acute treatment with a single dose of danshensu in rats with normal tHcy does not change plasma tHcy. In contrast,

danshensu significantly lowers tHcy in rats with elevated tHcy. The relatively higher cysteine and glutathione levels after treatment with danshensu indicates that its tHcy-lowering effect is via increased activity of the trans-sulphuration pathway [1].

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

PROTOCOL

Animal Administration ^[1]

All chemicals are dissolved in saline, except for tolcapone which is dissolved in saline containing 20% (v/v) PEG 200. During experiments, rats are fasted overnight and randomly assigned into different groups. About 200 µL blood is taken from orbital sinus alternatively after ethyl ether anaesthesia, and then the eye is quickly sterilized with alcohol and pressed with cotton. Blood samples are immediately collected into a polypropylene tube containing heparin-Na and centrifuged at 5000 g at 5°C for 3 min. Prepared plasma samples are kept at -20°C and analysed within 48 h.

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

CUSTOMER VALIDATION

- Phytomedicine. 2023 Mar 5;113:154743.

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REFERENCES

[1]. YG Cao, et al. Beneficial effects of danshensu, an active component of *Salvia miltiorrhiza*, on homocysteine metabolism via the trans-sulphuration pathway in rats. *Br J Pharmacol.* 2009 Jun; 157(3): 482–490.

[2]. Yu J, et al. Danshensu protects isolated heart against ischemia reperfusion injury through activation of Akt/ERK1/2/Nrf2 signaling. *Int J Clin Exp Med.* 2015 Sep 15;8(9):14793-804.

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

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