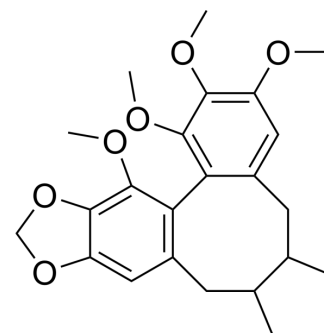


## Schisandrin B

<b>Cat. No.:</b>	HY-N0089		
<b>CAS No.:</b>	61281-37-6		
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>28</sub> O <sub>6</sub>		
<b>Molecular Weight:</b>	400.46		
<b>Target:</b>	Autophagy; Reactive Oxygen Species		
<b>Pathway:</b>	Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (249.71 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	2.4971 mL	12.4856 mL	24.9713 mL
	<b>5 mM</b>	0.4994 mL	2.4971 mL	4.9943 mL
	<b>10 mM</b>	0.2497 mL	1.2486 mL	2.4971 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 (6.24 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 (6.24 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (6.24 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Schisandrin B (γ-Schisandrin) is a biphenylcyclooctadiene derivative isolated from Schisandra chinensis and has been shown to have antioxidant effects on the liver and heart of rodents.
<b>In Vitro</b>	Schisandrin B modulates cellular redox status and activates Nrf2 and its dependent genes in lymphocytes <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Real Time qPCR <sup>[1]</sup>

	Cell Line:	lymphocyte
	Concentration:	10-50 $\mu$ M
	Incubation Time:	4 h
	Result:	Increase in relative mRNA copy number of Nrf2, HO-1, TrxR1, and GCLC. Increased basal ROS levels and decreased GSH/GSSG ratio.
<b>In Vivo</b>	Schisandrin B decreases responsiveness to Con A and anti-CD3/CD28 mAb stimulation <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Mice endotoxic shock model <sup>[1]</sup>
	Dosage:	80 mg/kg
	Administration:	Intraperitoneally injected (i.p.), single dose
	Result:	Decreased proliferation and secretion of the proinflammatory cytokines IL-2, IL-6, and IFN- $\gamma$ .

## CUSTOMER VALIDATION

- Biomater Sci. 2020 Jan 1;8(1):201-211.
- Front Pharmacol. 2020 Jul 31;11:1175.
- Front Cell Dev Biol. 2021 Nov 10;9:763864.
- Eur J Pharmacol. 2019 Jul 15;855:10-19.
- J Tissue Eng Regen Med. 2023 Mar 22.

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## REFERENCES

- [1]. Checker R, et al. Schisandrin B exhibits anti-inflammatory activity through modulation of the redox-sensitive transcription factors Nrf2 and NF- $\kappa$ B. Free Radic Biol Med. 2012 Oct 1;53(7):1421-30.
- [2]. Lam PY, et al. Schisandrin B as a hormetic agent for preventing age-related neurodegenerative diseases. Oxid Med Cell Longev. 2012;2012:250825.
- [3]. Zeng KW, et al. Schisandrin B exerts anti-neuroinflammatory activity by inhibiting the Toll-like receptor 4-dependent MyD88/IKK/NF- $\kappa$ B signaling pathway in lipopolysaccharide-induced microglia. Eur J Pharmacol. 2012 Oct 5;692(1-3):29-37.
- [4]. Liu Z, et al. Schisandrin B attenuates cancer invasion and metastasis via inhibiting epithelial-mesenchymal transition. PLoS One. 2012;7(7):e40480.
- [5]. Zhu S, et al. Protective effect of schisandrin B against cyclosporine A-induced nephrotoxicity in vitro and in vivo. Am J Chin Med. 2012;40(3):551-66.

**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](mailto:tech@MedChemExpress.com)

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