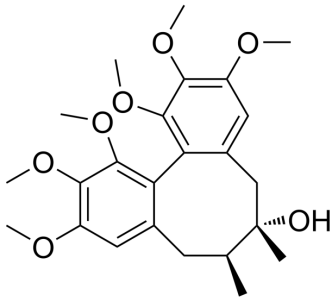
Schisandrin

Cat. No.:	HY-N0691
CAS No.:	7432-28-2
Molecular Formula:	$C_{24}H_{32}O_7$
Molecular Weight:	432.51
Target:	Autophagy
Pathway:	Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 1 mg/mL (2.31 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3121 mL	11.5604 mL	23.1209 mL
5 mM	---	---	---
10 mM	---	---	---

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: ≥ 0.28 mg/mL (0.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Schisandrin (Schizandrin), a dibenzocyclooctadiene lignan, is isolated from the fruit of Schisandra chinensis Baill. Schisandrin exhibits antioxidant, hepatoprotective, anti-cancer and anti-inflammatory activities. Schisandrin also can reverses memory impairment in rats[1][2][3].

In Vitro

Schisandrin (10-100 μM; pretreated for 2 h) inhibits LPS-stimulated NO production, iNOS protein and mRNA expression in a dose-dependent manner in RAW 264.7 cells[1].

Schisandrin (25-100 μM; pretreated for 2 h) inhibits prostaglandin E2 production, COX-2 protein and mRNA expression in LPS-stimulated RAW 264.7 macrophages[1].

Schisandrin inhibits the SK-HEP-1, SNU-638, and T47D cells proliferation, with IC_{50}s of 42.0, 53.1, and 40.0 μM, respectively[3].

Schisandrin (10-60 μM; 48 h) enhances Doxorubicin -induced apoptosis and selectively reverses MCF-7/DOX resistance[4].

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

Cell Viability Assay[1]

Cell Line:	RAW 264.7 macrophages
Concentration:	12.5, 25, 50, 100 μM
Incubation Time:	Pretreated for 2 h and then incubated with LPS (1 μg/mL) for 18 h
Result:	Markedly decreased iNOS protein expression a dose-dependent manner. Significantly inhibited COX-2 protein expression.

In Vivo

Schisandrin (10-100 mg/kg; a single i.p.) inhibits acetic acid-induced peritoneal vascular permeability and reduces the carrageenan-induced paw edema of mice[1].

Schisandrin (1-10 mg/kg; a single p.o.) significantly reverses the Scopolamine-induced impairment of spatial memory and passive avoidance response, and enhances tremors induced by Oxotremorine in rats[2].

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

Animal Model:	Male ICR mice (4-weeks) were treated with λ-carrageenan by intraperitoneal injection into the right hind paw[1]
Dosage:	100, 200 mg/kg
Administration:	A single i.p.
Result:	Inhibited paw edema by 33.43 % (100 mg/kg) and 57.38 % (200 mg/kg) at 3 h.

CUSTOMER VALIDATION

- Int Immunopharmacol. 2023 Jun 28;122:110502.
- Eur J Pharmacol. 2019 Jul 15;855:10-19.

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REFERENCES

[1]. Guo LY, et, al. Anti-inflammatory effects of schisandrin isolated from the fruit of Schisandra chinensis Baill. Eur J Pharmacol. 2008 Sep 4;591(1-3):293-9.

[2]. Egashira N, et, al. Schizandrin reverses memory impairment in rats. Phytother Res. 2008 Jan;22(1):49-52.

[3]. Min HY, et, al. Antiproliferative effects of dibenzocyclooctadiene lignans isolated from Schisandra chinensis in human cancer cells. Bioorg Med Chem Lett. 2008 Jan 15;18(2):523-6.

[4]. Zhang ZL, et, al. Schisandrin A reverses doxorubicin-resistant human breast cancer cell line by the inhibition of P65 and Stat3 phosphorylation. Breast Cancer. 2018 Mar;25(2):233-242.

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