

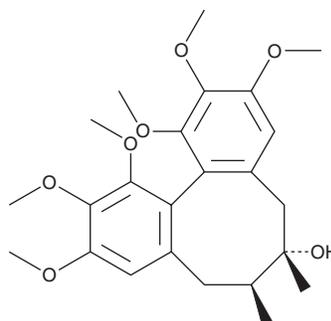
# PRODUCT INFORMATION



## Schizandrin

Item No. 27211

**CAS Registry No.:** 7432-28-2  
**Formal Name:** (6S,7S,12aR)-5,6,7,8-tetrahydro-1,2,3,10,11,12-hexamethoxy-6,7-dimethyl-dibenzo[a,c]cycloocten-6-ol  
**Synonyms:** (+)-Schizandrin, Schizandrol A  
**MF:** C<sub>24</sub>H<sub>32</sub>O<sub>7</sub>  
**FW:** 432.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 218, 252 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Schisandra chinensis*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Schizandrin is supplied as a crystalline solid. A stock solution may be made by dissolving the schizandrin in the solvent of choice, which should be purged with an inert gas. Schizandrin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of schizandrin in these solvents is approximately 2, 5, and 30 mg/ml, respectively.

Schizandrin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, schizandrin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Schizandrin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Schizandrin is a dibenzocyclooctadiene lignan and a major component of *S. chinensis* and has diverse biological activities.<sup>1-5</sup> It induces cell cycle arrest at the G<sub>0</sub>/G<sub>1</sub> phase and inhibits growth of T47D and MDA-MB-231 breast cancer cells when used at a concentration of 100 μM.<sup>1</sup> Schizandrin (10 and 100 μM) prevents glutamate-induced cytotoxicity, inhibits production of nitric oxide (NO) and reactive oxygen species (ROS), and preserves the mitochondrial membrane potential in isolated rat cortical cells.<sup>2</sup> It reduces apoptosis induced by cisplatin (Item No. 13119) in HK-2 human kidney cells.<sup>3</sup> *In vivo*, schizandrin (1 and 10 mg/kg, p.o.) reverses scopolamine-induced impairment of spatial memory and the passive avoidance response in rats.<sup>4</sup> It enhances oxotremorine-induced tremors in mice. Schizandrin (10 mg/kg) reduces serum levels of IgE, IgG1, IL-4, and IFN-γ in an ovalbumin-sensitized mouse model of allergy.<sup>5</sup>

### References

1. Kim, S.-J., Min, H.-Y., Lee, E.J., et al. *Phytother. Res.* **24**(2), 193-197 (2010).
2. Cheng, H.-Y., Hsieh, M.-T., Wu, C.-R., et al. *J. Pharmacol. Sci.* **107**(1), 21-31 (2008).
3. Bunel, V., Antoine, M.-H., Nortier, J., et al. *J. Appl. Toxicol.* **34**(12), 1311-1319 (2013).
4. Egashira, N., Kurauchi, K., Iwasaki, K., et al. *Phytother. Res.* **22**(1), 49-52 (2008).
5. Han, N.-R., Moon, P.-D., Kim, N.-R., et al. *Am. J. Chin. Med.* **45**(1), 159-172 (2017).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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