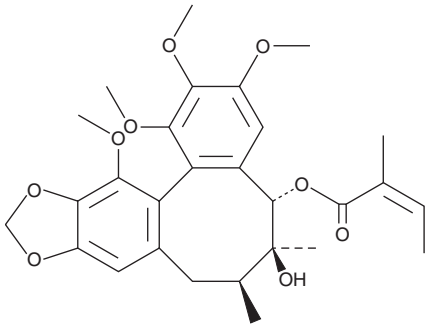
PRODUCT INFORMATION

Schisantherin B

Item No. 26716

CAS Registry No.:	58546-55-7
Formal Name:	(2Z)-2-methyl-2-butenoic acid, (5S,6S,7S,13aS)-5,6,7,8-tetrahydro-6-hydroxy-1,2,3,13-tetramethoxy-6,7-dimethylbenzo[3,4]cyclooct[1,2-f][1,3]benzodioxol-5-yl ester
Synonyms:	Gomisin B, Schizantherin B, Wuweizi ester B
MF:	$C_{28}H_{34}O_9$
FW:	514.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 219 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

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

Schisantherin B is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, schisantherin B should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Schisantherin B 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

Schisantherin B (STB) is a lignan originally isolated from *S. sphenanthera* fruit.[1] It inhibits formation of advanced glycation end products (AGEs) *in vitro*.[2] STB (0.1 mg/kg) decreases escape latency in the Morris water maze and increases spontaneous alternation in the Y-maze in a mouse model of Alzheimer's disease induced by amyloid-β (1-42) (Item No. 20574).[3] It increases glial expression of glutamate transporter 1 (GLP-1) and decreases immobility time in the forced swim test (FST) in mice, indicating antidepressant-like activity.[4] STB also increases spontaneous alternation in the Y-maze in a mouse model of stress-induced short-term learning impairment induced by the FST.

References

1. Liu, C.S., Fang, S.D., Huang, M.F., *et al.* Studies on the active principles of Schisandra sphenanthera Rehd. et Wils. The structures of schisantherin A, B, C, D, E, and the related compounds. *Sci. Sin.* **21(4),** 483-502 (1978).
2. Poornima, B., Kumar, D.A., Siva, B., *et al.* Advanced glycation end-products inhibitors isolated from *Schisandra grandiflora*. *Nat. Prod. Res.* **30(4)**, 493-496 (2016).
3. Xu, M., Dong, Y., Wan, S., *et al.* Schisantherin B ameliorates $A\beta_{1-42}$-induced cognitive decline via restoration of GLT-1 in a mouse model of Alzheimer's disease. *Physiol. Behav.* **167**, 265-273 (2016).
4. Xu, M., Xiao, F., Wang, M., *et al.* Schisantherin B improves the pathological manifestations of mice caused by behavior desperation in different ages-depression with cognitive impairment. *Biomol. Ther. (Seoul)* **27(2),** 160-167 (2019).

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