

PRODUCT INFORMATION



Liensinine

Item No. 43570

CAS Registry No.: 2586-96-1
Formal Name: 4-[[[(1R)-1,2,3,4-tetrahydro-6,7-dimethoxy-2-methyl-1-isoquinolinyl]methyl]-2-[[[(1R)-1,2,3,4-tetrahydro-1-[[4-hydroxy phenyl]methyl]-6-methoxy-2-methyl-7-isoquinolinyl]oxy]-phenol

MF: C₃₇H₄₂N₂O₆

FW: 610.8

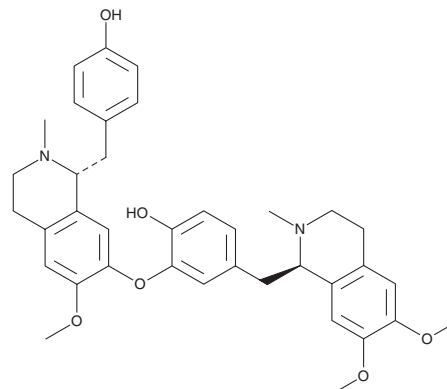
Purity: ≥98%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Plant/*Nelumbo nucifera* Gaertn.



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

Laboratory Procedures

Liensinine is supplied as a solid. A stock solution may be made by dissolving the liensinine in the solvent of choice, which should be purged with an inert gas. Liensinine is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

Description

Liensinine is an isoquinoline alkaloid that has been found in *N. nucifera* and has diverse biological activities.¹⁻³ It is an inhibitor of voltage-gated potassium channel 10.1 (K_v10.1; IC₅₀ = 0.24 μM).² It is selective for K_v10.1 over K_v11.1 (IC₅₀ = 67 μM), K_v7.1 at 10 μM, and inward-rectifier potassium channel 2.1 (K_v2.1) at 10 μM. Liensinine is cytotoxic to A549, NCI H520, and SPC-A1 non-small cell lung cancer (NSCLC) cells when used at concentrations ranging from 20 to 100 μM and induces apoptosis and autophagosome accumulation in A549 and SPC-A1 cells at 20 μM.³ It also reduces the proliferation and migration of HepG2 and Huh-7 hepatocellular carcinoma cells in a concentration-dependent manner.² Liensinine (0.6 and 3 mg/kg) reduces tumor growth in a HepG2 mouse xenograft model. It reduces signs of renal damage, levels of blood urea nitrogen (BUN) and serum creatinine, and mRNA expression of *IL-1b*, *TNF-α*, *IL-6*, and *NOS2I* in a mouse model of LPS-induced acute kidney injury and sepsis.¹

References

1. Zhang, W., Chen, H., Xu, Z., et al. Liensinine pretreatment reduces inflammation, oxidative stress, apoptosis, and autophagy to alleviate sepsis acute kidney injury. *Int. Immunopharmacol.* **122**, 110563 (2023).
2. Ma, B., Shi, S., Guo, W., et al. Liensinine, a novel and food-derived compound, exerts potent antihepatoma efficacy via inhibiting the Kv10.1 channel. *J. Agric. Food Chem.* **72(9)**, 4689-4702 (2024).
3. Chang, M., Ding, S., Dong, X., et al. Liensinine inhibits cell growth and blocks autophagic flux in nonsmall-cell lung cancer. *J. Oncol.* **2022**, 1533779 (2022).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM