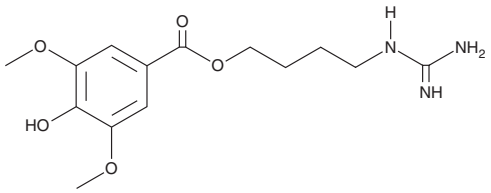
PRODUCT INFORMATION

Leonurine

Item No. 26850

CAS Registry No.:	24697-74-3
Formal Name:	4-hydroxy-3,5-dimethoxy-benzoic acid, 4-[(aminoiminomethyl)amino]butyl ester
Synonym:	SCM 198
MF:	$C_{14}H_{21}N_3O_5$
FW:	311.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 219, 269 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Leonurus artemisia*



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

Laboratory Procedures

Leonurine is supplied as a crystalline solid. A stock solution may be made by dissolving the leonurine in the solvent of choice, which should be purged with an inert gas. Leonurine has a solubility of approximately 3 mg/ml in DMSO. Leonurine is also slightly soluble in ethanol.

Description

Leonurine is an alkaloid that has been found in *H. leonuri* and has diverse biological activities.[1-4] It reduces infarct size and collagen deposition and inhibits apoptosis of cardiomyocytes in a coronary artery ligation-induced rat model of myocardial infarction when administered at a dose of 15 mg/kg per day.[2] Leonurine (200 mg/kg per day) increases hepatic levels of superoxide dismutase (SOD) and glutathione (GSH), reduces serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels, and inhibits hepatic fibrosis in a diet-induced mouse model of non-alcoholic steatohepatitis (NASH).[3] It inhibits LPS-induced increases in TNF-α, IL-1β, and IL-6 levels in the serum of broiler chicks when administered at a dose of 120 mg/kg.[4]

References

1. Zhu, Y.Z., Wu, W., Zhu, Q., *et al.* Discovery of Leonuri and therapeutical applications: From bench to bedside. *Pharmacol. Ther.* **188**, 26-35 (2018).
2. Xu, L., Jiang, X., Wei, F., *et al.* Leonurine protects cardiac function following acute myocardial infarction through anti-apoptosis by the PI3K/AKT/GSK3β signaling pathway. *Mol. Med. Rep.* **18(2)**, 1582-1590 (2018).
3. Zhang, L., Li, H.-X., Pan, W.-S., *et al.* Novel hepatoprotective role of Leonurine hydrochloride against experimental non-alcoholic steatohepatitis mediated *via* AMPK/SREBP1 signaling pathway. *Biomed. Pharmacother.* **110**, 571-581 (2019).
4. Yang, L., Liu, G., Zhu, X., *et al.* The anti-inflammatory and antioxidant effects of leonurine hydrochloride after lipopolysaccharide challenge in broiler chicks. *Poult. Sci.* **98(4)**, 1648-1657 (2019).

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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