

PRODUCT INFORMATION



Sophocarpine

Item No. 29598

CAS Registry No.: 6483-15-4
Formal Name: (7aS,13aR,13bR,13cS)-
2,3,6,7,7a,8,13,13a,13b,13c-decahydro-
1H,5H,10H-dipyrido[2,1-f:3',2',1'-ij]
[1,6]naphthyridin-10-one

Synonym: 13,14-Dehydromatrine

MF: C₁₅H₂₂N₂O

FW: 246.4

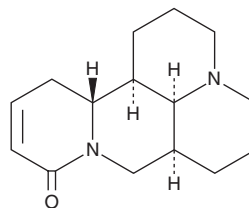
Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Plant/*Macleaya cordata* (Willd.) R. Br.



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

Laboratory Procedures

Sophocarpine is supplied as a crystalline solid. A stock solution may be made by dissolving the sophocarpine in the solvent of choice, which should be purged with an inert gas. Sophocarpine is soluble in organic solvents such as ethanol and DMSO. The solubility of sophocarpine in these solvents is approximately 1 and 2 mg/ml, respectively.

Description

Sophocarpine is an alkaloid that has been found in *S. flavescens* roots and has diverse biological activities.¹⁻⁵ It is cytotoxic to HL-60, U937, K562, EC109, A549, and HepG2 cancer cells (IC₅₀s = 1.64-12.86 mM).¹ Sophocarpine is nematocidal against *B. xylophilus* *in vitro*.² *In vivo*, sophocarpine (30 mg/kg) reduces infarct size, cardiac muscle fiber swelling and hypertrophy, and neutrophil infiltration in a rat model of myocardial ischemia and reperfusion injury.³ It decreases liver weight, fibrosis, and levels of IL-6, TNF-α, and TGF-β1 in a rat model of non-alcoholic steatohepatitis (NASH).⁴ Sophocarpine (15 and 30 mg/kg) reduces carrageenan-induced hind paw edema in rats and decreases acetic acid-induced writhing in mice.⁵

References

1. Lin, Z., Huang, C.-F., Liu, X.-S., et al. *In vitro* anti-tumour activities of quinolizidine alkaloids derived from *Sophora flavescens* Ait. *Basic Clin. Pharmacol. Toxicol.* **108**(5), 304-309 (2011).
2. Matsuda, K., Yamada, K., Kimura, M., et al. Nematicidal activity of matrine and its derivatives against pine wood nematodes. *J. Agric. Food Chem.* **39**(1), 189-191 (1991).
3. Li, C., Gao, Y., Tian, J., et al. Sophocarpine administration preserves myocardial function from ischemia-reperfusion in rats via NF-κB inactivation. *J. Ethnopharmacol.* **135**(3), 620-625 (2011).
4. C.-Y., S., Zeng, X., Chen, S.-W., et al. Sophocarpine alleviates non-alcoholic steatohepatitis in rats. *J. Gastroenterol. Hepatol.* **26**(4), 765-774 (2011).
5. Gao, Y., Li, G., Li, C., et al. Anti-nociceptive and anti-inflammatory activity of sophocarpine. *J. Ethnopharmacol.* **125**(2), 324-329 (2009).

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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