

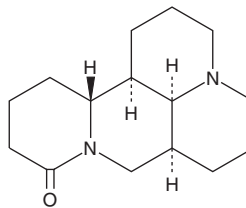
PRODUCT INFORMATION



Matrine

Item No. 22901

CAS Registry No.: 519-02-8
Formal Name: (7aS,13aR,13bR,13cS)-dodecahydro-1H,5H,10H-dipyrido[2,1-f:3',2',1'-ij][1,6]naphthyridin-10-one
Synonyms: NSC 146051, NSC 318810
MF: C₁₅H₂₄N₂O
FW: 248.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Matrine is supplied as a crystalline solid. A stock solution may be made by dissolving the matrine in the solvent of choice. Matrine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of matrine in ethanol is approximately 33.3 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of matrine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of matrine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Matrine is an alkaloid found in *S. flavescens* roots that has diverse biological activities. It inhibits LPS-induced splenocyte proliferation and release of IL-1 and IL-6 from mouse peritoneal macrophages *in vitro*.¹ In mice, administration of matrine inhibits the development of LPS-induced hepatitis in a dose-dependent manner.² Matrine reduces production of the hepatitis B surface antigen (HBsAG) and serum antigen (HBeAG) with IC₅₀ values of 0.75 and 3.35 mg/ml, respectively, *in vitro* and inhibits viral replication in a duck model of hepatitis B.³ *In vitro*, matrine inhibits angiotension II-induced hyperplastic growth of cardiac fibroblasts in a dose-dependent manner.⁴ Matrine also inhibits proliferation of melanoma, breast, and colon cancer cells with IC₅₀s ranging from 0.769-2.758 mg/ml.⁵

References

1. Hu, Z.-L., Zhang, J.-P., Qian, D.-H., et al. *Zhongguo Yao Li Xue Bao.* **17(3)**, 259-261 (1996).
2. Hu, Z.-L., Zhang, J.-P., Yu, X.-B., et al. *Zhongguo Yao Li Xue Bao.* **17(4)**, 351-353 (1996).
3. Li, C.-Q., Zhu, Y.-T., Zhang, F.-X., et al. *World J. Gastroenterol.* **11(3)**, 426-428 (2005).
4. Li, Y., Wang, B., Zhou, C., et al. *Basic Clin. Pharmacol. Toxicol.* **101(1)**, 1-8 (2007).
5. Jin, H., Sun, Y., Wang, S., et al. *Int. J. Mol. Sci.* **14(8)**, 16040-16057 (2013).

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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