

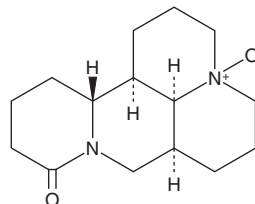
# PRODUCT INFORMATION



## Oxymatrine

Item No. 14915

**CAS Registry No.:** 16837-52-8  
**Formal Name:** (4R,7aS,13aR,13bR,13cS)-dodecahydro-4-oxide-1H,5H,10H-dipyrido[2,1-f:3',2';1'-ij][1,6]naphthyridin-10-one  
**Synonyms:** Matrine 1-oxide  
**MF:** C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 264.4  
**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

Oxymatrine is supplied as a crystalline solid. A stock solution may be made by dissolving the oxymatrine in the solvent of choice, which should be purged with an inert gas. Oxymatrine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of oxymatrine in these solvents is approximately 33.3 mg/ml in ethanol, 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 oxymatrine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of oxymatrine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Oxymatrine is a natural alkaloid isolated from the root of *S. flavescens*, an herb used in traditional Chinese herbal medicine.<sup>1</sup> It has antiviral properties, inhibiting the replication of hepatitis B alone and in combination with lamivudine.<sup>2,3</sup> Oxymatrine also prevents fibrosis in a number of organs including liver, at least in part by interfering with TGF- $\beta$  signaling.<sup>4,5</sup> This compound also induces apoptosis in certain cancer cells and ameliorates inflammation by impairing the translocation of nuclear factors- $\kappa$ B.<sup>1,6</sup>

### References

1. Ling, Q., Xu, X., Wei, X., *et al.* Oxymatrine induces human pancreatic cancer PANC-1 cells apoptosis via regulating expression of Bcl-2 and IAP families, and releasing of cytochrome c. *J. Exp. Clin. Cancer Res.* 30, 66 (2011).
2. Cui, X., Wang, Y., Kokudo, N., *et al.* Traditional Chinese medicine and related active compounds against hepatitis B virus infection. *Biosci. Trends* 4(2), 39-47 (2010).
3. Ma, Z.J., Li, Q., Wang, J.B., *et al.* Combining oxymatrine or matrine with lamivudine increased its antireplication effect against the hepatitis B virus *in vitro*. *Evid. Based Complement. Alternat. Med.* 2013, 186573 (2013).
4. Wu, X.L., Zeng, W.Z., Jiang, M.D., *et al.* Effect of oxymatrine on the TGF $\beta$ Smad signaling pathway in rats with CCl<sub>4</sub>-induced hepatic fibrosis. *World J. Gastroenterol.* 14(13), 2100-2105 (2008).
5. Chai, N.L., Fu, Q., Shi, H., *et al.* Oxymatrine liposome attenuates hepatic fibrosis via targeting hepatic stellate cells. *World J. Gastroenterol.* 18(31), 4199-4206 (2012).
6. Guzman, J.R., Koo, J.S., Goldsmith, J.R., *et al.* Oxymatrine prevents NF- $\kappa$ B nuclear translocation and ameliorates acute intestinal inflammation. *Sci.Rep.* 3, 1629 (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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