

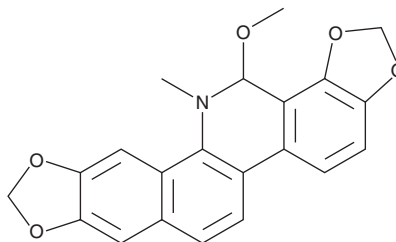
# PRODUCT INFORMATION



## 6-Methoxydihydrosanguinarine

Item No. 43281

**CAS Registry No.:** 72401-54-8  
**Formal Name:** (-)-13,14-dihydro-14-methoxy-13-methyl-[1,3]benzodioxolo[5,6-c]-1,3-dioxolo[4,5-i]phenanthridine  
**Synonym:** (-)-Sanguinarine pseudomethanolate  
**MF:** C<sub>21</sub>H<sub>17</sub>NO<sub>5</sub>  
**FW:** 363.4  
**Purity:** ≥98%  
**Supplied as:** A 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

6-Methoxydihydrosanguinarine is supplied as a solid. A stock solution may be made by dissolving the 6-methoxydihydrosanguinarine in the solvent of choice, which should be purged with an inert gas. 6-Methoxydihydrosanguinarine is slightly soluble (0.1-1 mg/ml) in DMSO and acetonitrile.

### Description

6-Methoxydihydrosanguinarine is a benzophenanthridine alkaloid that has been found in *H. hylomeconoides* and has diverse biological activities.<sup>1-4</sup> It is active against methicillin-resistant *S. aureus* (MRSA; MIC = 3.9 µg/ml).<sup>1</sup> 6-Methoxydihydrosanguinarine (8 µM) induces apoptosis and increases the levels of reactive oxygen species (ROS) in HepG2 hepatocellular carcinoma cells.<sup>2</sup> It induces DNA fragmentation in HT-29 colon cancer cells when used at a concentration of 5 µM.<sup>3</sup> 6-Methoxydihydrosanguinarine (0.75, 1.5, and 3 µM) reduces basal and maximal respiration and ATP production in SKOV3 ovarian cancer cells.<sup>4</sup> *In vivo*, 6-methoxydihydrosanguinarine (5 mg/kg) decreases tumor volume and weight in a Caov-3 ovarian cancer mouse xenograft model.

### References

1. Choi, J.-G., Kang, O.-H., Chae, H.-S., *et al.* Antibacterial activity of *Hylomecon hylomeconoides* against methicillin-resistant *Staphylococcus aureus*. *Appl. Biochem. Biotechnol.* **160**(8), 2467-2474 (2010).
2. Yin, H.-Q., Kim, Y.-H., Moon, C.-K., *et al.* Reactive oxygen species-mediated induction of apoptosis by a plant alkaloid 6-methoxydihydrosanguinarine in HepG2 cells. *Biochem. Pharmacol.* **70**(2), 242-248 (2005).
3. Lee, Y.-J., Yin, H.-Q., Kim, Y.-H., *et al.* Apoptosis inducing effects of 6-methoxydihydrosanguinarine in HT29 colon carcinoma cells. *Arch. Pharm. Res.* **27**(12), 1253-1257 (2004).
4. Zhang, H., Shangguan, F., Zhang, L., *et al.* A novel mechanism of 6-methoxydihydroavicine in suppressing ovarian carcinoma by disrupting mitochondrial homeostasis and triggering ROS/ MAPK mediated apoptosis. *Front. Pharmacol.* **14**, 1093650 (2023).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/16/2025

#### 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](http://WWW.CAYMANCHEM.COM)