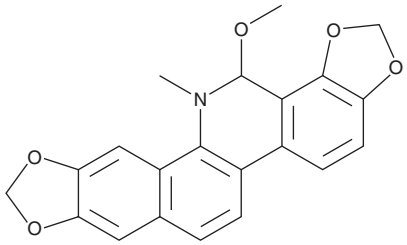
PRODUCT INFORMATION

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:	$C_{21}H_{17}NO_5$
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.[1-4] It is active against methicillin-resistant *S. aureus* (MRSA; MIC = 3.9 µg/ml).[1] 6-Methoxydihydrosanguinarine (8 µM) induces apoptosis and increases the levels of reactive oxygen species (ROS) in HepG2 hepatocellular carcinoma cells.[2] It induces DNA fragmentation in HT-29 colon cancer cells when used at a concentration of 5 µM.[3] 6-Methoxydihydrosanguinarine (0.75, 1.5, and 3 µM) reduces basal and maximal respiration and ATP production in SKOV3 ovarian cancer cells.[4] *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).

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