

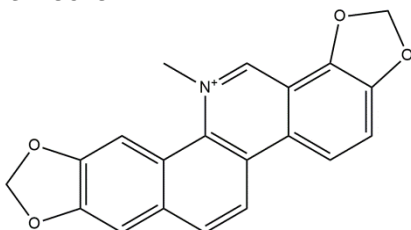
# Sanguinarine

11/19

**ALTERNATE NAMES:** 13-methyl-[1,3]dioxolo[4',5':4,5]benzo[1,2-c][1,3]dioxolo[4,5-i]phenanthridin-13-ium; 13-methyl-[1,3]benzodioxolo[5,6-c]-1,3-dioxolo[4,5-i]phenanthridinium; 24-methyl-5,7,18,20-tetraoxa-24-azoniahexacyclo[11.11.0.0<sup>2,10</sup>.0<sup>4,8</sup>.0<sup>14,22</sup>.0<sup>17,21</sup>]tetracos-1(24),2,4(8),9,11,13,15,17(21),22-nonaene; Pseudochelerythrine; Sangvinarin; Sanguinarin; Veadent; Sanguiritrin; Sanguinarium; Sangrovit; Benzophenanthridine alkaloid

**CATALOG #:** B2946-5 5 mg  
B2946-25 25 mg

**STRUCTURE:**



**MOLECULAR FORMULA:** C<sub>20</sub>H<sub>14</sub>NO<sub>4</sub>

**MOLECULAR WEIGHT:** 332.33

**CAS NUMBER:** 2447-54-3

**APPEARANCE:** Solid

**PURITY:** ≥98%

**SOLUBILITY:** Soluble in DMSO

**DESCRIPTION:** Sanguinarine is a benzylisoquinoline alkaloid that inhibits PP2C and shows selectivity for PP2C over PP1, PP2A, and PP2B *in vitro*. It inhibits MKP-1 with an IC<sub>50</sub> of 10 μM and shows selectivity for MKP-1 over MKP-3. It is a potent suppressor of NF-κB activation and inhibits the TNF-dependent activation of NF-κB in a dose-dependent manner, with maximum effect occurring at 10 μM. It shows cytotoxicity toward human promyelocytic leukemia cell line HL60, with an IC<sub>50</sub> value of 0.37 μM.

**STORAGE TEMPERATURE:** -20°C. Protect from air. Store under desiccating conditions. Store in the dark. Product is light sensitive.

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

**REFERENCES:**

1. Chaturvedi, M.M., Kumar, A., Darnay, B.G., et al. Sanguinarine (pseudochelerythrine) is a potent inhibitor of NF-kappaB activation, IkappaBalpha phosphorylation, and degradation. *J Biol Chem.* 272(48):30129-34 (1997).
2. Vogt, A., Tamewitz, A., Skoko, J., et al. The benzo[c]phenanthridine alkaloid, sanguinarine, is a selective, cell-active inhibitor of mitogen-activated protein kinase phosphatase-1. *J Biol Chem.* 280(19):19078-86 (2005).
3. Aburai, N., Yoshida, M., Ohnishi, M., et al. Sanguinarine as a potent and specific inhibitor of protein phosphatase 2C *in vitro* and induces apoptosis via phosphorylation of p38 in HL60 cells. *Biosci Biotechnol Biochem.* 74(3):548-52 (2010).

**RELATED PRODUCTS:**

Celastrol (Cat. No. 1940)  
 Triptolide (Cat. No. 1761)  
 Demethoxycurcumin (Cat. No. B2945)  
 Microcystin-LR (Cat. No. 1840)  
 NF-κB Inhibitor, SN50 (Cat. No. 2506)

**DISCLAIMER:** **FOR RESEARCH USE ONLY! Not to be used on humans.**