

**Product Name:** Chaetocin

**Catalog No.:** 4504

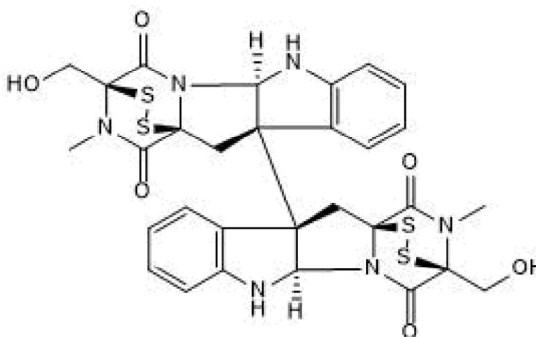
**Batch No.:** 10

CAS Number: 28097-03-2

IUPAC Name: (3*S*,3'*S*,5*aR*,5*aR*,10*bR*,10'*bR*,11*aS*,11'*aS*)-2,2',3,3',5*a*,5'*a*,6,6'-octahydro-3,3'-bis(hydroxymethyl)-2,2'-dimethyl-[10*b*,10'*b*(11*H*,11'*H*)-bi3,11*a*-epidithio-11*aH*-pyrazino[1',2':1,5]pyrrolo[2,3-*b*]indole]-1,1',4,4'-tetrone

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>30</sub>H<sub>28</sub>N<sub>6</sub>O<sub>6</sub>S<sub>4</sub>  
**Batch Molecular Weight:** 696.84  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 10 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 96.1% purity

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**Description:**

Chaetocin is a histone methyltransferase SUV39H1 inhibitor (IC<sub>50</sub> values are 0.8, 2.5 and 3 μM for dSU(VAR)3-9, mouse G9a and Neurospora crassa DIM5, respectively). Induces apoptosis in myeloma cell lines in vitro; exhibits antiproliferative activity in a mouse myeloma model in vivo. Chaetocin potently inhibits cell proliferation and colony formation in a wide range of cancer cell lines (IC<sub>50</sub> of 2-10 nM) and inhibits tumor growth by deregulating HIF-1α-mediated angiogenesis. Sensitizes glioblastoma multiforme cells to pro-apoptotic agents. Chaetocin is also an inhibitor of the oxidative stress remediation enzyme thioredoxin reducta... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

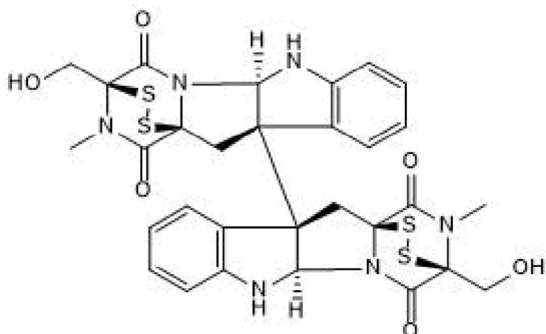
Batch Molecular Formula: C<sub>30</sub>H<sub>28</sub>N<sub>6</sub>O<sub>6</sub>S<sub>4</sub>

Batch Molecular Weight: 696.84

Physical Appearance: White solid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**References:**

**Liang et al (2021)** Chaetocin Promotes Osteogenic Differentiation via Modulating Wnt/Beta-Catenin Signaling in Mesenchymal Stem Cells. *Stem Cells Int.* doi: 10.1155/2021/88. PMID: 33628276.

**Ozyerli-Goknar et al (2019)** The fungal metabolite chaetocin is a sensitizer for pro-apoptotic therapies in glioblastoma. *Cell Death Dis* **10** 894. PMID: 31772153.

**Nakajima et al (2017)** Inhibition of the HDAC/Suv39/G9a pathway restores the expression of DNA damage-dependent major histocompatibility complex class I-related chain A and B in cancer cells. *Oncol Rep.* **38** 693. PMID: 28677817.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 10 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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