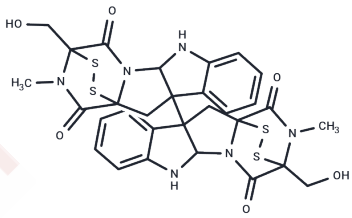
Data Sheet (Cat.No.T6803)

TargetMol

Chaetocin

Chemical Properties



CAS No. : 28097-03-2

Formula: C30H28N6O6S4

Molecular Weight: 696.84

Storage: Store at low temperature,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Chaetocin, a natural product from Chaetomium species, is a histone methyltransferase inhibitor with IC50 of 0.8 μM, 2.5 μM and 3 μM for dSU(VAR)3-9, mouse G9a and Neurospora crassa DIM5, respectively.
Targets(IC50)	Histone Methyltransferase,Antibacterial,Antibiotic
In vitro	In SL-2 Drosophila tissue culture cells, Chaetocin causes the inhibition of SU(VAR)3-9 and the number of H3 molecules dimethylated at Lys9, and also inhibits cell growth. [1] In HepG2, Hep3B, and Huh7 human hepatoma cells, Chaetocin inhibits HIF-1-Mediated hypoxic responses. [2] Chaetocin also potently inhibits proliferation and colony formation in a broad range of cancer cell lines with IC50 of 2-10 nM. [3]
In vivo	In Hepa 1c1c-7 tumor-bearing mice, Chaetocin (0.25 mg/kg, i.p.) inhibits tumor growth by deregulating HIF-1[alpha]-mediated angiogenesis. [2] In SKOV3 tumor-bearing nude mice, chaetocin treatment (0.25 mg/kg, i.p.) significantly delays the tumor growth with minimal evidence of toxicities. [3]
Cell Research	HeLa cells are transfected with 1 μg pcDNA or pcDNA-Trx. Twenty four h after transfection the cells are treated with either DMSO, 100 nM chaetocin or 100 nM doxorubicin for 24 h. The cells are then trypsinized and manually counted in trypan blue to exclude dead cells. For immunoblotting (24 h after transfections), cells are trypsinized, ished in cold PBS, and lysed in CelLytic lysis buffer containing protease inhibitors. Protein is analyzed by BCA assay and lysates are electrophoresed on 15% SDS-PAGE gels and transferred to nitrocellulose. Immunoblotting for thioredoxin and actin is then performed[2].

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 7 mg/mL (10.05 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.435 mL	7.1752 mL	14.3505 mL
5 mM	0.287 mL	1.435 mL	2.8701 mL
10 mM	0.1435 mL	0.7175 mL	1.435 mL
50 mM	0.0287 mL	0.1435 mL	0.287 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Greiner D, et al. Nat Chem Biol. 2005, 1(3), 143-145.
Lee YM, et al. Hepatology. 2011, 53(1), 171-180.
Isham CR, et al. Br J Cancer. 2012, 106(2), 314-323.