

DATASHEET

Chaetocin

Product overview

Name	Chaetocin
Cat No	HB1415
Biological action	Inhibitor
Purity	>99%
Description	Potent histone methyltransferase SUV39H1 inhibitor

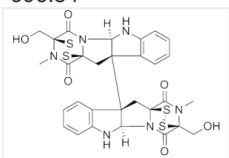
Biological Data

Biological description	Potent histone methyltransferase SUV39H1 inhibitor (IC ₅₀ = 0.8 μM). Induces reactive oxygen species. Shows apoptotic and anti-cancer actions.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in DMSO (10mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(3 <i>S</i> ,3' <i>S</i> ,5 <i>aR</i> ,5 <i>aR</i> ,10 <i>bR</i> ,10' <i>bR</i> ,11 <i>aS</i> ,11' <i>aS</i>) -2,2',3,3',5 <i>a</i> ,5' <i>a</i> ,6,6'-octahydro-3,3'-bis(hydroxymethyl)-2,2'-dimethyl-[10 <i>b</i> ,10' <i>b</i> (11 <i>H</i> ,11' <i>H</i>)-bi3,11 <i>a</i> -epidithio-11 <i>aH</i> -pyrazino[1',2':1,5]pyrrolo[2,3- <i>b</i>]indole]-1,1',4,4'-tetrone
Molecular Weight	696.84
Chemical structure	
Molecular Formula	C ₃₀ H ₂₈ N ₆ O ₆ S ₄
CAS Number	28097-03-2
PubChem identifier	161591
SMILES	CN(C([C@]35N1[C@@]2([H])NC4=C(C=CC=C4)[C@]([C@@]68C(C=CC=C9)=C9N[C@@]([H])6N7[C@@](C8)%10C(N(C)[C@@](CO)(SS%10)C7=O)=O)2C3)=O)[C@@](CO)(SS5)C1=O
InChiKey	PZPPOCZWRGNKIR-UHFFFAOYSA-N

References

Reply to 'Chaetocin is a nonspecific inhibitor of histone lysine methyltransferases'.

Greiner D *et al* (2013) Nat Chem Biol 9(3)

PubMedID [23416388](https://pubmed.ncbi.nlm.nih.gov/23416388/)

Chaetocin-induced ROS-mediated apoptosis involves ATM-YAP1 axis and JNK-dependent inhibition of glucose metabolism.

Dixit D *et al* (2014) Cell Death Dis 5

PubMedID [24810048](#)

The anticancer effects of chaetocin are independent of programmed cell death and hypoxia, and are associated with inhibition of endothelial cell proliferation.

Isham CR *et al* (2012) Br J Cancer 106(2)

PubMedID [22187030](#)

Chaetocin is a nonspecific inhibitor of histone lysine methyltransferases.

Cherblanc FL *et al* (2013) Nat Chem Biol 9(3)

PubMedID [23416387](#)
