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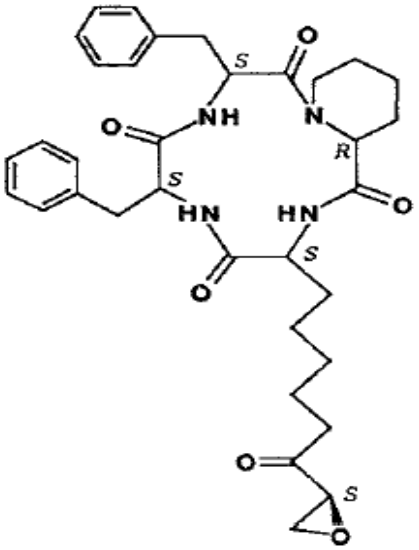
Product Information

Trapoxin A from *Helicoma ambiens*

Catalog Number **T2580**
Storage Temperature –20 °C

CAS RN 133155-89-2
Molecular Weight: 602.72
Molecular formula: $C_{34}H_{42}N_4O_6$



Product Description
Purity: ≥ 98% (HPLC)

Trapoxin is a cyclotetrapeptide isolated from the fungus *Helicoma ambiens.* It was first isolated due to its ability to induce morphological reversion from *sis*-transformed NIH3T3 fibroblasts to normal morphology.[1, 2] Trapoxin is a histone deacetylase (HDAC) inhibitor. It increases the level of chromatin acetylation associated with histone H3 at low nanomolar concentrations.[3] Unlike the reversible HDAC inhibition induced by TCA, Trapoxin irreversibly inhibits HDAC activity in crude cell lysates, and induces the accumulation of hyperacetylated core histones in a number of mammalian cell lines and tissues.[4] Histone acetylation and methylation have been studied extensively for their anti-tumor activities in carcinogenesis in pre-clinical studies.[5] Trapoxin was suggested as a potential anticancer agent for pre-clinical trials.[6, 7]

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation instructions
Soluble in DMSO, methanol, and chloroform. Once dissolved in DMSO, the solution can be further diluted 20 fold in H_2O.

Storage/Stability
Store the product sealed at –20 °C. Under these conditions the product is stable for at least 2 years.

References
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2. Yoshida, H., and Sugita, K., A novel tetracyclic peptide, Trapoxin, induces phenotypic change from transformed to normal in sis-oncogene-transformed NIH3T3 cells. *Jpn. J. Cancer Res.*, **83**, 324-328 (1992).
3. Fang, J.Y., and Lu, Y.Y., Effects of histone acetylation and DNA methylation on p21 (WAF1) regulation. *World J. Gastroenterol.*, **8**, 400-405 (2002).
4. Yoshida, M., et al., Trichostatin A and Trapoxin: novel chemical probes for the role of histone acetylation in chromatin structure and function. *BioEssays*, **17**, 423-430 (1995).
5. Acharya, M.R., et al., Rational development of histone deacetylase inhibitors as anticancer agents: a review. *Mol. Pharmacol.,* **68,** 917-932 (2005).
6. Vigushin, D.M., and Coombes, R.C., Histone deacetylase inhibitors in cancer treatment. *Anticancer Drugs*, **13**, 1-13 (2002).
7. Cang, S., et al., New clinical developments in histone deacetylase inhibitors for epigenetic therapy of cancer. *J. Hematol. Oncol.,* **2**, 22 (2009).

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