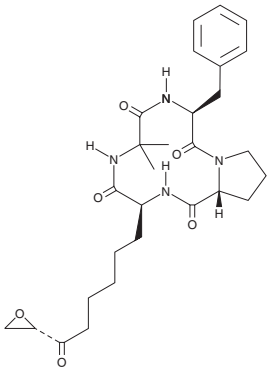
PRODUCT INFORMATION

Chlamydocin

Item No. 28468



CAS Registry No.:	53342-16-8
Formal Name:	cyclo[2-methylalanyl-L-phenylalanyl-D-prolyl-(αS,2S)-α-amino-η-oxo-2-oxiraneoctanoyl]
MF:	$C_{28}H_{38}N_4O_6$
FW:	526.6
Purity:	≥70%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Fungus/Unidentified sp.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Chlamydocin is supplied as a solid. A stock solution may be made by dissolving the chlamydocin in the solvent of choice, which should be purged with an inert gas. Chlamydocin is soluble in ethanol, methanol, and DMSO.

Description

Chlamydocin is a histone deacetylase (HDAC) inhibitor that was originally isolated from *D. chlamydosporia* and has anticancer properties.[1] It is selective for HDAC1 over HDAC6 (IC_{50} = 0.15 and 1,100 nM, respectively).[2] Chlamydocin increases acetylation of histone H3 and histone H4 in A2780 cells when used at concentrations ranging from 1 to 1,000 nM.[1] It inhibits growth of A2780, Malme-3M, MCF-7, HT-29, and HeLa cancer cells (IC_{50}s = 0.36, 45, 5.3, 4.3, and 14 nM, respectively). Chlamydocin increases lifespan by 10% in a P185 mouse allograft model when administered at doses ranging from 20 to 160 mg/kg.[3]

References

1. De Schepper, S., Bruwiere, H., Verhulst, T., *et al.* Inhibition of histone deacetylases by chlamydocin induces apoptosis and proteasome-mediated degradation of survivin. *J. Pharmacol. Exp. Ther.* **304(2)**, 881-888 (2003).
2. Furumai, R., Komatsu, Y., Nishino, N., *et al.* Potent histone deacetylase inhibitors built from trichostatin A and cyclic tetrapeptide antibiotics including trapoxin. *Proc. Natl. Acad. Sci. U.S.A.* **98(1)**, 87-92 (2001).
3. Stähelin, H. and Trippmacher, A. Cytostatic activity of chlamydocin, a rapidly inactivated cyclic tetrapeptide. *Eur. J. Cancer* **10(12)**, 801-808 (1974).

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