PRODUCT INFORMATION



4-hydroperoxy Cyclophosphamide

Item No. 19527

CAS Registry No.:	39800-16-3	
Formal Name:	2-[bis(2-chloroethyl)amino]tetrahydro-2-oxido-2H-	
	1,3,2-oxazaphosphorin-4-yl, hydroperoxide	но—о́н
Synonym:	4-OOH-CY	
MF:	C ₇ H ₁₅ Cl ₂ N ₂ O ₄ P	
FW:	293.1	
Purity:	≥95%	
Supplied as:	A solid	
Storage:	-80°C	
Stability:	≥2 years	
Special Conditions: Hygroscopic		
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis		

Laboratory Procedures

4-hydroperoxy Cyclophosphamide (4-OOH-CY) is supplied as a solid. A stock solution may be made by dissolving the 4-OOH-CY in the solvent of choice, which should be purged with an inert gas. 4-OOH-CY is soluble in the organic solvent DMSO. 4-OOH-CY is slightly soluble in chloroform.

Description

4-OOH-CY is an activated analog of cyclophosphamide (Item No. 13849).¹ 4-OOH-CY (1 and 3 μg/ml) crosslinks DNA and induces T cell apoptosis independent of death receptor activation but activates mitochondrial death pathways through the production of reactive oxygen species (ROS). In vivo, 4-OOH-CY (0.05, 0.1, and 0.15 mmol/kg) reduces tumor growth in an MX-1 breast cancer mouse xenograft model.²

References

- 1. Strauss, G., Westhoff, M.-A., Fischer-Posovszky, P., et al. 4-hydroperoxy-cyclophosphamide mediates caspase-independent T-cell apoptosis involving oxidative stress-induced nuclear relocation of mitochondrial apoptogenic factors AIF and EndoG. Cell Death Differ. 15(2), 332-343 (2008).
- 2. Kubota, T., Hanatani, Y., Tsuyuki, K., et al. Antitumor effect and metabolic activation of cyclophosphamide and 4-hydroperoxycyclophosphamide in the human breast carcinoma (MX-1)-nude mouse system. Gan. 74(3), 437-444 (1983).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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