

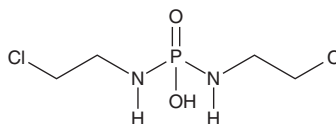
# PRODUCT INFORMATION



## Palifosfamide

Item No. 29887

**CAS Registry No.:** 31645-39-3  
**Formal Name:** N,N'-bis(2-chloroethyl)-phosphorodiamidic acid  
**Synonyms:** Isophosphoramidate Mustard, NSC 297900  
**MF:** C<sub>4</sub>H<sub>11</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>P  
**FW:** 221.0  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Palifosfamide is supplied as a crystalline solid. A stock solution may be made by dissolving the palifosfamide in the solvent of choice, which should be purged with an inert gas. Palifosfamide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of palifosfamide in these solvents is approximately 30 mg/ml.

### Description

Palifosfamide is an active metabolite of the DNA alkylating agent ifosfamide (Item No. 17562).<sup>1</sup> Palifosfamide is formed through hydroxylation of ifosfamide by various hepatic cytochrome P450 (CYP) isoforms.<sup>2</sup> It is cytotoxic to L1210 and CCRF-CEM cancer cells when used at a concentration of 100 µM.<sup>3</sup> Palifosfamide (100 mg/kg per day) reduces tumor growth in murine Lewis lung carcinoma and L1210 leukemia models, as well as a rat Yoshida ascitic sarcoma model.<sup>1</sup>

### References

1. Struck, R.F., Dykes, D.J., Corbett, T.H., *et al.* Isophosphoramidate mustard, a metabolite of ifosfamide with activity against murine tumours comparable to cyclophosphamide. *Br. J. Cancer* **47(1)**, 15-26 (1983).
2. Zheng, J.J., Chan, K.K., and Muggia, F. Preclinical pharmacokinetics and stability of isophosphoramidate mustard. *Cancer Chemother. Pharmacol.* **33(5)**, 391-398 (1994).
3. Lowenberg, D., Thorn, C.F., Desta, S., *et al.* PharmGKB summary: ifosfamide pathways, pharmacokinetics and pharmacodynamics. *Pharmacogenet. Genom.* **24(2)** 133-138 (2014).

#### 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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