

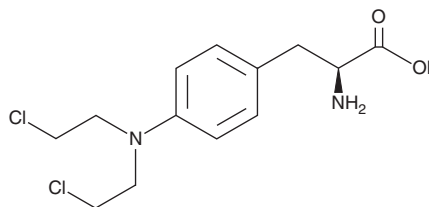
PRODUCT INFORMATION



Melphalan

Item No. 16665

CAS Registry No.: 148-82-3
Formal Name: 4-[bis(2-chloroethyl)amino]-L-phenylalanine
Synonyms: Alanine Nitrogen Mustard, Alkeran, NSC 8806, NSC 241286, L-Phenylalanine Mustard
MF: C₁₃H₁₈Cl₂N₂O₂
FW: 305.2
Purity: ≥90%
UV/Vis.: λ_{max}: 260, 302 nm
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

Melphalan is supplied as a crystalline solid. A stock solution may be made by dissolving the melphalan in the solvent of choice, which should be purged with an inert gas. Melphalan is soluble in organic solvents such as methanol and DMSO. The solubility of melphalan in these solvents is approximately 2 and 5 mg/ml, respectively.

Description

Melphalan is a phenylalanine derivative of mechlorethamine, belonging to the family of nitrogen mustard alkylating agents that are used for chemotherapy.¹ It attaches an alkyl group to guanine bases in DNA at the 7-nitrogen of the imidazole ring, which leads to DNA interstrand and intrastrand crosslinks, cytotoxicity, and apoptosis.¹ Melphalan can inhibit the growth of PC-3 prostate cancer cells with IC₅₀ values of 0.074 or 0.77 μM for sequential dosing or single dosing, respectively.²

References

1. Vasquez, K.M. Targeting and processing of site-specific DNA interstrand crosslinks. *Environ. Mol. Mutagen* **51(6)**, 527-539 (2010).
2. Mougenot, P., Bressolle, F., Culine, S., *et al.* *In vitro* cytotoxic effect of melphalan and pilot phase II study in hormone-refractory prostate cancer. *Anticancer Res.* **26(3B)**, 2197-2203 (2006).

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.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM