

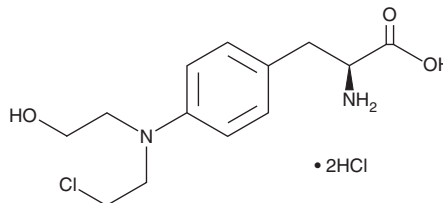
PRODUCT INFORMATION



Monohydroxy Melphalan (hydrochloride)

Item No. 27856

CAS Registry No.: 2707535-88-2
Formal Name: 4-[(2-chloroethyl)(2-hydroxyethyl)amino]-L-phenylalanine, dihydrochloride
Synonym: Hydroxymelphalan
MF: C₁₃H₁₉ClN₂O₃ • 2HCl
FW: 359.7
Purity: ≥95%
Supplied as: A 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

Monohydroxy melphalan (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the monohydroxy melphalan (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Monohydroxy melphalan (hydrochloride) is soluble in methanol and DMSO.

Monohydroxy melphalan (hydrochloride) is soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Monohydroxy melphalan is a DNA alkylating agent and a degradation product of melphalan (Item No. 16665).^{1,2} Monohydroxy melphalan is formed by the hydrolysis of melphalan in aqueous solutions, including cell culture medium and human plasma.^{1,3} It increases the level of DNA adducts in ML-1 myeloblastic leukemia cells in a concentration-dependent manner and induces cytotoxicity with an IC₅₀ value of 28.1 µg/ml.²

References

1. Bosanquet, A.G. and Bird, M.C. Degradation of melphalan *in vitro*: Rationale for the use of continuous exposure in chemosensitivity assays. *Cancer Chemother. Pharmacol.* **21(3)**, 211-215 (1988).
2. Gould, K.A., Nixon, C., and Tilby, M.J. p53 elevation in relation to levels and cytotoxicity of mono- and bifunctional melphalan-DNA adducts. *Mol. Pharmacol.* **66(5)**, 1301-1309 (2004).
3. Mirkou, A., Vignal, B., Cohen, S., et al. Assays for the quantification of melphalan and its hydrolysis products in human plasma by liquid chromatography-tandem mass spectrometry. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **877(27)**, 3089-3096 (2009).

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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