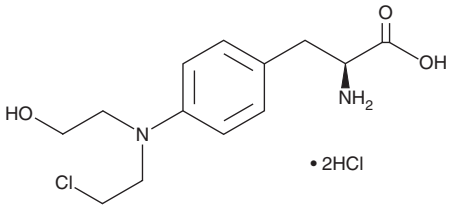
PRODUCT INFORMATION

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:	$C_{13}H_{19}ClN_2O_3 \bullet 2HCl$
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 IC_{50} 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).

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