

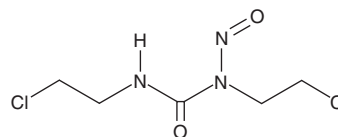
PRODUCT INFORMATION



Carmustine

Item No. 15775

CAS Registry No.: 154-93-8
Formal Name: N,N'-bis(2-chloroethyl)-N-nitroso-urea
Synonyms: BCNU, bis-Chloroethylnitrosourea, NSC 409962
MF: C₅H₉Cl₂N₃O₂
FW: 214.1
Purity: ≥95%
UV/Vis.: λ_{max}: 231 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

Carmustine is supplied as a crystalline solid. A stock solution may be made by dissolving the carmustine in the solvent of choice, which should be purged with an inert gas. Carmustine is soluble in organic solvents such as ethanol and DMSO. It is also soluble in water. The solubility of carmustine in ethanol, DMSO, and water is approximately 100 and 25 mM, respectively. We do not recommend storing the aqueous solution for more than one day.

Description

Carmustine is a DNA alkylating agent.^{1,2} It inhibits cell growth and induces cell cycle arrest at the G₂/M phase in C6 rat glioma cells when used at a concentration of 10 μM.² *In vivo*, carmustine (0.3 and 6.7 mg/kg per day) reduces tumor growth in a C6 rat glioma model. Carmustine (0.5 mg/kg, i.p.) also reduces the number of amyloid-β plaques and brain levels of amyloid-β (1-40) (Aβ₄₀), as well as increases brain levels of soluble amyloid precursor protein (sAPP) in the APP/PS1 transgenic mouse model of Alzheimer's disease.³ Formulations containing carmustine have been used in the treatment of gliomas and glioblastomas.

References

1. Wasserman, T.H., Slavik, M., and Carter, S.K. Clinical comparison of the nitrosoureas. *Cancer* **36**(4), 1258-1268 (1975).
2. Soma, M.R., Baetta, R., De Renzis, M.R., *et al.* *In vivo* enhanced antitumor activity of carmustine [N,N'-bis(2-chloroethyl)-N-nitrosourea] by simvastatin. *Cancer Res.* **55**(3), 597-602 (1995).
3. Hayes, C.D., Dey, D., Palavicini, J.P., *et al.* Striking reduction of amyloid plaque burden in an Alzheimer's mouse model after chronic administration of carmustine. *BMC Med.* **11**, 81 (2013).

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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