

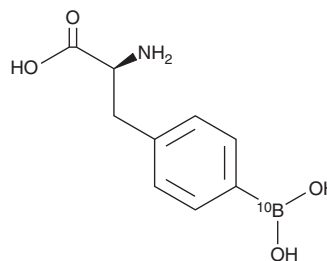
PRODUCT INFORMATION



Borofalan

Item No. 38760

CAS Registry No.: 80994-59-8
Formal Name: 4-(borono-¹⁰B)-L-phenylalanine
Synonyms: ¹⁰B-L-BPA, Boronophenylalanine B-10
MF: C₉H₁₂[¹⁰B]NO₄
FW: 208.2
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

Borofalan is supplied as a solid. A stock solution may be made by dissolving the borofalan in the solvent of choice, which should be purged with an inert gas. Borofalan is slightly soluble in acetonitrile.

Borofalan is slightly 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

Borofalan is a radiation sensitizer that contains ¹⁰B, a stable isotope of boron.¹ It sensitizes B16/F10 melanoma cells to fast and thermal neutron radiation when used at a concentration of 50 µg/ml. Borofalan (300 mg/kg) selectively accumulates in sarcoma tissues over blood, muscle, skin, liver, and brain tissue in rats.² *In vivo*, borofalan (803 mg/kg), in combination with radiation, increases mean survival time in an F98 rat glioma model.³ Formulations containing borofalan have been used in boron neutron capture therapy (BNCT) of unresectable, locally recurrent head and neck cancer.

References

1. Ichihashi, M., Shiono, M., Yamamura, K., *et al.* In vitro radiobiological analysis of ¹⁰B-L-BPA for BNCT of malignant melanoma: Correlation of determined ¹⁰B-content and cell killing effect. *Pigment Cell Res. Suppl. 2*, 193-198 (1992).
2. Pignol, J.P., Oudart, H., Chauvel, P., *et al.* Selective delivery of ¹⁰B to soft tissue sarcoma using ¹⁰B-L-boronophenylalanine for boron neutron capture therapy. *Br. J. Radiol.* **71(843)**, 320-323 (1998).
3. Matalka, K.Z., Barth, R.F., Staubus, A.E., *et al.* Neutron capture therapy of a rat glioma using boronophenylalanine as a capture agent. *Radiat. Res.* **137(1)**, 44-51 (1994).

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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