

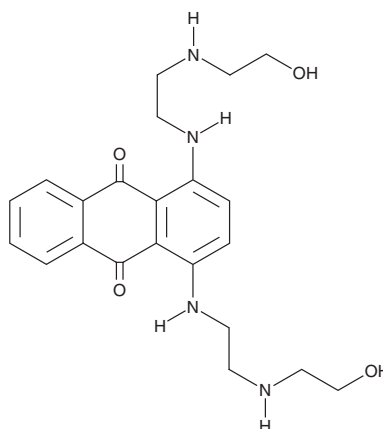
# PRODUCT INFORMATION



## Ametantrone

Item No. 22924

**CAS Registry No.:** 64862-96-0  
**Formal Name:** 1,4-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione  
**Synonyms:** NSC 196473, NSC 290813  
**MF:** C<sub>22</sub>H<sub>28</sub>N<sub>4</sub>O<sub>4</sub>  
**FW:** 412.5  
**Purity:** ≥90%  
**UV/Vis.:** λ<sub>max</sub>: 258, 592, 640 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

Ametantrone is supplied as a crystalline solid. A stock solution may be made by dissolving the ametantrone in the solvent of choice, which should be purged with an inert gas. Ametantrone is soluble in DMSO.

### Description

Ametantrone is an inhibitor of topoisomerase II.<sup>1</sup> It induces double-strand breaks in SV40 DNA in the presence, but not absence, of topoisomerase II and induces single-strand breaks in DNA in NCI H187 cells.<sup>1,2</sup> It also induces interstrand DNA cross-links in HeLa S3 cells at a minimum concentration of 4.1 μM.<sup>3</sup> Ametantrone is cytotoxic to NCI H187 and HL-60 cells (IC<sub>50</sub>s = 112 and 0.44 μM, respectively). It inhibits tumor growth in a Ridgway osteogenic sarcoma mouse model when administered at a dose of 5 mg/kg, however, it increases tumor growth in mouse models of mammary adenocarcinoma and colon adenocarcinoma 11a.<sup>4</sup>

### References

1. De Isabella, P., Capranico, G., Palumbo, M., *et al.* Sequence selectivity of topoisomerase II DNA cleavage stimulated by mitoxantrone derivatives: Relationships to drug DNA binding and cellular effects. *Mol. Pharmacol.* **43**(5), 715-721 (1993).
2. De Isabella, P., Palumbo, M., Sissi, C., *et al.* Topoisomerase II DNA cleavage stimulation, DNA binding activity, cytotoxicity, and physico-chemical properties of 2-aza- and 2-aza-oxide-anthracenedione derivatives. *Mol. Pharmacol.* **48**(1), 30-38 (1995).
3. Skladanowski, A. and Konopa, J. Mitoxantrone and ametantrone induce interstrand cross-links in DNA of tumour cells. *Br. J. Cancer.* **82**(7), 1300-1304 (2000).
4. Leopold, W.R., Nelson, J.M., Plowman, J., *et al.* Anthrapyrazoles, a new class of intercalating agents with high-level, broad spectrum activity against murine tumors. *Cancer Res.* **45**(11 Pt 1), 5532-5539 (1985).

#### 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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