

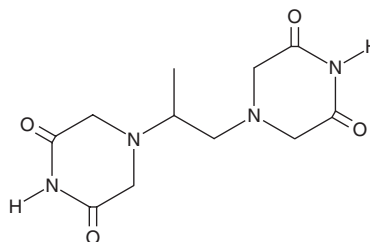
# PRODUCT INFORMATION



## Razoxane

Item No. 45123

**CAS Registry No.:** 21416-67-1  
**Formal Name:** 4,4'-(1-methyl-1,2-ethanediy)bis-2,6-piperazinedione  
**Synonyms:** ICI 59118, ICRF 159, NSC 129943  
**MF:** C<sub>11</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub>  
**FW:** 268.3  
**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

Razoxane is supplied as a solid. A stock solution may be made by dissolving the razoxane in the solvent of choice, which should be purged with an inert gas. Razoxane is soluble (≥10 mg/ml) in DMSO.

### Description

Razoxane is a racemic mixture of dexrazoxane (Item No. 14632) and levrazoxane.<sup>1</sup> Unlike dexrazoxane, razoxane inhibits topoisomerase II- $\alpha$  (TOP2A) and TOP2B only weakly (IC<sub>50</sub>s = 301 and 505  $\mu$ M, respectively). Razoxane slows tumor growth, normalizes intratumoral vasculature, and prevents metastases in murine Lewis lung carcinoma models when administered at a dose of 30 mg/kg.<sup>2-4</sup>

### References

1. Jirkovská, A., Karabanovich, G., Kubeš, J., *et al.* Structure-activity relationship study of dexrazoxane analogues reveals ICRF-193 as the most potent bisdioxopiperazine against anthracycline toxicity to cardiomyocytes due to its strong topoisomerase II $\beta$  interactions. *J. Med. Chem.* **64(7)**, 3997-4019 (2021).
2. Le Serve, A.W. and Hellmann, K. Metastases and the normalization of tumour blood vessels by ICRF 159: A new type of drug action. *Br. Med. J.* **1(5800)**, 597-601 (1972).
3. Salsbury, A.J., Burrage, K., and Hellmann, K. Histological analysis of the antimetastatic effect of ( $\pm$ )-1,2-bis(3,5-dioxopiperazin-1-yl)propane. *Cancer Res.* **34(4)**, 843-849 (1974).
4. Hellmann, K. Dynamics of tumour angiogenesis: Effect of razoxane-induced growth rate slowdown. *Clin. Exp. Metastasis* **20(2)**, 95-102 (2003).

#### 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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