

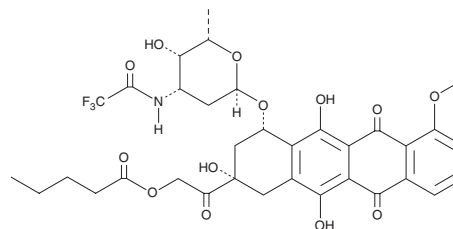
# PRODUCT INFORMATION



## Valrubicin

Item No. 22964

**CAS Registry No.:** 56124-62-0  
**Formal Name:** pentanoic acid, 2-[(2S,4S)-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-4-[[2,3,6-trideoxy-3-[(2,2,2-trifluoroacetyl)amino]- $\alpha$ -L-lyxo-hexopyranosyl]oxy]-2-naphthaceny]-2-oxoethyl ester  
**Synonyms:** NSC 246131, N-Trifluoroacetyladriamycin-14-valerate  
**MF:** C<sub>34</sub>H<sub>36</sub>F<sub>3</sub>NO<sub>13</sub>  
**FW:** 723.6  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 201, 235, 252, 496 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Valrubicin is supplied as a crystalline solid. A stock solution may be made by dissolving the valrubicin in the solvent of choice. Valrubicin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of valrubicin in these solvents is approximately 5 mg/ml.

### Description

Valrubicin is a semisynthetic anthracycline antitumor antibiotic and derivative of doxorubicin (Item No. 15007).<sup>1</sup> It inhibits the growth of human bladder tumor cell lines with LD<sub>50</sub> values ranging from 0.05 to 11.2  $\mu$ M.<sup>2</sup> Valrubicin is more active against cells in the plateau growth phase than in the log growth phase (LD<sub>705</sub> = 2.5 and 12.1  $\mu$ M, respectively for CUB-2 cells). Valrubicin (40 mg/kg) increases survival in mice with murine P388 and L1210 leukemias.<sup>1</sup> Topical administration of valrubicin (0.01 g/ml) reduces epidermal thickness and normalizes epidermal morphology in a mouse psoriasis xenograft transplantation model.<sup>3</sup> Formulations containing valrubicin have been used in the treatment of bladder cancer.

### References

1. Israel, M., Modest, E.G., and Frei, E., III N-trifluoroacetyladriamycin-14-valerate, an analog with greater experimental antitumor activity and less toxicity than adriamycin. *Cancer Res.* **35(5)**, 1365-1368 (1975).
2. Niell, H.B., Hunter, R.F., Herrod, H.G., et al. Effects of N-trifluoroacetyladriamycin-14-valerate (AD-32) on human bladder tumor cell lines. *Cancer Chemother. Pharmacol.* **19(1)**, 47-52 (1987).
3. Rosada, C., Stenderup, K., de Darkó, E., et al. Valrubicin in a topical formulation treats psoriasis in a xenograft transplantation model. *J. Invest. Dermatol.* **130(2)**, 455-463 (2010).

#### 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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