

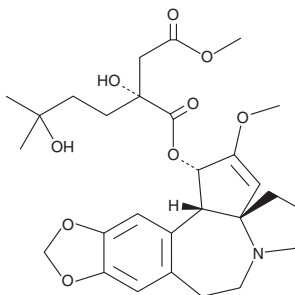
# PRODUCT INFORMATION



## Harringtonine

Item No. 15361

**CAS Registry No.:** 26833-85-2  
**Formal Name:** 3-[4-methyl (2R)-2-hydroxy-2-(3-hydroxy-3-methylbutyl) butanedioate]cephalotaxine  
**Synonym:** NSC 124147  
**MF:** C<sub>28</sub>H<sub>37</sub>NO<sub>9</sub>  
**FW:** 531.6  
**Purity:** ≥95%  
**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

Harringtonine is supplied as a crystalline solid. A stock solution may be made by dissolving the harringtonine in the solvent of choice, which should be purged with an inert gas. Harringtonine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of harringtonine in these solvents is approximately 25 mg/ml.

Harringtonine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, harringtonine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Harringtonine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Harringtonine is a natural alkaloid that inhibits protein synthesis at low micromolar concentrations.<sup>1</sup> It immobilizes ribosomes immediately after the initiation of translation.<sup>1,2</sup> While harringtonine has drawn some interest in mitigating cancer, its homolog homoharrington is more effective, particularly for chronic myelogenous leukemia.<sup>3-5</sup> The ability of harringtonine to immobilize initiating ribosomes can be used to capture ribosome-protected mRNA fragments for evaluating translation.<sup>2</sup>

### References

1. Fresno, M., Jiménez, A., and Viquez, D. Inhibition of translation in eukaryotic systems by harringtonine. *Eur. J. Biochem.* **72(2)**, 323-330 (1977).
2. Ingolia, N.T., Brar, G.A., Rouskin, S., et al. The ribosome profiling strategy for monitoring translation *in vivo* by deep sequencing of ribosome-protected mRNA fragments. *Nat. Protoc.* **7(8)**, 1534-1550 (2012).
3. Kantarjian, H.M., O'Brien, S., Anderlini, P., et al. Treatment of chronic myelogenous leukemia: Current status and investigational options. *Blood* **87(8)**, 3069-3081 (1996).
4. Chen, Y., Peng, C., Sullivan, C., et al. Novel therapeutic agents against cancer stem cells of chronic myeloid leukemia. *Anticancer Agents Med. Chem.* **10(2)**, 111-115 (2010).
5. Robert, F., Carrier, M., Rawe, S., et al. Altering chemosensitivity by modulating translation elongation. *PLoS One* **4(5)**, e5428 (2009).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM