

# Produktinformation



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# PRODUCT INFORMATION



# **Harringtonine**

Item No. 15361

CAS Registry No.: 26833-85-2

3-[4-methyl (2R)-2-hydroxy-Formal Name:

2-(3-hydroxy-3-methylbutyl)

butanedioate]cephalotaxine

Synonym: NSC 124147 MF: C28H37NO9 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.

НО

## **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. 1 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 Vizquez, 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).
- 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).
- 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.

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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