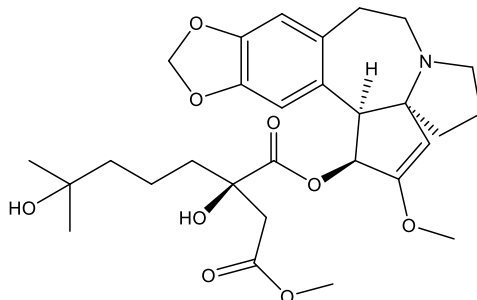


Catalog # 10-3033
Homoharringtonine

CAS# 26833-87-4

Cephalotaxine 4-methyl (2R)-2-hydroxy-2-(4-hydroxy-4-methylpentyl)butanedioate; HHT; NSC 141633; Omacetaxine mepesuccinate

Lot # X109509



Homoharringtonine is a plant alkaloid, originally isolated from the Hainan plum yew, that binds to the large ribosomal subunit A-site, competing with aminoacyl-tRNA amino acid side chains, thereby inhibiting the initial elongation step of protein synthesis.¹ It also binds to transcription factors NKRF (NF-κB repressing factor) and SP1, down-regulating the Myc pathway.^{2,3} Dramatically decreases global DNA 5-hydroxymethylcytosine levels via the SP1/TET1 axis.³ Induces apoptosis in tyrosine kinase inhibitor-resistant NSCLC cells⁴, and is a clinically useful agent for CML and AML⁵.

- 1) Gürel *et al.* (2009), *U2504 determines the species specificity of the A-site cleft antibiotics: the structures of tiamulin, homoharringtonine, and bruceantin bound to the ribosome*; J.Mol.Biol. **389** 146
- 2) Chen (2019), *Homoharringtonine deregulates MYC transcriptional expression by directly binding NF-κB repressing factor*; Proc. Natl. Acad. Sci. USA. **116** 2220
- 3) Li *et al.* (2020), *Homoharringtonine exhibits potent anti-tumor effect and modulates DNA epigenome in acute myeloid leukemia by targeting SP1/TET1/5hmC*; Haematologica **105** 148
- 4) Cao *et al.* (2015), *Homoharringtonine induces apoptosis and inhibits STAT3 via IL-6/JAK1/STAT3 signal pathway in Gefitinib-resistant lung cancer cells*; Sci. Rep. **5** 8477
- 5) Lu and Wang (2014), *Homoharringtonine and omacetaxine for myeloid hematological malignancies*; J. Hematol. Oncol. **7** 2

PHYSICAL DATA

Molecular Weight:	545.63
Molecular Formula:	C ₂₉ H ₃₉ NO ₉
Purity:	>95% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (75 mg/ml)
Physical Description:	Pale yellow to off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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