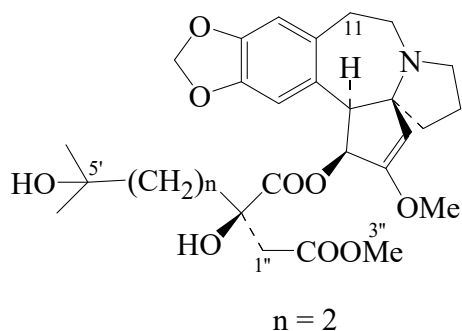




>>Entry Name: Harringtonine

Synonym(s): Cephalotaxine 4-methyl 2-hydroxy-2-(3-hydroxy-3-methylbutyl)butanedioate(ester), 9Cl



CAS Registry Number: 26833-85-2

Molecular Formula: C₂₈H₃₇NO₉

Molecular Weight: 531.602

Accurate Mass: 531.246834

Percentage Composition: C 63.26%; H 7.02%; N 2.63%; O 27.09%

Biological Source: Alkaloid from *Cephalotaxus harringtonia* var. *harringtonia*, *Cephalotaxus fortunei*, *Cephalotaxus hainanensis*, *Cephalotaxus sinensis* and *Cephalotaxus oliveri* (Cephalotaxaceae)

Use/Importance: Protein and DNA biosynthesis inhibitor. Shows antineoplastic activity, especially against murine lymphocytic leukaemias. More active than Vincristine against mouse leukaemias and melanomas. Has been used clinically against acute myelocytic leukaemia

Melting Point: Mp 73-75°

Optical Rotation: [α]_D -104.6 (c, 1.0 in CHCl₃)

Calculated Log P Data: Log P 0.52 (uncertain value) (calc)

UV: [neutral] $\lambda_{\max}$ 261 (ϵ 724); 290 (ϵ 4570) (EtOH) (Derep) [neutral] $\lambda_{\max}$ 290 () (EtOH) (Berdy)

Hazard & Toxicity: LD₅₀ (mus, ipr) 4.17 mg/kg. Exp. adverse systemic effects (G.I. tract, heart, haematopoietic organs)

Sigma: H0510

>>Derivative: Parent acid

Synonym(s): 3''-Des-*O*-methyhharringtonine. 5'-Des-*O*-methyhharringtonine

Molecular Formula: C₂₇H₃₅NO₉

Molecular Weight: 517.575

Accurate Mass: 517.231184

Percentage Composition: C 62.66%; H 6.82%; N 2.71%; O 27.82%

Biological Source: Alkaloid from leaves and stems of *Cephalotaxus harringtonia* var. *drupacea*

Physical Description: Amorph. solid

Optical Rotation: [α]_D -113 (c, 0.43 in DMSO)

UV: [neutral] $\lambda_{\max}$ 289 (ϵ 3630) (MeOH) (Berdy)

>>Derivative: 5'-Deoxy

Synonym(s): Deoxyharringtonine

CAS Registry Number: 36804-95-2

Molecular Formula: C₂₈H₃₇NO₈

Molecular Weight: 515.602

Accurate Mass: 515.251919

Percentage Composition: C 65.23%; H 7.23%; N 2.72%; O 24.82%

Biological Source: Alkaloid from *Cephalotaxus harringtonia* var. *harringtonia* and *Cephalotaxus hainanensis* (Cephalotaxaceae)

Use/Importance: Shows antineoplastic props.

Physical Description: Noncryst.

Optical Rotation: [α]_D -125.4 (c, 1.76 in CHCl₃)

Calculated Log P Data: Log P 2.73 (uncertain value) (calc)

UV: [neutral] $\lambda_{\max}$ 273 (ϵ 12590) (EtOH) (Derep) [neutral] $\lambda_{\max}$ 290 (ϵ 14570) (EtOH) (Berdy)