

PRODUCT INFORMATION



Shearinine A Item No. 45475

CAS Registry No.: 163136-24-1
Formal Name: 2,3R,5bS,6,7,7aS,8,10,10aS,11,13,16,16b
S,16cR,17,18-hexadecahydro-5b-hydroxy-
2,2,11,11,13,13,16b,16c-octamethyl-
4H-3,18aS-epoxy-1-benzoxepino[6',-
7':6,7]indeno[1,2-b]pyrano[4',3':3,4]
cyclopent[1,2-f]indol-4-one

Synonym: (+)-Shearinine A

MF: C₃₇H₄₅NO₅

FW: 583.8

Purity: ≥95%

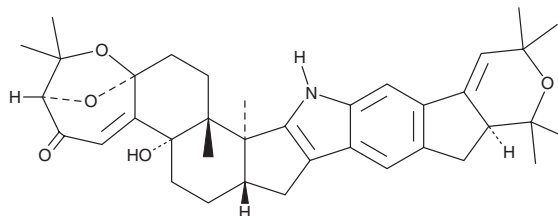
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Bacterium/*Penicillium* sp.

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



Laboratory Procedures

Shearinine A is supplied as a solid. A stock solution may be made by dissolving the shearinine A in the solvent of choice, which should be purged with an inert gas. Shearinine A is soluble in methanol and DMSO.

Description

Shearinine A is an indole diterpene and has been found in *P. janthinellum* that has diverse biological activities.¹⁻³ It inhibits protein tyrosine phosphatase 1B (PTP1B), T cell protein tyrosine phosphatase (TCPTP), Src homology region 2 domain-containing phosphatase 1 (SHP-1), and SHP-2 (IC₅₀s = 1.3, 3.8, 2.9, and 4 μM, respectively, in cell-free assays) and induces apoptosis in HL-60 leukemia cells at a concentration of 100 μM.^{1,2} It is also active against methicillin-resistant *S. aureus* (MRSA; MIC = 25 μg/ml).³

References

1. Cao, F., Liu, X.-M., Wang, X., *et al.* Structural diversity and biological activities of indole-diterpenoids from *Penicillium janthinellum* by co-culture with *Paecilomyces formosus*. *Bioorg. Chem.* **141:106863**, (2023).
2. Smetanina, O.F., Kalinovsky, A.I., Khudyakova, Y.V., *et al.* Indole alkaloids produced by a marine fungus isolate of *Penicillium janthinellum* Biourge. *J. Nat. Prod.* **70(6)**, 906-909 (2007).
3. Bo, H., Li, L.-H., Zhang, L.-J., *et al.* Indole-diterpenoids with anti-MRSA activity from the endophytic fungus *Aspergillus fumigatus*. *Chem. Nat. Compd.* **61(4)**, 827-830 (2025).

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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