

PRODUCT INFORMATION

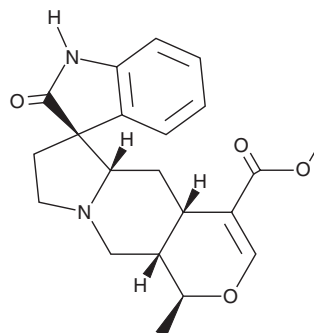


Isopteropodine

Item No. 40237

CAS Registry No.: 5171-37-9
Formal Name: 1,2,5',5'a,7',8',10',10'a-octahydro-1'-methyl-2-oxo-spiro[3H-indole-3,6'(4'aH)-[1H]pyrano[3,4-f]indolizine]-4'-carboxylic acid, methyl ester

Synonym: Uncarine E
MF: C₂₁H₂₄N₂O₄
FW: 368.4
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Uncaria rhynchophylla* (Miq.) Miq. ex Havil



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

Laboratory Procedures

Isopteropodine is supplied as a solid. A stock solution may be made by dissolving the isopteropodine in the solvent of choice, which should be purged with an inert gas. Isopteropodine is soluble in organic solvents such as methanol and DMSO. We do not recommend storing the aqueous solution for more than one day.

Description

Isopteropodine is an oxindole alkaloid that has been found in *U. tomentosa* and has diverse biological activities.¹⁻⁴ It induces activation of the pregnane X receptor (PXR) in a reporter assay using DPX2 cells expressing the human receptor (EC₅₀ = 0.7656 μM).¹ Isopteropodine is a positive modulator of M₁ muscarinic acetylcholine receptors (mAChRs) and the serotonin (5-HT) receptor subtype 5-HT₂ (EC₅₀s = 9.92 and 14.5 μM for the rat receptors, respectively).² It is active against *S. aureus* and *B. subtilis* (MICs = 408 and 679 μM, respectively).³ Isopteropodine (100 μM) inhibits the proliferation of CCRF CEM C7H2 lymphoblastic leukemia cells.⁴

References

1. Lei, S., Lu, J., Cheng, A., *et al.* Identification of PXR activators from *Uncaria rhynchophylla* (Gou Teng) and *Uncaria tomentosa* (cat's claw). *Drug Metab. Dispos.* **51(5)**, 629-636 (2023).
2. Kang, T.H., Matsumoto, K., Tohda, M., *et al.* Pteropodine and isopteropodine positively modulate the function of rat muscarinic M₁ and 5-HT₂ receptors expressed in *Xenopus* oocyte. *Eur. J. Pharmacol.* **444(1-2)**, 39-45 (2002).
3. García, R., Cayunao, C., Bocić, R., *et al.* Antimicrobial activity of isopteropodine. *Z. Naturforsch. C. J. Biosci.* **60(5-6)**, 385-388 (2005).
4. Bacher, N., Tienfenthaler, M., Sturm, S., *et al.* Oxindole alkaloids from *Uncaria tomentosa* induce apoptosis in proliferating, G₀/G₁-arrested and bcl-2-expressing acute lymphoblastic leukaemia cells. *Br. J. Haematol.* **132(5)**, 615-622 (2006).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/27/2024

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