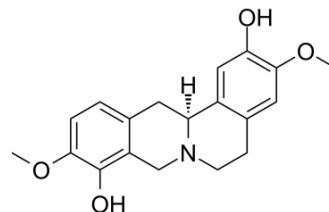


Scoulerine

Cat. No.:	HY-N1255
CAS No.:	6451-73-6
Molecular Formula:	C ₁₉ H ₂₁ NO ₄
Molecular Weight:	327.37
Target:	Microtubule/Tubulin; Beta-secretase; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Neuronal Signaling; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Scoulerine ((-)-Scoulerine), an isoquinoline alkaloid, is a potent antimetabolic compound. Scoulerine is also an inhibitor of BACE1 (β-site amyloid precursor protein cleaving enzyme 1). Scoulerine inhibits proliferation, arrests cell cycle, and induces apoptosis in cancer cells ^[1] .																
In Vitro	<p>Scoulerine ((-)-Scoulerine) inhibits mini-panel of human leukemic cells, MOLT-4 (WT), Jurkat (TP53 mutated), Raji (TP53 mutated), HL-60 (TP53 null), U-937 (TP53 mutated), and HEL 92.1.7 (wild-type), with IC₅₀s ranging from 2.7 μM to 6.5 μM^[1]. Scoulerine (2.5-20 μM; 24 hours) decreases proliferation of Jurkat and MOLT-4 cells^[1]. Scoulerine (2.5-20 μM; 24 hours) induces MOLT-4 and Jurkat cells apoptosis^[1]. Scoulerine induces G2 or M cell cycle arrest^[1]. Scoulerine (2.5-5 μM; 24 hours) shows an upregulation of p53 protein in p53 wild-type MOLT-4 cells^[1]. Scoulerine (2.5-5 μM; 24-48 hours) activates caspase-3/7, -8 and -9 in a dose-dependent manner^[1]. Scoulerine (5-10 μM; 24 hours) disrupts microtubule structure of A549 lung carcinoma cells^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Jurkat and MOLT-4 cells</td> </tr> <tr> <td>Concentration:</td> <td>2.5, 5, 10, 15 and 20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Significantly reduced the viability and proliferation of Jurkat and MOLT-4 cells in a dose dependent manner.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MOLT-4 and Jurkat cells</td> </tr> <tr> <td>Concentration:</td> <td>2.5, 5, 10, 15 and 20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Induced MOLT-4 and Jurkat cells apoptosis.</td> </tr> </table> <p>Cell Cycle Analysis^[1]</p>	Cell Line:	Jurkat and MOLT-4 cells	Concentration:	2.5, 5, 10, 15 and 20 μM	Incubation Time:	24 hours	Result:	Significantly reduced the viability and proliferation of Jurkat and MOLT-4 cells in a dose dependent manner.	Cell Line:	MOLT-4 and Jurkat cells	Concentration:	2.5, 5, 10, 15 and 20 μM	Incubation Time:	24 hours	Result:	Induced MOLT-4 and Jurkat cells apoptosis.
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Cell Line:	Jurkat and MOLT-4 leukemic cells
Concentration:	2.5-20 μ M
Incubation Time:	16 hours
Result:	Induced cell cycle arrest at the G2/M transition.

Western Blot Analysis^[1]

Cell Line:	MOLT-4 cells
Concentration:	2.5, 5 μ M
Incubation Time:	24 hours
Result:	Showed an upregulation of p53 protein in p53 wild-type MOLT-4 cells.

REFERENCES

[1]. Habartova K, et al. Scoulerine affects microtubule structure, inhibits proliferation, arrests cell cycle and thus culminates in the apoptotic death of cancer cells. Sci Rep. 2018;8(1):4829. Published 2018 Mar 19.

Caution: Product has not been fully validated for medical applications. For research use only.

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