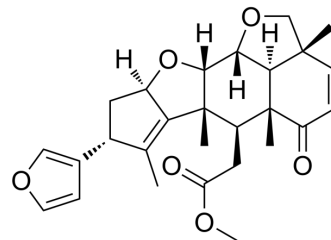


28-Deoxonimbolide

Cat. No.:	HY-N1710
CAS No.:	126005-94-5
Molecular Formula:	C ₂₇ H ₃₂ O ₆
Molecular Weight:	452.54
Target:	Apoptosis; Caspase
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	28-Deoxonimbolide is a nimbin (HY-N3187) type limonoid, that can be isolated from <i>Azadirachta indica</i> seed extracts. 28-Deoxonimbolide shows anticancer activity. 28-Deoxonimbolide induces apoptotic cell death in HL60 cells via both the mitochondrial- and the death receptor-mediated pathways ^[1] .																		
IC₅₀ & Target	Caspase-8	Caspase-9	Caspase-3																
In Vitro	<p>28-Deoxonimbolide (1-100 μM, 48 h) exhibits potent cytotoxic activity against HL60 (leukemia), A549 (lung), AZ521 (stomach), SK-BR-3 (breast), CRL1579 (melanoma), and RPMI1788 (normal lymphocyte) cells^[1].</p> <p>28-Deoxonimbolide (30 μM, 0-24 h) induces apoptosis in HL60 cells^[1].</p> <p>28-Deoxonimbolide (30 μM, 0-24 h) increases the levels of cleaved caspases-8, -9, and -3^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Cytotoxicity Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HL60, A549, AZ521, SK-BR-3, CRL1579 cells, RPMI1788</td> </tr> <tr> <td>Concentration:</td> <td>1-100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Exhibited potent cytotoxic activity against HL60 (leukemia), A549 (lung), AZ521 (stomach), SK-BR-3 (breast), and CRL1579 (melanoma) cells, with IC₅₀ values of 2.7 μM, 9.3 μM, 2.4 μM, 1.7 μM, 14.2 μM, and 2.7 μM, respectively.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HL60 cells</td> </tr> <tr> <td>Concentration:</td> <td>30 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>8 and 24 h</td> </tr> <tr> <td>Result:</td> <td>Induced early apoptosis in HL60 cells. The ratio of early apoptotic cells was increased after 8 h (10.9% vs 6.1% of negative control) and 24 h (18.7% vs 3.5% of negative control), and that of late apoptotic cells (upper right) was increased after 24 h (28.1% vs 2.9% of negative control).</td> </tr> </table>			Cell Line:	HL60, A549, AZ521, SK-BR-3, CRL1579 cells, RPMI1788	Concentration:	1-100 μM	Incubation Time:	48 h	Result:	Exhibited potent cytotoxic activity against HL60 (leukemia), A549 (lung), AZ521 (stomach), SK-BR-3 (breast), and CRL1579 (melanoma) cells, with IC ₅₀ values of 2.7 μM, 9.3 μM, 2.4 μM, 1.7 μM, 14.2 μM, and 2.7 μM, respectively.	Cell Line:	HL60 cells	Concentration:	30 μM	Incubation Time:	8 and 24 h	Result:	Induced early apoptosis in HL60 cells. The ratio of early apoptotic cells was increased after 8 h (10.9% vs 6.1% of negative control) and 24 h (18.7% vs 3.5% of negative control), and that of late apoptotic cells (upper right) was increased after 24 h (28.1% vs 2.9% of negative control).
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Western Blot Analysis^[1]

Cell Line:	HL60 cells
Concentration:	30 μ M
Incubation Time:	8 and 24 h
Result:	Diminished the levels of procaspases-8, -9, and -3, and then increased the levels of cleaved caspases-8, -9, and -3.

REFERENCES

[1]. Kikuchi T, et al. Cytotoxic and apoptosis-inducing activities of limonoids from the seeds of *Azadirachta indica* (neem). *J Nat Prod*. 2011 Apr 25;74(4):866-70.

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

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