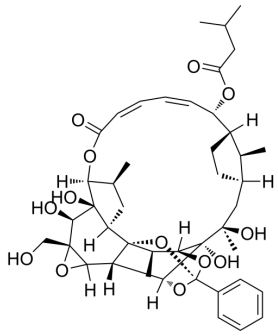
Trigothysoid N

Cat. No.:	HY-135744
CAS No.:	1501943-08-3
Molecular Formula:	$C_{44}H_{58}O_{13}$
Molecular Weight:	794.92
Target:	Apoptosis; STAT; MMP
Pathway:	Apoptosis; JAK/STAT Signaling; Stem Cell/Wnt; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Trigothysoid N is a daphnane diterpenoid with anticancer activity. Trigothysoid N inhibits tumor proliferation and migration by targeting mitochondria, regulating the STAT3/FAK signal pathway, and suppressing angiogenesis. Trigothysoid N also induce apoptosis, can be used for research of non-small cell lung cancer (NSCLC)[1].

In Vitro

Trigothysoid N (5, 15, and 45 μM; 48 h) suppresses tumor cell growth in a dose-dependent manner[1].
Trigothysoid N (5, 10, and 20 μM; 48 h) induces apoptosis and arrests the cell cycle at G0/G1 phase[1].
Trigothysoid N (5, 10, and 20 μM; 48 h) induces MMP depolarization, and increased cellular ROS production, to stimulate A549 cell apoptosis[1].
Trigothysoid N induces apoptosis by mitochondria-dependent signaling, and inhibits A549 cell metastasis via regulating FAK signal pathway[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	A549 cells
Concentration:	5, 10, and 20 μM
Incubation Time:	48 h
Result:	Resulted the apoptotic cell percentages increased from 9.9% (control) to 12.6% (5.0 μM), 15.4% (10.0 μM), and 59.0% (20.0 μM).

In Vivo

Trigothysoid N (0.025, 0.05, and 0.1 μM; 4 h) shows antiangiogenetic activity and antitumor activity against A549 in a transgenic zebrafish model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Transgenic zebrafish model transplanted with CM-DiI-stained A549 cells[1]
Dosage:	0.025, 0.05, and 0.1 μM
Administration:	
Result:	Inhibited angiogenesis. Disrupted intersegmental blood vessels (ISVs) and dorsal

	longitudinal anastomotic vessels (DLAVs) in zebrafish. Inhibited tumor cell proliferation with inhibitory rates of 5.7% (0.025 μM), 14.8% (0.05 μM) and 56.9% (0.1 μM), respectively.

REFERENCES

[1]. Li Y, et al. Trigothysoid N inhibits tumor proliferation and migration by targeting mitochondria and the STAT3/FAK pathway[J]. Arabian Journal of Chemistry, 2023, 16(8): 104930.

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