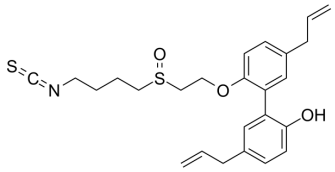
CT1-3

Cat. No.:	HY-150596
CAS No.:	2460738-32-1
Molecular Formula:	$C_{25}H_{29}NO_3S_2$
Molecular Weight:	455.63
Target:	Apoptosis; Bcl-2 Family; JNK
Pathway:	Apoptosis; MAPK/ERK Pathway
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CT1-3 is a potent anticancer agent. CT1-3 induces mitochondria-mediated apoptosis by regulating JNK/Bcl-2/Bax/XIAP pathway. CT1-3 suppresses the epithelial mesenchymal transition (EMT) potential of human cancer cells (HCCs) via regulating the E-cadherin/Snail axis, thus inhibits tumorigenesis. CT1-3 has a strong antitumor effect in mice model and exhibits no significant hepatic and renal toxicity[1].

In Vitro

CT1-3 has excellent inhibitory activity against multiple cancer cells with IC_{50} range of 5.10~14.06 μM in LOVO, A549, HepG2, MDA-MB-231 and HONE1, et al[1].

CT1-3 (10 μM; 24 h) notably increases ROS production in HCCs, significantly decreases mitochondrial membrane potential, and reduces Bcl-2 and XIAP levels and increases phospho-JNK and Bax levels[1].

CT1-3 (7.5 μM; 24 h) reduces the capacity of migration and invasion of HCCs, significantly promotes the expression level of E-cadherin (E-cad), and markedly decreases the pro-metastatic and pro-invasive protein Snail[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	A549, H460 and LOVO
Concentration:	10 μM
Incubation Time:	24 h
Result:	Notably increased ROS production, significantly decreased mitochondrial membrane potential, and reduced Bcl-2 and XIAP levels and increased phospho-JNK and Bax levels.

In Vivo

CT1-3 (20 mg/kg; IP, for 28 days) significantly suppresses tumor growth and exhibits no hepatic and renal toxicity in MDA-MB-231 xenografts model[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male BALB/c-nu/nu mice (injected with A549, OVCAR3 and MDA-MB-231)[1]
Dosage:	20 mg/kg
Administration:	IP, for 28 days

Result:	Significantly suppresses tumor growth and exhibited no hepatic and renal toxicity.

REFERENCES

[1]. Tao C, et al. CT1-3, a novel magnolol-sulforaphane hybrid suppresses tumorigenesis through inducing mitochondria-mediated apoptosis and inhibiting epithelial mesenchymal transition. Eur J Med Chem. 2020 Aug 1;199:112441.

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