Apoptosis inducer 17

Cat. No.: HY-163451

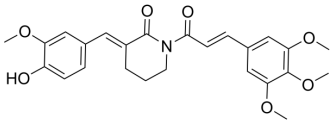
Molecular Formula: $C_{25}H_{27}NO_7$

Molecular Weight: 453.48

Target: Apoptosis

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Apoptosis inducer 17 is a Curcumin-Piperlongumine hybrid molecule that increases cell cycle arrest and apoptosis through activating JNK signaling pathway in lung cancer cells[1].

In Vitro

Apoptosis inducer 17 (compound CP; 0.027-60 μM; 72 h) inhibits cell proliferation, with IC_{50} values of 0.021 μM, 0.027 μM, and 0.73 μM for H446, H1299, and SBC-2 cells, respectively[1].

Apoptosis inducer 17 (compound CP; 0.03-0.3 μM; 24 h) displays superior inhibition of colony formation. Apoptosis inducer 17 induces dose-dependent G2/M arrest in H446 and H1299 cells[1].

Apoptosis inducer 17 (compound CP; 0.03-0.3 μM; 24 h) induces apoptosis of H446 and H1299 cells is mediated by caspase activity. And also activates JNK signaling cascade[1].

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

Cell Proliferation Assay[1]

Cell Line:	H446, H1299, and SBC-2 cells
Concentration:	60 μM, 20 μM, 6.67 μM, 2.22 μM, 0.74 μM, 0.25 μM, 0.082 μM, and 0.027 μM
Incubation Time:	72 h
Result:	Effectively inhibited cell proliferation.

Cell Cycle Analysis[1]

Cell Line:	H446, H1299 cells
Concentration:	0.03 μM, 0.1 μM, 0.3 μM
Incubation Time:	24 h
Result:	Induced dose-dependent G2/M arrest.

Apoptosis Analysis[1]

Cell Line:	H446, H1299 cells
Concentration:	0.03 μM, 0.1 μM, 0.3 μM

Incubation Time:	24 h
Result:	Induced apoptosis of H446 and H1299 cells.

Western Blot Analysis[1]

Cell Line:	H446, H1299 cells
Concentration:	0.03 μM, 0.1 μM, 0.3 μM
Incubation Time:	24 h
Result:	Led to a dose-dependent increase in the phosphorylation of JNK, c-Jun and activating transcription factor-2 (ATF-2) in both H446 and H1299 cells.

In Vivo

Apoptosis inducer 17 (compound CP; 10 mg/kg; ip; twice a day; for 15 days) shows a significant reduction in H446 cell growth, without any significant changes in body weight[1].

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Animal Model:	BALB/c nude mice (4-6 weeks old) injected with H446 cells[1]
Dosage:	10 mg/kg
Administration:	ip; twice a day; for 15 days
Result:	Prevented growth of lung cancer in xenograft tumors.

REFERENCES

[1]. Curcumin-Piperlongumine Hybrid Molecule Increases Cell Cycle Arrest and Apoptosis in Lung Cancer through JNK/c-Jun Signaling Pathway

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