Antitumor agent-80

Cat. No.: HY-151620

CAS No.: 2758520-84-0

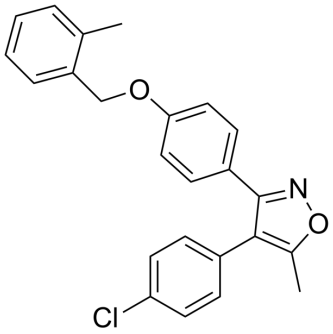
Molecular Formula: $C_{24}H_{20}ClNO_2$

Molecular Weight: 389.87

Target: Apoptosis

Pathway: Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Antitumor agent-80 (compound 11) is an orally active and potent antitumor agent. Antitumor agent-80 induces apoptosis in tumor cells[1].

In Vitro

Antitumor agent-80 (compound 11) (5 μM, 48 h) induces apoptosis and increase in PARP cleavage in tumor cells[1].

Antitumor agent-80 (0-10 μM, 96 h) shows cell growth inhibitory activity against breast and hepatocellular carcinoma cell lines[1].

Growth Inhibitory Activity of Antitumor agent-80 against Hepatocellular Carcinoma and Breast Cancer Cell Line Panel[1].

hepatocellular carcinoma	IC_{50} (μM)	breast	IC_{50} (μM)
Huh7	1.3	MCF7	3.8
HepG2	2.1	MDA-MB231	2.0
SNU475	1.7	MDA-MB468	2.8
Hep3B	3.0	SKBR3	3.5
FOCUS	2.1	ZR75	7.6
Hep40	8.6	MCF10A	12.1
PLC-PRF-5	9.5		
Mahlavu	3.2		

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

Western Blot Analysis[1]

Cell Line:	Huh7, Mahlavu, MDA-MB-231, and MCF-7 cells

Concentration:	5 μM
Incubation Time:	48 h
Result:	Caused the increase in PARP cleavage in both breast cancer cells (MCF7 and MDA-MB-231) and hepatocellular carcinoma cells (Mahlavu).

Cell Proliferation Assay[1]

Cell Line:	Huh7, Mahlavu, MDA-MB-231, and MCF-7 cells
Concentration:	10 μM, 5 μM, 2.5 μM
Incubation Time:	96 h
Result:	Caused inhibition in the growth of both breast and hepatocellular carcinoma cell lines.

In Vivo

Antitumor agent-80 (compound 11) (40 mg/kg, Orally, twice a week, for 4 weeks) displays antitumor activity in vivo in the Mahlavu hepatocellular carcinoma and the MDA-MB-231 breast cancer xenograft models[1].

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Animal Model:	Athymic nude mice (6-8 weeks old, with Mahlavu cells or MDA-MB-231 cells)[1]
Dosage:	40 mg/kg
Administration:	Orally, twice a week, for 4 weeks
Result:	In the Mahlavu xenografts, had a significant reduction (85%) in tumor volume. For MDA-MB-231 xenografts, resulted in about a 50% decrease in tumor volumes as compared to the control group.

REFERENCES

[1]. Turanlı S, et al. Vicinal Diaryl-Substituted Isoxazole and Pyrazole Derivatives with In Vitro Growth Inhibitory and In Vivo Antitumor Activity. ACS Omega. 2022 Oct 3;7(41):36206-36226.

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

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