Antitumor agent-79

Cat. No.: HY-151618

CAS No.: 2750233-50-0

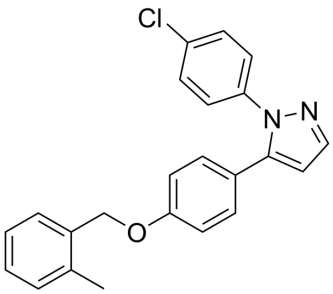
Molecular Formula: $C_{23}H_{19}ClN_2O$

Molecular Weight: 374.86

Target: Apoptosis

Pathway: Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Antitumor agent-79 shows good antiproliferative activities against hepatocellular carcinoma and breast cancer cells with IC_{50} values of 0.7-7.9 μM. Antitumor agent-79 induces cancer cells apoptosis and shows in vivo antitumor effects. Antitumor agent-79 can be used for the research of cancer[1].

IC_{50} & Target

IC50: 0.7 μM (Huh7), 1.4 μM (HepG2), 1.5 μM (SNU475), 7.9 μM (Hep3B), 2.4 μM (FOCUS), 5.2 μM (Hep40), 6.5 μM (PLC-PRF-5), 3.7 μM (Mahlavu), 0.9 μM (MCF7), 0.9 μM (MDA-MB231), 1.0 μM (MDA-MB468), 1.8 μM (SKBR3), 5.5 μM (ZR75), 7.6 μM (MCF10A) [1]

In Vitro

Antitumor agent-79 (0.15-40 μM; 72 h) shows in vitro growth inhibitory activities against hepatocellular carcinoma and breast cancer cells with IC_{50} values of 0.7-7.9 μM[1].

Antitumor agent-79 (5 μM; 48 h) induces cell apoptosis by increasing the PARP cleavage[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	Huh7, HepG2, SNU475, Hep3B, FOCUS, Hep40, PLC-PRF-5, Mahlavu, MCF7, MDA-MB231. MDA-MB468, SKBR3, ZR75 and MCF10A cell lines
Concentration:	0.15-40 μM
Incubation Time:	72 hours
Result:	Time and dose-dependent showed cytotoxicity to hepatocellular carcinoma and breast cancer cells with IC_{50} values of 0.7, 1.4, 1.5, 7.9, 2.4, 5.2, 6.5, 3.7, 0.9, 0.9, 1.0, 1.8, 5.5 and 7.6 μM for Huh7, HepG2, SNU475, Hep3B, FOCUS, Hep40, PLC-PRF-5, Mahlavu, MCF7, MDA-MB231, MDA-MB468, SKBR3, ZR75 and MCF10A cells, respectively.

Western Blot Analysis[1]

Cell Line:	Mahlavu, Huh7, MCF-7 and MDA-MB-231 cancer cells
Concentration:	5 μM
Incubation Time:	48 hours
Result:	Increased the PARP cleavage in both breast cancer cells (MCF7 and MDA-MB-231) and

	hepatocellular carcinoma cells (Mahlavu).

Apoptosis Analysis[1]

Cell Line:	Mahlavu, Huh7, MCF-7 and MDA-MB-231 cancer cells
Concentration:	5 μM
Incubation Time:	48 hours
Result:	Induced cell apoptosis of cancer cells.

In Vivo

Antitumor agent-79 (40 mg/kg; p.o. twice a week for 4 weeks) shows antitumor effects in mice xenograft models[1].

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

Animal Model:	6–8 weeks old male athymic nude mice with hepatocellular carcinoma (Mahlavu cells) and breast (MDA MB-231 cells) xenografts[1]
Dosage:	40 mg/kg
Administration:	Oral gavage; 40 mg/kg; twice a week for 4 weeks
Result:	Significantly reduced the tumor volume following 4 weeks treatment with 40% reductions of tumor volumes in the Mahlavu xenografts. Resulted in about a 50% decreased in tumor volumes as compared to the control group in MDA-MB-231 xenografts. Showed well tolerated in vivo and neither significant bodyweight loss nor toxic effects or mortality were observed.

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA