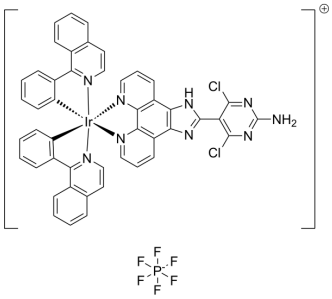
Antitumor agent-143

Cat. No.:	HY-161332
Molecular Formula:	$C_{47}H_{29}Cl_2F_6IrN_9P$
Molecular Weight:	1127.88
Target:	Ferroptosis; Pyroptosis; Apoptosis; Reactive Oxygen Species
Pathway:	Apoptosis; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antitumor agent-143 (compound 2c) is an antitumor agent that blocks cell proliferation of A549 cells during the S phase and induces an early apoptosis. Antitumor agent-143 induces cell death via ferroptosis, apoptosis by a ROS-mediated mitochondrial dysfunction pathway and GSDMD-mediated pyroptosis[1].

In Vitro

Antitumor agent-143 (compound 2c; 48h) inhibits the cell growth of A549, B16, HCT116 and HepG2 cells with IC_{50} values of 2.2 μM, 2.5 μM, 2.5 μM and 1 μM, respectively[1].

Antitumor agent-143 (compound 2c) blocks cell proliferation of A549 cells during the S phase and induces an early apoptosis [1].

Antitumor agent-143 (compound 2c) leads to elevated ROS and Ca^{2+} amounts. This resulted in a reduced mitochondrial membrane potential, mitochondrial permeability transition pore opening, and an increase of cytochrome c[1].

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

In Vivo

Antitumor agent-143 (compound 2c) decreases tumor volumes comparison to the control[1].

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Animal Model:	BALB/c nude mice (3-4 weeks) injected with A549 cells[1]
Dosage:	3.2 or 5.0 mg/kg
Administration:	Intraperitoneal injection; daily; for 7 days
Result:	Exhibited a remarkable inhibitory rate of 58.58% in restraining tumor growth.

REFERENCES

[1]. Huiyan Hu, et al. Synthesis and mitochondria-localized iridium (III) complexes induce cell death through pyroptosis and ferroptosis pathways. Eur J Med Chem. 2024 Feb 29:268:116295.

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

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