Anticancer agent 193

Cat. No.: HY-162310

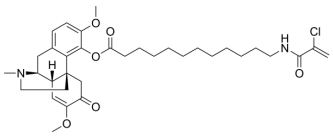
Molecular Formula: $C_{34}H_{47}ClN_2O_6$

Molecular Weight: 615.2

Target: Ferroptosis; Reactive Oxygen Species; Autophagy

Pathway: Apoptosis; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Autophagy

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



BIOLOGICAL ACTIVITY

Description

Anticancer agent 193 (compound D3-3) is an inducer of ferritinophagy, eventually triggering ferroptosis. Anticancer agent 193 induces the production of lipid ROS, and significantly promoted colorectal cancer cells to release the ferrous ion in an autophagy-dependent manner[1].

In Vitro

Anticancer agent 193 (D3-3; 2.5-30 μM; 12-48 h) inhibits the proliferation of HCT-116 cells for 12, 24, and 48 h and the IC_{50} values are 15.06 μM, 11.18 μM, and 5.87 μM, respectively[1].

Anticancer agent 193 (D3-3; 5-20 μM; 12 h) considerably increases the autophagy marker protein LC3B-II/LC3B-I ratio. And it enhances FTH1 expression, a ferritin subunit[1].

Anticancer agent 193 (D3-3; 5-20 μM; 12 h) effectively promotes the accumulation of lipid ROS[1].

Anticancer agent 193 (D3-3) remarkably increases the level of ferrous iron in HCT-116 cells in a concentration-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	HCT-116 cells
Concentration:	2.5 μM, 5 μM, 7.5 μM,10 μM, 15 μM, 30 μM
Incubation Time:	12, 24, and 48 h
Result:	Inhibited the proliferation of human colon cancer cells.

Western Blot Analysis[1]

Cell Line:	HCT-116 cells
Concentration:	5 μM, 10 μM, 20 μM
Incubation Time:	12 h
Result:	Induced ferritinophagy in HCT-116 cells through the LC3-NCOA4-FTH1 axis.

In Vivo

Anticancer agent 193 (D3-3; 30-60 mg/kg; i.p; daily; for 2 weeks) restraines tumor growth and promoted lipid peroxidation in the HCT-116 xenograft model[1].

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

Animal Model:	Female BALB/c nude mice injected with HCT-116 cells[1]
Dosage:	30 mg/kg or 60 mg/kg
Administration:	i.p; daily; for 2 weeks
Result:	Inhibited tumor growth in vivo.

REFERENCES

[1]. Ling Zhu, et al. Identification of a ferritinophagy inducer via sinomenine modification for the treatment of colorectal cancer. Eur J Med Chem. 2024 Feb 21:268:116250.

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