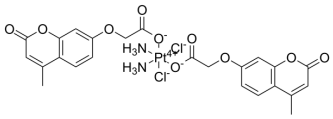
DMUP

Cat. No.:	HY-115983
CAS No.:	2364350-07-0
Molecular Formula:	$C_{24}H_{24}Cl_2N_2O_{10}Pt$
Molecular Weight:	766.44
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

DMUP is a potent CD47-SIRPα axis inhibitor. DMUP induces apoptosis and increases the macrophage phagocytosis in A549 cells. DMUP decreases the expression of CD47 and SIRPα protein. DMUP shows antitumor activity[1].

In Vitro

DMUP (72 h) shows antiproliferative activity with IC_{50}s of 0.92, 3.58, 6.29, 1.54 μM for A549, A549/DDP, PANC-1, HepG2 cells, respectively[1].
DMUP (5 μM, 24 h) arrests the cell cycle in S phase in A549 cells[1].
DMUP (5 μM, 48 h) induces apoptosis in A549 cells[1].
DMUP (5 μM, 24 h) decreases the expression of CD47 and SIRPα protein[1].
DMUP (5 μM, 4 h) increases the macrophage phagocytosis in A549-GFP cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	A549, A549/DDP, PANC-1, HepG2 cells
Concentration:	0-64 μM
Incubation Time:	72 h
Result:	Showed antiproliferative activity with IC_{50}s of 0.92, 3.58, 6.29, 1.54 μM for A549, A549/DDP, PANC-1, HepG2 cells, respectively.

Cell Cycle Analysis[1]

Cell Line:	A549 cells
Concentration:	5 μM
Incubation Time:	24 h
Result:	Arrested the cell cycle in the S phase.

Apoptosis Analysis[1]

Cell Line:	A549 cells

Concentration:	5 μM
Incubation Time:	48 h
Result:	Induced cell apoptosis.

Western Blot Analysis[1]

Cell Line:	A549, THP-1 cells
Concentration:	5 μM
Incubation Time:	24 h
Result:	Decreased the expression of CD47 and SIRPα protein.

In Vivo

DMUP (10 mg/kg, i.v., every other day for 17 day) shows antitumor activity[1].
DMUP (5, 10, 20, 40 mg/kg, i.v.,every two days for 18 days) shows no toxicity in mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ICR mice[1]
Dosage:	5, 10, 20, 40 mg/kg
Administration:	i.v., every two days, 18 days
Result:	Showed low toxicity with LD_{50} of greater than 20 mg/kg.

Animal Model:	A549 xenograft BALB/c nude mice[1]
Dosage:	10 mg/kg
Administration:	i.v., every other day, 17 day
Result:	Showed antitumor activity.

REFERENCES

[1]. Tan Y, et al. Platinum(IV) complexes as inhibitors of CD47-SIRPα axis for chemoimmunotherapy of cancer. Eur J Med Chem. 2022; 229:114047.

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