SLC7A11-IN-1

Cat. No.: HY-149979

Molecular Formula: $C_{13}H_{15}Cl_2F_3N_4O_5PtS$

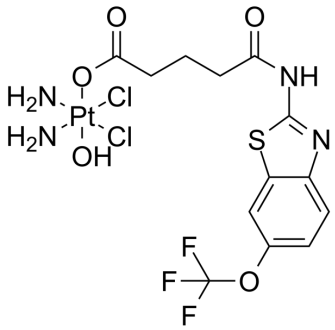
Molecular Weight: 662.33

Target: Apoptosis

Pathway: Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 20 mg/mL (30.20 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5098 mL	7.5491 mL	15.0982 mL
5 mM	0.3020 mL	1.5098 mL	3.0196 mL
10 mM	0.1510 mL	0.7549 mL	1.5098 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

SLC7A11-IN-1 is a potent solute carrier family 7 member 11 (SLC7A11, xCT) inhibitor. SLC7A11-IN-1 shows antiproliferative activity. SLC7A11-IN-1 inhibits cell invasion and metastasis. SLC7A11-IN-1 induces Apoptosis and cell cycle arrest at S-phase. SLC7A11-IN-1 shows anti-tumor activity[1].

IC_{50} & Target

SLC7A11[1]

In Vitro

SLC7A11-IN-1 (compound 2; 0-100 μM; 72 h) shows antiproliferative activity with IC_{50}s of 0.03, 0.11, 0.18, 0.17, 0.27 μM for HCT-116, MDA-MB-231, MCF-7, HepG2, LO2 cells, respectively[1].

SLC7A11-IN-1 (0.5 μM; 24 h) inhibits invasion and metastasis of HCT-116 cells[1].

SLC7A11-IN-1 (0.5 μM; 24 h) induces cell apoptosis and cell cycle arrest at S-phase[1].

SLC7A11-IN-1 obviously reduces the intracellular GSH content and significantly enhances reactive oxygen species (ROS) expression[1].

SLC7A11-IN-1 (1 μM; 15 h) significantly induced DNA damage and related proteins expression in HCT-116 cells[1].

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

Cell Cycle Analysis[1]

Cell Line:	HCT-116 cells
Concentration:	0.5 μM
Incubation Time:	24 h
Result:	Induced cell apoptosis and cell cycle arrest at S-phase with the S-phase proportion of 55.79%.

Western Blot Analysis[1]

Cell Line:	HCT-116 cells
Concentration:	1 μM
Incubation Time:	15 h
Result:	Increased the expression of p53, Bax, p-Akt, VEGFA and HIF1-α proteins, decreased the expression of Bcl-2, xCT protein level.

In Vivo

SLC7A11-IN-1 (2 mg/kg; i.v.; every three days for consecutive 3 times) inhibits the growth of tumors in mice[1].

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

Animal Model:	male BALB/c mice (CT26 tumor models)[1]
Dosage:	2 mg/kg
Administration:	I.v.; once every three days, for consecutive 3 times
Result:	Suppressed the growth of tumor by 60.7%.

REFERENCES

[1]. Li Z, et al. Blocking xCT and PI3K/Akt pathway synergized with DNA damage of Riluzole-Pt(IV) prodrugs for cancer treatment. Eur J Med Chem. 2023 Mar 15;250:115233.

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