SIRT7 inhibitor 97491

Cat. No.: HY-135899

CAS No.: 1807758-81-1

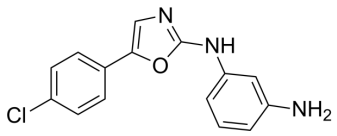
Molecular Formula: $C_{15}H_{12}ClN_3O$

Molecular Weight: 285.73

Target: Sirtuin; Apoptosis

Pathway: Cell Cycle/DNA Damage; Epigenetics; Apoptosis

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 500 mg/mL (1749.90 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4998 mL	17.4990 mL	34.9981 mL
	5 mM	0.7000 mL	3.4998 mL	6.9996 mL
	10 mM	0.3500 mL	1.7499 mL	3.4998 mL

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

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 10 mg/mL (35.00 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 4.17 mg/mL (14.59 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SIRT7 inhibitor 97491, a potent SIRT7 inhibitor with an IC_{50} of 325 nM, reduces deacetylase activity of SIRT7 in a dose-dependent manner. SIRT7 inhibitor 97491 prevents tumor progression by increasing p53 stability through acetylation at K373/382. SIRT7 inhibitor 97491 promotes apoptosis through caspase pathway.[1].

IC_{50} & Target

SIRT7
325 nM (IC_{50})

In Vitro

SIRT7 inhibitor 97491 (1-10 μM) reduces cell growth in MES-SA cells, without causing cytotoxicity in HEK293 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	Human uterine sarcoma MES-SA cells
Concentration:	1, 5, 10 μM
Incubation Time:	72 hours
Result:	Led to more than 50% decrease in cell proliferation at concentrations of 5 and 10 μM.

Cell Cytotoxicity Assay[1]

Cell Line:	Human embryonic kidney cell line HEK293 cells
Concentration:	1, 5, 10 μM
Incubation Time:	24 hours
Result:	HEK293 cells were almost unaffected.

In Vivo

SIRT7 inhibitor 97491 (2 mg/kg; intraperitoneally injected; for 3 weeks, except on weekends) inhibits tumor growth in xenograft mice[1].

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

Animal Model:	Balb/c nude mice (18-20 g; 6-8 weeks old) with MES-SA cells[1]
Dosage:	2 mg/kg
Administration:	Intraperitoneally injected; for 3 weeks, except on weekends.
Result:	Inhibited cancer growth in vivo.

CUSTOMER VALIDATION

- J Cell Biol. 2023 May 1;222(5):e202201068.

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REFERENCES

[1]. Ji-Hye Kim, et al. Identification of a Novel SIRT7 Inhibitor as Anticancer Drug Candidate. Biochem Biophys Res Commun. 2019 Jan 8;508(2):451-457.

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