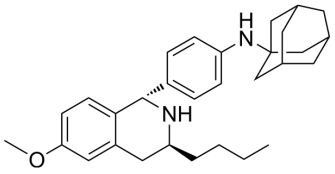
GPX4-IN-2

Cat. No.:	HY-138556
CAS No.:	2485005-22-7
Molecular Formula:	$C_{30}H_{40}N_2O$
Molecular Weight:	444.65
Target:	Glutathione Peroxidase
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 37.5 mg/mL (84.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2490 mL	11.2448 mL	22.4896 mL
	5 mM	0.4498 mL	2.2490 mL	4.4979 mL
	10 mM	0.2249 mL	1.1245 mL	2.2490 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.75 mg/mL (8.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GPX4-IN-2 is a potent GPX4 inhibitor. GPX4 shows antiproliferative activity. GPX4-IN-2 has the potential for the research of cancer[1].

IC_{50} & Target

GPX4[1]

In Vitro

GPX4-IN-2 (compound 28) (0.0005-10 mM; 24 h) shows antiproliferative activity with IC_{50}s of 0.004, 0.016, 2.9 μM for 786-O, SJSA-1, A431 cells, respectively[1].

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

Cell Proliferation Assay[1]

Cell Line:	SJSA-1, 786-O, A431 cells
Concentration:	0.0005-10 mM

Incubation Time:	24 h
Result:	Inhibited cell proliferation with IC_{50}s of 0.004, 0.016, 2.9 μM for 786-O, SJSA-1, A431 cells, respectively.

In Vivo

GPX4-IN-2 (5 mg/kg for mouse, 2 mg/kg for rats; i.v.) shows a good pharmacokinetics profile in mice and rats[1].

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

Animal Model:	6-8 weeks, 22-25 g, Male Balb/c mice, 6-8 weeks, 200-250 g, male SD rats[1]
Dosage:	5 mg/kg for mouse, 2 mg/kg for rats
Administration:	I.v.
Result:	Showed a good pharmacokinetics with $T_{1/2}$ of 3.5 h, C_{max} of 5446 ng/mL, AUC of 1635 ng·h/mL, CL of 49 mL/min/kg, Vd of 14.7 L/kg in mice, $T_{1/2}$ of 3.15 h, C_{max} of 3529 ng/mL, AUC of 1082 ng·h/mL, CL of 30 mL/min/kg, Vd of 8.2 L/kg in rats.

REFERENCES

[1]. Chun Jiang, et al. Compounds with ferroptosis inducing activity and methods of their use. WO2020176757A1.

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

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