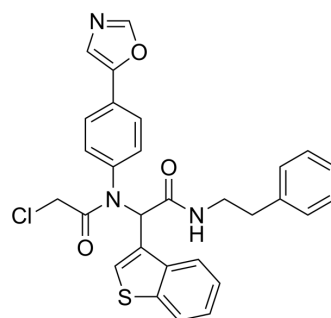


GPX4-IN-3

Cat. No.:	HY-141809		
CAS No.:	2761004-85-5		
Molecular Formula:	C ₂₉ H ₂₄ ClN ₃ O ₃ S		
Molecular Weight:	530.04		
Target:	Glutathione Peroxidase; Ferroptosis		
Pathway:	Metabolic Enzyme/Protease; 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 : 67.5 mg/mL (127.35 mM; Need ultrasonic)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>1.8867 mL</td> <td>9.4333 mL</td> <td>18.8665 mL</td> </tr> <tr> <td>5 mM</td> <td>0.3773 mL</td> <td>1.8867 mL</td> <td>3.7733 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1887 mL</td> <td>0.9433 mL</td> <td>1.8867 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	1.8867 mL	9.4333 mL	18.8665 mL	5 mM	0.3773 mL	1.8867 mL	3.7733 mL	10 mM	0.1887 mL	0.9433 mL	1.8867 mL
Solvent	Mass			Concentration																		
		1 mg	5 mg	10 mg																		
Preparing Stock Solutions	1 mM	1.8867 mL	9.4333 mL	18.8665 mL																		
	5 mM	0.3773 mL	1.8867 mL	3.7733 mL																		
	10 mM	0.1887 mL	0.9433 mL	1.8867 mL																		
	Please refer to the solubility information to select the appropriate solvent.																					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 6.75 mg/mL (12.73 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 6.75 mg/mL (12.73 mM); Clear solution 																					

BIOLOGICAL ACTIVITY

Description	GPX4-IN-3 (26a) is a potent glutathione peroxidase 4 (GPX4) inhibitor as a selective ferroptosis inducer. GPX4-IN-3 (26a) exhibits 71.7% inhibition for GPX4 with 1 μM ^[1] .
In Vitro	<p>GPX4-IN-3 (26a) exhibits IC₅₀ values of 0.78 μM, 6.9 μM, 0.15 μM and 4.73 μM in 4T1, MCF-7, HT1080 and HT1080 (with Fer-1) cells, respectively^[1].</p> <p>GPX4-IN-3 (26a) exhibits outstanding GPX4 inhibitory activity with a percent inhibition up to 71.7% at 1.0 μM compared to 45.9% of RSL-3^[1].</p> <p>GPX4-IN-3 (26a) could significantly induce lipid peroxide (LPO) increase and effectively induce ferroptosis with satisfactory selectivity^[1].</p> <p>GPX4-IN-3 (26a) is more likely to induce ferroptosis through the accumulation of intracellular peroxides via inhibiting GPX4</p>

activity^[1].

GPX4-IN-3 (26a) significantly increased the level of ROS in 4T1 cells, which could also be reversed by Ferrostatin-1 (fer-1)^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

GPX4-IN-3 (26a) exerts antitumor activity and good biological safety in vivo^[1].

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

Animal Model:	Mouse 4T1 xenograft model ^[1] .
Dosage:	15 and 30 mg/kg.
Administration:	Intravenous injection, every two days for a total of five times.
Result:	Significantly suppress tumor growth with a tumor growth inhibition (TGI) value of 33.2 and 55.1% at 15 and 30 mg/kg, respectively.

CUSTOMER VALIDATION

- J Exp Clin Cancer Res. 2023 Mar 1;42(1):52.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Congjun Xu, et al. Discovery of a Potent Glutathione Peroxidase 4 Inhibitor as a Selective Ferroptosis Inducer. J Med Chem. 2021 Sep 23;64(18):13312-13326.

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

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