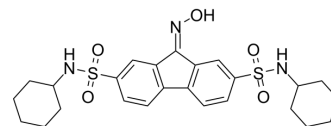


FIN56

Cat. No.:	HY-103087		
CAS No.:	1083162-61-1		
Molecular Formula:	C ₂₅ H ₃₁ N ₃ O ₅ S ₂		
Molecular Weight:	517.66		
Target:	Ferroptosis		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (193.18 mM)
 * "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.9318 mL	9.6588 mL	19.3177 mL
5 mM	0.3864 mL	1.9318 mL	3.8635 mL
10 mM	0.1932 mL	0.9659 mL	1.9318 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: 2.5 mg/mL (4.83 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.5 mg/mL (4.83 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (4.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FIN56 is a specific inducer of ferroptosis. FIN56 induces ferroptosis by inducing degradation of GPX4. FIN56 also binds to and activates squalene synthase^[1].

In Vitro

FIN56 (5 μM) can trigger ferroptosis by inhibition of glutathione peroxidase 4 (GPX4)^[2].
 FIN56 (5 μM, 10 hours) depletes GPX4 protein in HT-1080 cells^[3].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[2]

Cell Line: TP53^{+/+} and TP53^{-/-} HCT116 cells

Concentration: 5 μ M

Incubation Time:

Result: Triggered ferroptosis.

Western Blot Analysis^[3]

Cell Line: HT-1080 cells

Concentration: 5 μ M

Incubation Time: 10 hours

Result: Caused a large decrease in the abundance of GPX4 at the protein level.

CUSTOMER VALIDATION

- Redox Biol. 2021 Jan;38:101807.
- Free Radic Biol Med. 4 June 2022.
- Int Immunopharmacol. 2023 May 12;120:110291.
- Mol Carcinog. 2023 May 5.
- Med Oncol. 2023 Apr 10;40(5):141.

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REFERENCES

- [1]. Kenichi Shimada, et al. Global survey of cell death mechanisms reveals metabolic regulation of ferroptosis. Nat Chem Biol. 2016 Jul;12(7):497-503.
- [2]. Michael M Gaschler, et al. FINO₂ initiates ferroptosis through GPX4 inactivation and iron oxidation. Nat Chem Biol. 2018 May;14(5):507-515.
- [3]. Yangchun Xie, et al. The Tumor Suppressor p53 Limits Ferroptosis by Blocking DPP4 Activity. Cell Rep. 2017 Aug 15;20(7):1692-1704.

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

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