

## DeFer-2

## Chemical Properties

CAS No. : 3058911-16-0

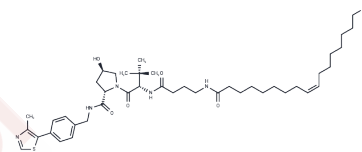
Formula: C44H69N5O5S

Molecular Weight: 780.11

Keep away from direct sunlight

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	DeFer-2 is a ferritin PROTAC degrader (Kd= 17.1 $\mu$ M). It triggers the degradation of ferritin leading to the accumulation of free iron ions and an increase in ROS, which subsequently initiates caspase 3-GSDME mediated pyroptosis in cancer cells. DeFer-2 significantly inhibits tumor growth and extends the survival of mice with subcutaneous B16F10 tumors, and it is useful for melanoma research.
Targets(IC50)	Caspase,Pyroptosis,PROTACs,ROS
In vitro	DeFer-2 (0-5 $\mu$ M, 0-24 hours) reduces ferritin expression by forming a ternary complex with ferritin and VHL, leading to disruption of redox and mitochondrial homeostasis in B16F10 cells. At 5 $\mu$ M for 8-24 hours, DeFer-2 triggers caspase 3-GSDME-mediated pyroptosis in B16F10 cells via free iron accumulation and increased ROS levels. With exposure from 24-48 hours, DeFer-2 exhibits significant cytotoxicity in B16F10 cells, with IC50 values of 3.1 $\mu$ M and 1.5 $\mu$ M at 24 and 48 hours, respectively.
In vivo	DeFer-2 (10 mg/kg, intravenous injection, once every other day, for a total of 8 days) can effectively inhibit the tumor proliferation in the B16F10 tumor mouse model and prolong their lifespan.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.2819 mL	6.4094 mL	12.8187 mL
5 mM	0.2564 mL	1.2819 mL	2.5637 mL
10 mM	0.1282 mL	0.6409 mL	1.2819 mL
50 mM	0.0256 mL	0.1282 mL	0.2564 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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