

Product Data Sheet

Liproxstatin-1

Cat. No.:	B4987
CAS No.:	950455-15-9
Formula:	C ₁₉ H ₂₁ ClN ₄
M.Wt:	340.85
Synonyms:	
Target:	Metabolism
Pathway:	Ferroptosis
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥10.5 mg/mL in DMSO; ≥2.39 mg/mL in EtOH with gentle warming and ultrasonic

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	2.9338 mL	14.6692 mL	29.3384 mL
	5 mM	0.5868 mL	2.9338 mL	5.8677 mL
	10 mM	0.2934 mL	1.4669 mL	2.9338 mL

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary

A potent ferroptosis inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: Gpx4^{-/-} cells

Preparation method: The solubility of this compound in DMSO is > 10.5 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

Reacting conditions: 72 hrs

	Applications:	Liproxstatin-1 inhibited the growth of Gpx4 ^{-/-} cells with an IC50 value of 22 nM. At the dose of 50 nM, Liproxstatin-1 completely prevented lipid peroxidation. Liproxstatin-1 (200 nM) dose-dependently protected Gpx4 ^{-/-} cells against ferroptosis-inducing agents, such as L-buthionine sulphoximine (10 µM), erastin (1 µM) and RSL3 (0.5 µM), whereas it failed to rescue cell death caused by staurosporine (0.2 µM) and H2O2 (200 µM).
In Vivo	Animal experiment	
	Animal models:	GreERT2; Gpx4 ^{fl/fl} mice
	Dosage form:	10 mg/kg; i.p.
	Applications:	In GreERT2; Gpx4 ^{fl/fl} mice, Liproxstatin-1 significantly extended the survival period. The TUNEL staining results after 9-day treatment showed a markedly reduced number of TUNEL+ cells in the Liproxstatin-1 treatment group than in the vehicle control group, indicating that Liproxstatin-1 delayed ferroptosis in tubular cells.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Nicole L. Jenkins, Simon A. James, et al. "Ferrous-glutathione coupling mediates ferroptosis and frailty in *Caenorhabditis elegans*." bioRxiv. 2019 March 31.

See more customer validations on www.apexbt.com.

References

[1]. Friedmann Angeli JP, Schneider M, Proneth B, et al. Inactivation of the ferroptosis regulator Gpx4 triggers acute renal failure in mice. *Nat Cell Biol*, 2014, 16(12): 1180-1191.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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