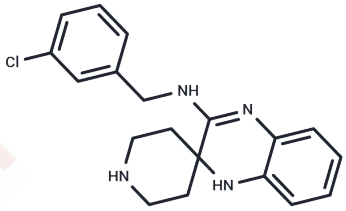
Data Sheet (Cat.No.T2376)

TargetMol

Liproxstatin-1

Chemical Properties



CAS No. : 950455-15-9

Formula: C19H21ClN4

Molecular Weight: 340.85

Storage: Store at low temperature
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	Liproxstatin-1 is a potent and selective inhibitor of ferroptosis (IC50=22 nM). Liproxstatin-1 protects cells from ferroptosis induced by ferroptosis inducers (e.g., Erastin, RSL3).
Targets(IC50)	Ferroptosis
In vitro	**METHODS**: Mouse fibroblasts L929 were treated with Liproxstatin-1 (0-250 nM) for 24 h. Cell viability was measured using AquaBluer. **RESULTS**: Liproxstatin-1 protected against FINs such as BSO (10 μM), erastin (1 μM), and RSL3 (0.5 μM) in a dose-dependent manner, while it did not rescue staurosporine (0.2 μM) or H2O2 (200 μM)-induced cell death. [1] **METHODS**: Oligodendrocytes OLN93 were treated with Liproxstatin-1 (1 μM) and RSL-3 (7.89 μM) for 24 h, and GSH levels were measured by micro reduced GSH assay kit. **RESULTS**: Liproxstatin-1 treatment increased GSH levels compared to the RSL-3 group. [2]
In vivo	**METHODS**: To test the potential to prevent animal-induced Gpx4 destruction in vivo, Liproxstatin-1 (10 mg/kg) was administered intraperitoneally to TAM-treated CreERT2; Gpx4fl/fl mice once daily for two weeks. **RESULTS**: Liproxstatin-1 significantly prolonged survival. the number of TUNEL+ cells in the Liproxstatin-1 group was significantly reduced, and the table Liproxstatin-1 delayed the desmoplasia of renal tubular cells. [1] **METHODS**: To investigate the role of ferroptosis in inflammation-associated cognitive deficits, Liproxstatin-1 (10 mg/kg) was administered intraperitoneally to C57BL/6 mice once daily for five days followed by LPS administration. **RESULTS**: Liproxstatin-1 ameliorated memory deficits in a mouse model of LPS-induced cognitive impairment.The protective effects of Liproxstatin-1 were associated with attenuation of iron deposition and modulation of the iron-death-associated protein families, TF, xCT, Fth, Gpx4 and FtMt. [3]
Cell Research	Cell viability is assessed at different time points after treatment using AquaBluer according to the manufacturer's recommendations. Alternatively, cell death is also quantified by measuring released lactate dehydrogenase activity using the cytotoxicity detection kit (LDH). (Only for Reference)

Solubility Information

Solubility	Ethanol: soluble, H2O: Insoluble, DMSO: 255 mg/mL (748.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 6 mg/mL (17.6 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0587 mL	0.2934 mL	0.5868 mL

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.

Reference

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