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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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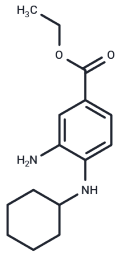
Data Sheet (Cat.No.T6500)

TargetMol

Ferrostatin-1

Chemical Properties



CAS No. : 347174-05-4

Formula: C15H22N2O2

Molecular Weight: 262.35

Appearance: no data available

Storage: keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Ferrostatin-1 (Fer-1) is a potent and selective inhibitor of ferroptosis. Ferrostatin-1 potently inhibits Erastin-induced ferroptosis in HT-1080 cells with an EC50 of 60 nM. Ferrostatin-1 also exhibits antioxidant and antifungal activities.
Targets(IC50)	Ferroptosis,Antifungal
In vitro	**METHODS**: Human bronchial epithelial cells BEAS-2B were co-treated with LPS (10 mg/L) and Ferrostatin-1 (2 μM) for 16 h. The growth inhibition of the cells was detected by CCK-8 method. **RESULTS**: Ferrostatin-1 attenuated the LPS-induced cell damage. [1] **METHODS**: Human fibrosarcoma cells HT-1080 were treated with Ferrostatin-1 (0.5 μM) and Erastin (10 μM) for 4 h, and ROS levels produced by the cells were measured by Flow Cytometry. **RESULTS**: Ferrostatin-1 inhibited the Erastin-induced accumulation of cytoplasmic and lipid ROS. [2] **METHODS**: Mouse hippocampal neuronal cells HT-22 were treated with Ferrostatin-1 (3-12 μM) for 16 h, then treated with 5 mM glutamate for 24 h, and then LDH release was measured. **RESULTS**: The release of LDH was significantly increased by treatment with glutamate, and the release of LDH was inhibited by Ferrostatin-1 treatment. [3]
In vivo	**METHODS**: To investigate whether ferroptosis is associated with LPS-induced acute kidney injury (AKI), Ferrostatin-1 (5 mg/kg) was administered intraperitoneally in a single dose to C57BL/6 mice, and infectious AKI was induced by intraperitoneal injection of LPS (10 mg/kg) 30 min later. **RESULTS**: Ferrostatin-1 significantly protected mice from renal dysfunction and tubular injury in LPS-induced AKI. [4] **METHODS**: To investigate whether iron disorders are associated with acute liver disease and its molecular mechanism, Ferrostatin-1 (2.5 μM/kg) was intraperitoneally injected into ICR mice once a day for three days, followed by intraperitoneal injection of TAA (250 mg/kg/day) for three consecutive days, to establish an acute liver injury (ALI) model in mice. **RESULTS**: Ferrostatin-1 pretreatment significantly reduced TAA-induced changes in plasma ALT, AST and LDH levels, inhibited the expression of TfR1, Fpn and Ft-L proteins, and decreased iron accumulation without affecting the expression of xCT or GPX4 in the liver. Ferrostatin-1 prevents hepatic iron by decreasing death. [5]

Cell Research	Cell viability was typically assessed in 384-well format by Alamar Blue fluorescence (ex/em 530/590) measured on a Victor3 plate reader. In some experiments, Trypan Blue dye exclusion counting was performed using an automated cell counter. Cell viability under test conditions is reported as a percentage relative to the negative control treatment [1].

Solubility Information

Solubility	Ethanol: 26.2 mg/mL (100 mM), DMSO: 45 mg/mL (171.53 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8117 mL	19.0585 mL	38.117 mL
5 mM	0.7623 mL	3.8117 mL	7.6234 mL
10 mM	0.3812 mL	1.9059 mL	3.8117 mL
50 mM	0.0762 mL	0.3812 mL	0.7623 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.

Reference

Liu P, et al. Ferrostatin-1 alleviates lipopolysaccharide-induced acute lung injury via inhibiting ferroptosis. Cell Mol Biol Lett. 2020 Feb 27;25:10.
Hu G, Cui Z, Chen X, et al.Suppressing Mesenchymal Stromal Cell Ferroptosis Via