

# Ferrostatin-1

Catalog No: tcsc0019733



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 25mg

**Size:** 50mg



## Specifications

**CAS No:**

347174-05-4

**Formula:**

$C_{15}H_{22}N_2O_2$

**Pathway:**

Anti-infection; Apoptosis

**Target:**

Ferroptosis; Fungal

**Form:**

Light brown to gray (Solid)

**Purity / Grade:**

99.86%

**Solubility:**

DMSO : 125 mg/mL (ultrasonic)

**Storage Instruction:**

2-8°C, protect from light

**Alternative Names:**

Benzoic acid, 3-amino-4-(cyclohexylamino)-, ethyl ester

---

**Observed Molecular Weight:**

262.35

---

**References**

[1]. Dixon SJ, et al. Ferroptosis: an iron-dependent form of nonapoptotic cell death. Cell. 2012;149(5):1060-1072. [2]. Skouta R, Dixon SJ, Wang J, et al. Ferrostatins inhibit oxidative lipid damage and cell death in diverse disease models. J Am Chem Soc. 2014;136(12):4551-4556. [3]. Horwath MC, et al. Antifungal Activity of the Lipophilic Antioxidant Ferrostatin-1. Chembiochem. 2017;18(20):2069-2078. [4]. Liu P, Feng Y, et al. Ferrostatin-1 alleviates lipopolysaccharide-induced acute lung injury via inhibiting ferroptosis. Cell Mol Biol Lett. 2020;25:10. Published 2020 Feb 27. [5]. Melania Guerrero Hue, et al. FP282 FERROPTOSIS-MEDIATED CELL DEATH IS DECREASED BY CURCUMIN IN RENAL DAMAGE ASSOCIATED TO RHABDOMYOLYSIS, Nephrology Dialysis Transplantation, Volume 34, Issue Supplement\_1, June 2019, gfr106.FP282.

**Product Description**

Ferrostatin-1 (Fer-1), a potent and selective ferroptosis inhibitor, suppresses Erastin-induced ferroptosis in HT-1080 cells (EC<sub>50</sub>=60nM). Ferrostatin-1, a synthetic antioxidant, acts via a reductive mechanism to prevent damage to membrane lipids and thereby inhibits cell death. Ferrostatin-1 exhibits antifungal activity[1][2][3]. IC<sub>50</sub> & Target: EC<sub>50</sub>: 60 nM (Ferroptosis)[1] In Vitro: Ferrostatin-1 prevents erastin-induced accumulation of cytosolic and lipid ROS. Ferrostatin-1 prevents glutamate-induced neurotoxicity in organotypic rat brain slices[1]

Ferrostatin-1 (2 μM; 24 h) prevents Glutamate (5 mM)-induced neurotoxicity in a rat organotypic hippocampal slice culture (OHSC)[2] Ferrostatin-1 inhibits lipid peroxidation, but not mitochondrial reactive oxygen species formation or lysosomal membrane permeability[2]

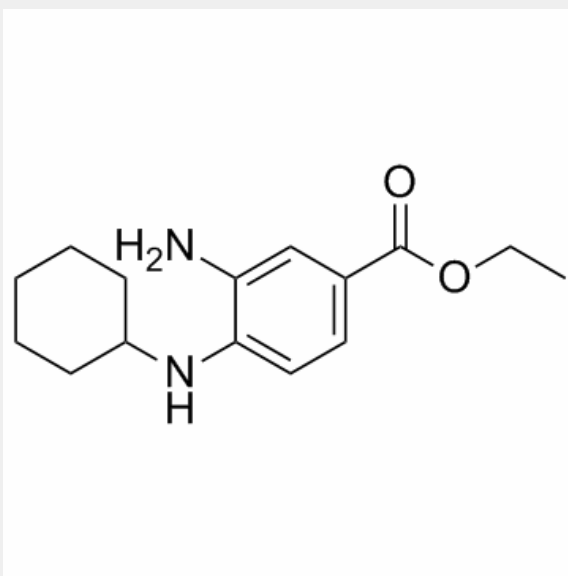
Ferrostatin-1 inhibits cell death in cellular models of Huntington's disease (HD), periventricular leukomalacia (PVL), and kidney dysfunction[2]

Ferrostatin-1 (1 μM; 6 h) inhibits the oxidative destruction of unsaturated fatty acids in HT-1080 cells, thus increases the number of healthy medium spiny neurons (MSNs)[3]

In Vivo: Ferrostatin-1 (5 mg/kg; ip; single dose, 30 min before glycerol injection) improves renal function in mice with rhabdomyolysis, whereas no beneficial effects were observed with the pan-caspase inhibitor zVAD or in RIPK3-deficient mice[1]

Ferrostatin-1 (0.8 mg/kg; tail vein injection) effectively alleviates LPS-induced acute lung injury (ALI)[4]

Ferrostatin-1 (i.p.; 5 mg/kg; C57BL/6J mice) improves renal function in mice with rhabdomyolysis[5]



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!