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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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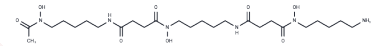
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Deferoxamine

Chemical Properties

CAS No. :	70-51-9
Formula:	C ₂₅ H ₄₈ N ₆ O ₈
Molecular Weight:	560.68
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	<p>Deferoxamine (Desferrioxamine B) is an iron chelator (binds Fe(III) and many other metal cations) that inhibits neuronopathy, may be used to modify the reduction of iron accumulation and deposition in tissues, and may improve neurological dysfunction by inhibiting ferroptosis and neuroinflammation following traumatic brain injury.</p> <p>Desferrioxamin-B has antioxidant, antiproliferative, Deferoxamine has antioxidant, antiproliferative, and antitumor activities, and can induce HIF-1α production, apoptosis and autophagy in cancer cells. Desferrioxamin-B can be used in the treatment of acute iron toxicity and COVID-19 related diseases.</p>
Targets(IC50)	Apoptosis, Antioxidant, HIF, Autophagy
In vitro	<p>Deferoxamine (1 mM; 16 hours or 4 weeks) improves HIF-1α function under hypoxic and hyperglycemic conditions and reduces ROS in MEF cells.[1]</p> <p>Deferoxamine mesylate (100 μM; 24 h) increases InsR expression and activity and induces increased p-Akt/total Akt/PKB levels.[2]</p> <p>Deferoxamine (5, 10, 25, 50, 100 μM; 7 or 9 days) inhibits the proliferation of tumor-associated MSCs and bone marrow MSCs.[3].</p> <p>Deferoxamine (5, 10, 25, 50, 100 μM; 7 days) induces apoptosis in mesenchymal stem cells.[3]</p> <p>Deferoxamine (10 μM; 3 days) affects the expression of mesenchymal stem cell adhesion proteins[3]</p> <p>Deferoxamine (100 μM; 24 h) induces autophagy-mediated by HIF-1α levels in SH-SY5Y cells.[4]</p>
In vivo	<p>Deferoxamine (6.57 μg/mouse; drip; once daily for 21 days) promotes wound healing and increases neovascularization in aged or diabetic mice.[1]</p> <p>Deferoxamine (200 mg/kg; i.p.; once daily for 2 weeks) causes HIF-1α stabilization and increases glucose uptake, hepatic InsR expression, and signaling in vivo.[2]</p>

Solubility Information

Solubility	<p>DMSO: 10 mg/mL (17.84 mM), Sonication is recommended.</p> <p>H₂O: 7.14 mg/mL (12.74 mM)</p> <p>(< 1 mg/ml refers to the product slightly soluble or insoluble)</p>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7835 mL	8.9177 mL	17.8355 mL
5 mM	0.3567 mL	1.7835 mL	3.5671 mL
10 mM	0.1784 mL	0.8918 mL	1.7835 mL
50 mM	0.0357 mL	0.1784 mL	0.3567 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

Duscher D, et al. Comparison of the Hydroxylase Inhibitor Dimethyloxalylglycine and the Iron Chelator Deferoxamine in Diabetic and Aged Wound Healing. *Plast Reconstr Surg.* 2017 Mar; 139(3):695e-706e.
Yong Y

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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