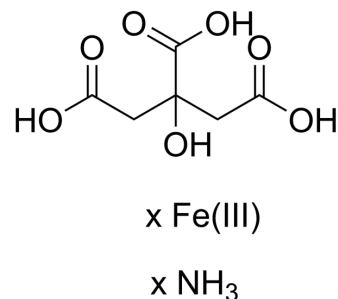


Ammonium iron(III) citrate

Cat. No.:	HY-B1645
CAS No.:	1185-57-5
Molecular Formula:	$C_6H_8O_7 \cdot xFe \cdot xH_3N$
Target:	Ferroptosis
Pathway:	Apoptosis
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 33.33 mg/mL (Need ultrasonic) DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Ammonium iron(III) citrate (Ammonium ferric citrate), a physiological form of nontransferrin-bound iron, induces intracellular iron overload to cause ferroptosis ^[1] . Ammonium iron(III) citrate can enhance protein production ^[2] .
In Vitro	Ammonium iron(III) citrate (Ammonium ferric citrate; 1, 5, 10, 15 mM; 24 hours) with 5 mM induces cell death in HT1080 cells. AML12 cells were highly resistant to Ammonium iron(III) citrate, as they maintained cell viability about 80%. Ammonium iron(III) citrate can be actively transported into cells by specific transporter ^[1] . Ammonium iron(III) citrate (6, 12, 18 mg/L) has a higher biomass for <i>Chlorella vulgaris</i> FSP-E (CV) in BG-11 medium with 12 mg/L and 18 mg/L ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biomed Pharmacother. 2023 Aug 18;166:115333.
- Front Mol Biosci. 22 July 2022.
- Bioengineered. 2021 Dec;12(2):11610-11621.
- Biol Trace Elem Res. 2023 May 8.
- Oxid Med Cell Longev. 2022 Apr 25;2022:3846217.

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REFERENCES

- [1]. Yu-Cheng Lai, et al. Towards protein production and application by using Chlorella species as circular economy. Bioresour Technol. 2019 Oct;289:121625.
- [2]. Shenglin Fang, et al. Effects of intracellular iron overload on cell death and identification of potent cell death inhibitors. Biochem Biophys Res Commun. 2018 Sep 3;503(1):297-303.
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Caution: Product has not been fully validated for medical applications. For research use only.

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