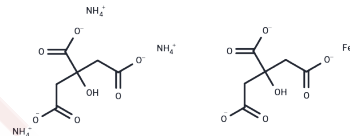


## Ammonium iron(III) citrate

### Chemical Properties

CAS No. : 1185-57-5  
 Formula: C<sub>12</sub>H<sub>22</sub>FeN<sub>3</sub>O<sub>14</sub>  
 Molecular Weight: 488.16  
 Storage: 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	Ammonium iron(III) citrate (Ferric ammonium citrate) is a physiological form of non-ferritin-bound iron that causes intracellular iron overload leading to cellular ferroptosis and enhances protein production.
Targets(IC50)	Ferroptosis

### Solubility Information

Solubility	H <sub>2</sub> O: 67.33 mg/mL (137.93 mM), Sonication is recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0485 mL	10.2425 mL	20.4851 mL
5 mM	0.4097 mL	2.0485 mL	4.097 mL
10 mM	0.2049 mL	1.0243 mL	2.0485 mL
50 mM	0.041 mL	0.2049 mL	0.4097 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

- Pogge DJ, Drewnoski ME, Hansen SL. Feeding ferric ammonium citrate to decrease the risk of sulfur toxicity: effects on trace mineral absorption and status of beef steers. *J Anim Sci.* 2014 Sep;92(9):4005-13. doi: 10.2527/jas.2014-7799. Epub 2014 Jul 8. PubMed PMID: 25006066.
- Zhang Z, Yuan Q, Hu X, et al. Rifaximin protects SH-SY5Y neuronal cells from iron overload-induced cytotoxicity via inhibiting STAT3/NF- $\kappa$ B signaling. *Cell Biology International.*
- Chavasit V, Porasuphatana S, Suthutvoravut U, Zeder C, Hurrell R. Iron bioavailability in 8-24-month-old Thai children from a micronutrient-fortified quick-cooking rice containing ferric ammonium citrate or a mixture of ferrous sulphate and ferric sodium ethylenediaminetetraacetic acid. *Matern Child Nutr.* 2015 Dec;11 Suppl 4:179-87. doi: 10.1111/mcn.12167. PubMed PMID: 25721887.
- Tan Q, Wu D, Lin Y, et al. Identifying eleven new ferroptosis inhibitors as neuroprotective agents from FDA-approved drugs. *Bioorganic Chemistry.* 2024: 107261.
- Pogge DJ, Drewnoski ME, Snider D, Rumbelha WK, Hansen SL. Effect of ferric ammonium citrate in feedlot diets with varying dried distillers' grains inclusion on ruminal hydrogen sulfide concentrations and steer growth. *J Anim Sci.* 2016 Sep;94(9):3894-3901. doi: 10.2527/jas.2016-0657. PubMed PMID: 27898902.
- Deng P, Silva M, Yang N, et al. Artemisinin inhibits neuronal ferroptosis in Alzheimer's disease models by targeting KEAP1. *Acta Pharmacologica Sinica.* 2024: 1-12.
- Li SW, Liu CM, Guo J, Marcondes AM, Deeg J, Li X, Guan F. Iron overload induced by ferric ammonium citrate triggers reactive oxygen species-mediated apoptosis via both extrinsic and intrinsic pathways in human hepatic cells. *Hum Exp Toxicol.* 2016 Jun;35(6):598-607. doi: 10.1177/0960327115597312. Epub 2015 Jul 29. PubMed PMID: 26224043.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E\_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481