

# PRODUCT INFORMATION



## Deferoxamine (mesylate)

Item No. 14595

CAS Registry No.: 138-14-7

Formal Name: N<sup>4</sup>-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N<sup>1</sup>-(5-aminopentyl)-N<sup>1</sup>-hydroxybutanediamide, monomethanesulfonate

Synonyms: Ba 33112, DFO, DFOM, DFX, NSC 644468

MF: C<sub>25</sub>H<sub>48</sub>N<sub>6</sub>O<sub>8</sub> • CH<sub>3</sub>SO<sub>3</sub>H

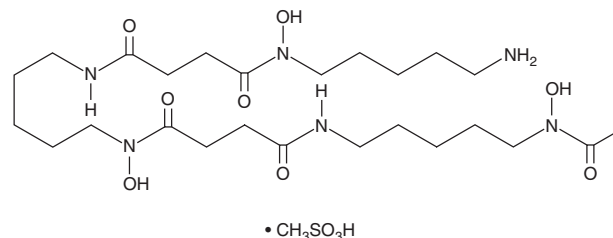
FW: 656.8

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Deferoxamine (mesylate) is supplied as a crystalline solid. A stock solution may be made by dissolving the deferoxamine (mesylate) in the solvent of choice, which should be purged with an inert gas. Deferoxamine (mesylate) is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of deferoxamine (mesylate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of deferoxamine (mesylate) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Deferoxamine is a bacterial siderophore that chelates iron.<sup>1</sup> It is used to experimentally inhibit iron-dependent prolyl hydroxylases (EC<sub>50</sub> = 17.8 μM), thus preventing the degradation of isoforms of hypoxia inducible factor during normoxia.<sup>2-4</sup> Deferoxamine has applications in diseases that are characterized by high levels of circulating iron, such as thalassemia major.<sup>5</sup>

### References

1. Steinmetz, W.L., Glick, M.R., and Oei, T.O. *Clin. Chem.* **26(11)**, 1593-1597 (1980).
2. Theriault, J.R., Felts, A.S., Bates, B.S., et al. *Bioorg. Med. Chem. Lett.* **22(1)**, 76-81 (2012).
3. Jaakkola, P., Mole, D.R., Tian, Y.-M., et al. *Science* **292**, 468-472 (2001).
4. Sandau, K.B., Zhou, J., Kietzmann, T., et al. *J. Biol. Chem.* **276(43)**, 39805-39811 (2001).
5. Neufeld, E.J. *Hematology Am. Soc. Hematol. Educ. Program* **2010**, 451-455 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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