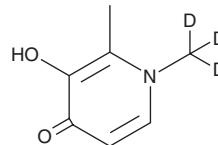


# PRODUCT INFORMATION



## Deferiprone-d<sub>3</sub> Item No. 28702

**CAS Registry No.:** 1346601-82-8  
**Formal Name:** 3-hydroxy-2-methyl-1-(methyl-d<sub>3</sub>)-4(1H)-pyridinone  
**MF:** C<sub>7</sub>H<sub>6</sub>D<sub>3</sub>NO<sub>2</sub>  
**FW:** 142.2  
**Chemical Purity:** ≥98% (Deferiprone)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

Deferiprone-d<sub>3</sub> is intended for use as an internal standard for the quantification of deferiprone (Item No. 20387) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Deferiprone-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the deferiprone-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Deferiprone-d<sub>3</sub> is soluble in DMSO.

### Description

Deferiprone is an iron chelator that binds to iron in a 3:1 (ligand:iron) ratio and has antioxidant and neuroprotective activities.<sup>1</sup> It reverses ferroptosis induced by erastin (Item No. 17754) in HT-1080 fibrosarcoma cells when used at a concentration of 100 μM as well as reduces levels of intracellular iron and inhibits lipid peroxidation in primary rat hepatocytes at 200 and 50 μM, respectively.<sup>2,3</sup> Deferiprone reduces cholesterol diet-induced increases in the levels of amyloid-β (1-42) (Aβ42), Aβ40, and the phosphorylation of tau and glycogen synthase kinase-3β (GSK-3β) in the rabbit hippocampus when administered at a dose of 50 mg/kg.<sup>4</sup> Formulations containing deferiprone have been used in the treatment of thalassemia.

### References

1. Barnabé, N., Zastre, J.A., Venkataram, S., *et al.* Deferiprone protects against doxorubicin-induced myocyte cytotoxicity. *Free Radic. Biol. Med.* **33(2)**, 266-275 (2002).
2. Morel, I., Cillard, J., Lescoat, G., *et al.* Antioxidant and free radical scavenging activities of the iron chelators pyoverdin and hydroxypyrid-4-ones in iron-loaded hepatocyte cultures: Comparison of their mechanism of protection with that of desferrioxamine. *Free Radic. Biol. Med.* **13(5)**, 499-508 (1992).
3. Zheng, J., Sato, M., Mishima, E., *et al.* Sorafenib fails to trigger ferroptosis across a wide range of cancer cell lines. *Cell Death Dis.* **12(7)**, 698 (2021).
4. Prasanthi, J.R., Schrag, M., Dasari, B., *et al.* Deferiprone reduces amyloid-β and tau phosphorylation levels but not reactive oxygen species generation in hippocampus of rabbits fed a cholesterol-enriched diet. *J. Alzheimers Dis.* **30(1)**, 167-182 (2012).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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