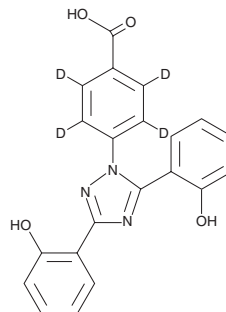


PRODUCT INFORMATION



Deferasirox-d₄ Item No. 25430

CAS Registry No.: 1133425-75-8
Formal Name: 4-[3,5-bis(2-hydroxyphenyl)-1H-1,2,4-triazol-1-yl]-benzoic-2,3,5,6-d₄ acid
MF: C₂₁H₁₁D₄N₃O₄
FW: 377.4
Chemical Purity: ≥98% (Deferasirox)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

Deferasirox-d₄ is intended for use as an internal standard for the quantification of deferasirox (Item No. 16753) 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).

Deferasirox-d₄ is supplied as a solid. A stock solution may be made by dissolving the deferasirox-d₄ in the solvent of choice, which should be purged with an inert gas. Deferasirox-d₄ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of deferasirox-d₄ in these solvents is approximately 2, 20, and 30 mg/ml, respectively.

Description

Deferasirox is a synthetic, tridentate iron chelator that binds iron at a 2:1 ratio.¹ It is selective for iron (Fe(III)) over Cu(II), Zn(II), Mg(II), and Ca(II) but does bind to Al(III). Deferasirox decreases iron levels in iron-loaded rat heart cells *in vitro* by 45.8 and 55.6% compared to control levels when used at concentrations of 160 and 320 μM, respectively.² In hypertransfused rats, deferasirox (200 mg/kg) decreases radiolabeled liver iron levels from 41 to 21.7% and blood iron levels from 8.2 to 3.4%.² It is primarily excreted *via* the fecal route, in contrast to the iron chelator deferoxamine (Item No. 14595).² Deferasirox also inhibits proliferation of SAS human oral squamous carcinoma cells (EC₅₀ = 21 μM), decreases cyclin D1 protein levels, and increases protein levels of N-Myc downregulated gene 1 (NDRG1) and NDRG3.³ It acts in a synergistic manner when used in combination with gemcitabine (Item Nos. 11690 | 22080 | 9003096) to reduce proliferation of BxPC-3 pancreatic cancer cells *in vitro* and reduce tumor growth in a BxPC-3 mouse xenograft model when administered at a dose of 200 mg/kg.⁴ Formulations containing deferasirox have been used in the treatment of β-thalassemia and chronic iron overload.

References

1. Heinz, U., Hegetschweiler, K., Acklin, P., *et al.* *Angew. Chem. Int. Ed.* **38(17)**, 2568-2570 (1999).
2. Hershko, C., Konijn, A.M., Nick, H.P., *et al.* *Blood* **97(4)**, 1115-1122 (2001).
3. Lee, J.-C., Chiang, K.-C., Feng, T.-H., *et al.* *Int. J. Mol. Sci.* **17(9)**, pii: E1435 (2016).
4. Shinoda, S., Kaino, S., Amano, S., *et al.* *Oncotarget* **9(47)**, 28434-28444 (2018).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/20/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM