

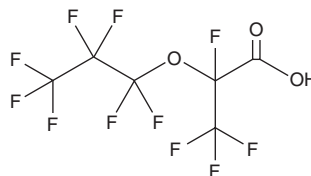
PRODUCT INFORMATION



Hexafluoropropylene Oxide Dimer Acid

Item No. 37266

CAS Registry No.: 13252-13-6
Formal Name: 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid
Synonyms: FRD-903, HFPO-DA, Perfluoro-2-propoxypropanoic Acid, PFPPrOPrA
MF: C₆HF₁₁O₃
FW: 330.1
Supplied as: A liquid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Hexafluoropropylene oxide dimer acid (HFPO-DA) is supplied as a liquid. A stock solution may be made by dissolving the HFPO-DA in the solvent of choice, which should be purged with an inert gas. HFPO-DA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of HFPO-DA in these solvents is approximately 10 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 HFPO-DA can be prepared by directly dissolving the HFPO-DA in aqueous buffers. The solubility of HFPO-DA in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

HFPO-DA is a perfluoroalkyl ether carboxylic acid (PFECA).¹ It induces apoptosis and increases the levels of reactive oxygen species (ROS) in HepG2 cells when used at a concentration of 250 μM.² HFPO-DA (4 mg/kg per egg) decreases right ventricular wall thickness, increases heart rate, and induces hepatic lipid accumulation in hatchling chickens, effects that can be prevented by knockdown of the gene encoding peroxisome proliferator-activated receptor α (*Ppara*).³ It decreases the percent survival of zebrafish embryos (LC₅₀ = 7,651 mg/L).⁴ HFPO-DA (250 mg/kg) decreases average birthweight, survival time, and serum glucose levels, as well as increases serum cholesterol and triglyceride levels, in neonatal rats when administered to pregnant dams.¹ It has been found as a contaminant in sea and river water.⁵

References

1. Conley, J.M., Lambright, C.S., Evans, N., et al. *Environ. Int.* **146**, (2021).
2. Yoo, H.J., Pyo, M.C., Park, Y., et al. *Heliyon* **7(11)**, e08272 (2021).
3. Xu, X., Ni, H., Guo, Y., et al. *Environ. Pollut.* **290**, 118112 (2021).
4. Gong, S., McLamb, F., Shea, D., et al. *Environ. Sci. Pollut. Res. Int.* **30(12)**, 32320-32336 (2022).
5. Zhao, Z., Cheng, X., Hua, X., et al. *Environ. Pollut.* **263(Pt. A)**, 114391 (2020).

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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