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PRODUCT INFORMATION



Perfluorooctanesulfonic Acid

Item No. 37233

CAS Registry No.: 1763-23-1
Formal Name: 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid

Synonyms: Heptadecafluorooctanesulfonic Acid, Perfluorooctane sulfonate, Perfluorooctylsulfonic Acid, PFOS

MF: C₈HF₁₇O₃S

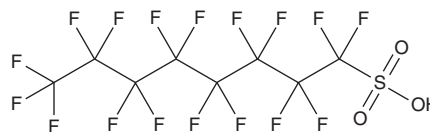
FW: 500.1

Purity: ≥95%

Supplied as: A solution in ethanol

Storage: -20°C

Stability: ≥2 years



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

Description

Perfluorooctanesulfonic acid (PFOS) is a perfluoroalkyl substance (PFAS).¹ It decreases peroxisome proliferator-activated receptor γ (PPAR γ) transactivation in a reporter assay and induces apoptosis in NRK-52E rat renal proximal tubular epithelial cells, effects that can be reversed by the PPAR γ agonist rosiglitazone (Item Nos. 71740 | 11884 | 71742), when used at a concentration of 50 nM. PFOS (20 mg/L) increases malondialdehyde (MDA) levels and decreases glutathione (GSH) levels in zebrafish larvae.² It decreases body weight and induces hepatomegaly, renal hypertrophy, neoplastic growth in the gonads, thickening of pulmonary epithelial walls, and focal hyperplasia of cerebral gliocytes in rats when administered at a dose of 20 mg/kg.³ Maternal serum exposure to PFOS is positively associated with gestational diabetes, and umbilical cord serum levels are negatively associated with infant birth weight and head circumference.^{4,5} It has been found in lake trout (*S. namaycush*), marine mammals, and urban watersheds.⁶⁻⁸

References

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2. Huang, J., Wang, Q., Liu, S., *et al.* Crosstalk between histological alterations, oxidative stress and immune aberrations of the emerging PFOS alternative OBS in developing zebrafish. *Sci. Total Environ.* **774(1)**, 145443 (2021).
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5. Apelberg, B.J., Witter, F.R., Herbstman, J.B., *et al.* Cord serum concentrations of perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA) in relation to weight and size at birth. *Environ. Health Perspect.* **115(11)**, 1670-1676 (2007).
6. Furdui, V.I., Stock, N.L., Ellis, D.A., *et al.* Spatial distribution of perfluoroalkyl contaminants in lake trout from the Great Lakes. *Environ. Sci. Technol.* **41(5)**, 1554-1559 (2007).
7. Rotander, A., Kärrman, A., van Bavel, B., *et al.* Increasing levels of long-chain perfluorocarboxylic acids (PFCAs) in Arctic and North Atlantic marine mammals, 1984-2009. *Chemosphere* **86(3)**, 278-285 (2012).
8. Nguyen, V.T., Reinhard, M., and Karina, G.Y.-H. Occurrence and source characterization of perfluorochemicals in an urban watershed. *Chemosphere* **82(9)**, 1277-1285 (2011).

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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