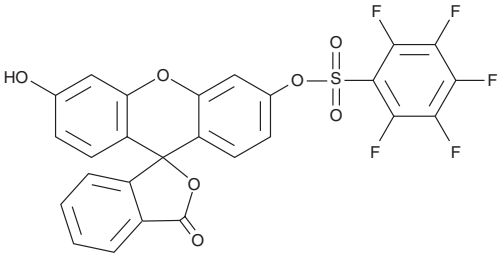
PRODUCT INFORMATION

Pentafluorobenzenesulfonyl fluorescein

Item No. 10005983

CAS Registry No.: 728912-45-6
Formal Name: pentafluorobenzenesulfonic acid, 6'-hydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl ester
MF: $C_{26}H_{11}F_5O_7S$
FW: 562.4
Purity: ≥98%
Ex./Em. Max: 485 ±20/530 ±25 nm
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

Pentafluorobenzenesulfonyl fluorescein is supplied as a crystalline solid. A stock solution may be made by dissolving the pentafluorobenzenesulfonyl fluorescein in the solvent of choice. Pentafluorobenzenesulfonyl fluorescein is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of pentafluorobenzenesulfonyl fluorescein is approximately 20 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

Pentafluorobenzenesulfonyl fluorescein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pentafluorobenzenesulfonyl fluorescein should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pentafluorobenzenesulfonyl fluorescein has a solubility of approximately 0.25 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Reactive oxygen species (ROS) play important roles in the initiation and progression of many disease processes. Most fluorescent probes for ROS detection, such as 2,7-dichlorofluorescein (DCFH), function by an oxidative mechanism and are useful for total oxidant detection but are not selective for hydrogen peroxide specifically.[1] Pentafluorobenzenesulfonyl fluorescein is a fluorescent probe that functions by a nonoxidative mechanism. It fluoresces upon perhydrolysis of the sulfonyl linkage, and is selective for hydrogen peroxide over hydroxyl radical, *tert*-butyl hydroperoxide, superoxide anion, singlet oxygen, and nitrates. Pentafluorobenzenesulfonyl fluorescein can be used as a probe for hydrogen peroxide in whole cell systems.[1]

Reference

1. Maeda, H., Fukuyasu, Y., Yoshida, S., *et al.* Fluorescent probes for hydrogen peroxide based on a non-oxidative mechanism. *Angew. Chem. Int. Ed.* **43(18)**, 2389-2391 (2004).

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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