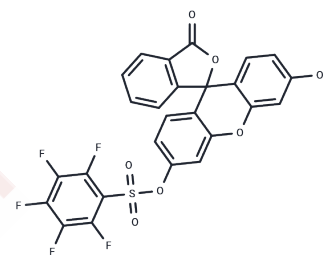


## Pentafluorobenzenesulfonyl fluorescein

## Chemical Properties

CAS No. :	728912-45-6
Formula:	C <sub>26</sub> H <sub>11</sub> F <sub>5</sub> O <sub>7</sub> S
Molecular Weight:	562.42
Storage:	Store at low temperature, Keep away from direct sunlight Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Pentafluorobenzenesulfonyl fluorescein itself no fluorescence, but were in the H <sub>2</sub> O <sub>2</sub> in sulfonyl key fluoresce when hydrolyzed. Pentafluorobenzenesulfonyl fluorescein is often treated as selective H <sub>2</sub> O <sub>2</sub> sensors, can be used for the detection of H <sub>2</sub> O <sub>2</sub> content in the cell.
Targets(IC50)	Others
Cell Research	<p>Instructions</p> <ol style="list-style-type: none"> <li>1. Prepare probe solution: PFSF is usually dissolved in anhydrous DMSO to prepare a stock solution (e.g. 1-10 mM), and then diluted to a working concentration (usually 1-10 μM) according to experimental requirements.</li> <li>2. Sample treatment:             <ol style="list-style-type: none"> <li>1) For cell experiments, PFSF is added to the culture medium (usually used in phenol red-free culture medium containing 1% FBS to avoid fluorescence background interference), and then incubate the cells for 30 minutes to 1 hour at 37°C, away from light.</li> <li>2) For chemical or solution experiments, PFSF can be directly mixed with the target system (such as a buffer solution containing H<sub>2</sub>O<sub>2</sub>).</li> </ol> </li> <li>3. Fluorescence detection:             <p>Fluorescence excitation wavelength: 490-500 nm, emission wavelength: 515-530 nm. The signal can be recorded using a fluorescence microscope, fluorescence spectrophotometer, or fluorescence plate reader.</p> </li> <li>4. Calibration and control:             <ol style="list-style-type: none"> <li>1) It is recommended to set up a no-H<sub>2</sub>O<sub>2</sub> control group and a H<sub>2</sub>O<sub>2</sub> standard curve to verify signal specificity.</li> <li>2) To ensure probe specificity, catalase can be added to eliminate H<sub>2</sub>O<sub>2</sub> interference.</li> </ol> </li> </ol> <p>Notes</p> <ol style="list-style-type: none"> <li>1) Storage conditions: PFSF should be stored at -20°C in the dark and fully dissolved before use.</li> <li>2) Experimental environment: Avoid high temperature and direct exposure to strong light to prevent probe decomposition or increased autofluorescence.</li> <li>3) Selectivity verification: In addition to H<sub>2</sub>O<sub>2</sub>, the probe may have a slight reaction to other strong oxidants (such as peroxyxynitrite), and the specificity should be verified according to experimental requirements.</li> </ol>

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### Cell Research

The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

### Solubility Information

#### Solubility

DMSO:PBS (pH 7.2)(1:1): 0.25 mg/mL (0.44 mM),Sonication is recommended.  
DMSO: 30 mg/mL (53.34 mM),Sonication is recommended.  
Ethanol: 20 mg/mL (35.56 mM),Sonication is recommended.  
DMF: 30 mg/mL (53.34 mM),Sonication is recommended.  
(< 1 mg/ml refers to the product slightly soluble or insoluble)

#### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.778 mL	8.8902 mL	17.7803 mL
5 mM	0.3556 mL	1.778 mL	3.5561 mL
10 mM	0.1778 mL	0.889 mL	1.778 mL
50 mM	0.0356 mL	0.1778 mL	0.3556 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

#### Reference

Dickinson, B., Chang, C. Chemistry and biology of reactive oxygen species in signaling or stress responses. Nat Chem Biol 7, 504-511 (2011).

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