

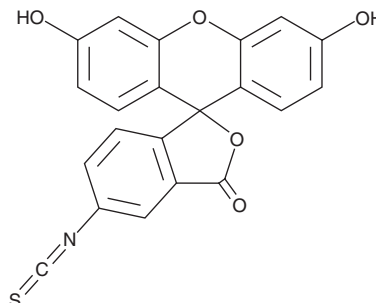
PRODUCT INFORMATION



Fluorescein 5-isothiocyanate

Item No. 27814

CAS Registry No.: 3326-32-7
Formal Name: 3',6'-dihydroxy-5-isothiocyanato-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one
Synonyms: 5-FITC, FITC isomer I, 5-Isothiocyanatofluorescein
MF: C₂₁H₁₁NO₅S
FW: 389.4
Purity: ≥90%
UV/Vis.: λ_{max}: 226, 278 nm
Ex./Em. Max: 494/519 nm
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

Fluorescein 5-isothiocyanate (5-FITC) is supplied as a solid. A stock solution may be made by dissolving the 5-FITC in the solvent of choice, which should be purged with an inert gas. 5-FITC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 5-FITC in ethanol is approximately 10 mg/ml and approximately 14 mg/ml in DMSO and DMF.

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 5-FITC can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 5-FITC in PBS (pH 7.2) is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-FITC is an isomer of fluorescein isothiocyanate (FITC), which is commonly used as a mixture of the 5- and 6-isothiocyanate isomers.^{1,2} It reacts with amine and thiol groups to form conjugates with proteins, lipids, and other molecules for detection by a variety of fluorescent-based applications.^{1,3} 5-FITC displays excitation/emission maxima of 494/519 nm, respectively.³

References

1. Schnaible, V. and Przybylski, M. Identification of fluorescein-5'-isothiocyanate-modification sites in proteins by electrospray-ionization mass spectrometry. *Bioconjug. Chem.* **10(5)**, 861-866 (1999).
2. Hunkapiller, M.W., Connell, C.R., Mordan, W.J., et al. Real time scanning electrophoresis apparatus for DNA sequencing. *Applied Biosystems LLC US4811218A* (1986).
3. Sabnis, R.W. Fluorescein-5-isothiocyanate (FITC). *Handbook of Fluorescent Dyes and Probes*. 1st ed., John Wiley & Sons, Inc. (2015).

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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