

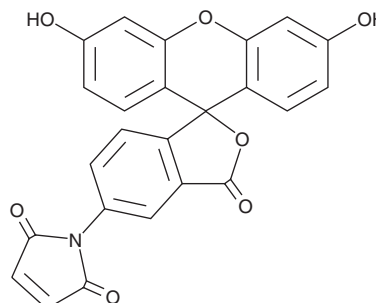
PRODUCT INFORMATION



Fluorescein-5-maleimide

Item No. 16383

CAS Registry No.:	75350-46-8
Formal Name:	1-(3',6'-dihydroxy-3-oxospiro [isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)-1H-pyrrole-2,5-dione
Synonyms:	5-Maleimido-fluorescein, 5-MF
MF:	C ₂₄ H ₁₃ NO ₇
FW:	427.4
Purity:	≥90%
UV/Vis.:	λ _{max} : 225, 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-maleimide is supplied as a solid. A stock solution may be made by dissolving the fluorescein-5-maleimide in the solvent of choice, which should be purged with an inert gas. Fluorescein-5-maleimide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of fluorescein-5-maleimide in these solvents is approximately 2, 20, and 30 mg/ml, respectively.

Description

Fluorescein-5-maleimide is an activated fluorescent molecule (excitation: 494 nm, emission: 519 nm) that is used to easily conjugate fluorescein to proteins.¹⁻³ The maleimide group reacts optimally with sulfhydryl groups on cysteine side chains at pH 7, forming a stable thioether bond.⁴ The compound can be used to label proteins for the detection of conformational changes, assembly of multisubunit complexes, and ligand-binding processes.⁵

References

1. Curtis, S.K. and Cowden, R.R. Demonstration of sulfhydryl and disulfide groups by a fluorescent maleimide procedure. *Histochemistry* **68(1)**, 23-28 (1980).
2. Elliott, J.T., Tona, A., and Plant, A.L. Comparison of reagents for shape analysis of fixed cells by automated fluorescence microscopy. *Cytometry* **52(2)**, 90-100 (2003).
3. Lepedda, A.J., Zinellu, A., Nieddu, G., et al. Protein sulfhydryl group oxidation and mixed-disulfide modifications in stable and unstable human carotid plaques. *Oxid. Med. Cell. Longev.* 403973 (2013).
4. Bigelow, D.J. and Inesi, G. Frequency-domain fluorescence spectroscopy resolves the location of maleimide-directed spectroscopic probes within the tertiary structure of the Ca-ATPase of sarcoplasmic reticulum. *Biochemistry* **30(8)**, 2113-2125 (1991).
5. Taraska, J.W. and Zagotta, W.N. Fluorescence applications in molecular neurobiology. *Neuron* **66(2)**, 170-189 (2010).

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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