

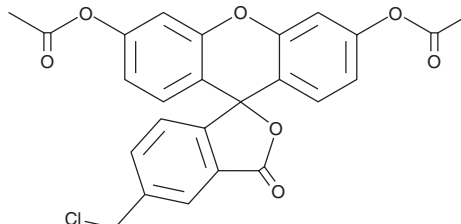
# PRODUCT INFORMATION



## Green CMFDA

Item No. 19583

**CAS Registry No.:** 136832-63-8  
**Formal Name:** 3',6'-bis(acetyloxy)-5-(chloromethyl)-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one  
**Synonym:** 5-Chloromethylfluorescein diacetate  
**MF:** C<sub>25</sub>H<sub>17</sub>ClO<sub>7</sub>  
**FW:** 464.9  
**Purity:** ≥95%  
**Ex./Em. Max:** 492/517 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

Green CMFDA is supplied as a crystalline solid. A stock solution may be made by dissolving the green CMFDA in the solvent of choice, which should be purged with an inert gas. Green CMFDA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of green CMFDA in ethanol and DMF is approximately 25 mg/ml and approximately 30 mg/ml in DMSO.

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 green CMFDA can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of green CMFDA in PBS (pH 7.2) is approximately 0.2 mg/ml and approximately 5 mg/ml in 0.1 M Na<sub>2</sub>CO<sub>3</sub>. We do not recommend storing the aqueous solution for more than one day.

### Description

Green CMFDA is a cell-permeable fluorescent probe that freely enters living cells, where it is transformed into a cell-impermeable, soluble, fluorescent compound. The resulting molecule does not affect cell viability or proliferation and stably fluoresces for at least 72 hours, allowing for its use in cell tracking.<sup>1</sup> It is also transferred to daughter cells. Green CMFDA is brightly fluorescent with standard filters (ex/em max = 492/517 nm) and is often used with additional fluorescent dyes and proteins.<sup>2,3</sup>

### References

1. Beem, E., and Segal, M. S. Evaluation of stability and sensitivity of cell fluorescent labels when used for cell migration. *J. Fluoresc.* **23**(5), 975-987 (2013).
2. Dagley, M. J., Saunders, E. C., Simpson, K. J., et al. High-content assay for measuring intracellular growth of *Leishmania* in human macrophages. *Assay Drug Dev. Technol.* **13**(7), 389-401 (2015).
3. 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).

#### 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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