

## FluoriCa-8 AM, green fluorescent calcium indicator

<http://www.lumiprobe.com/p/fluo-8-am>

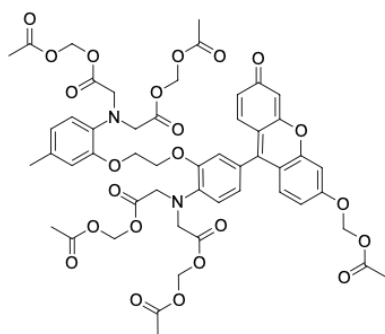
FluoriCa-8 AM is a cell-permeable  $\text{Ca}^{2+}$ -indicator that is metabolized by intracellular esterase, leading to a bright green fluorescent signal upon  $\text{Ca}^{2+}$ -binding (excitation/emission  $\lambda$  at 490/514 nm). FluoriCa-8 AM is used for visualization and quantifying intracellular  $\text{Ca}^{2+}$ . It is well suited for fluorometric and imaging applications such as microscopy, flow cytometry, spectrofluorometry, and fluorometric high-throughput microplate screening assays.

FluoriCa-8 AM is similar in structure and spectral properties to the  $\text{Ca}^{2+}$  indicators Fluo-3 AM and Fluo-4 AM but has the brightest fluorescence compared to them (two times brighter than Fluo-4 and four times brighter than Fluo-3). The  $K_d$  of FluoriCa-8 AM for  $\text{Ca}^{2+}$  is about 389 nM. With its highest fluorescence intensity, FluoriCa-8 AM is ideal for applications where the concentration of dye loaded into cells is required to be minimized. Unlike Fluo-3 AM and Fluo-4 AM, which require cells to be incubated at 37 °C, FluoriCa-8 AM can be loaded into cells at room temperature.

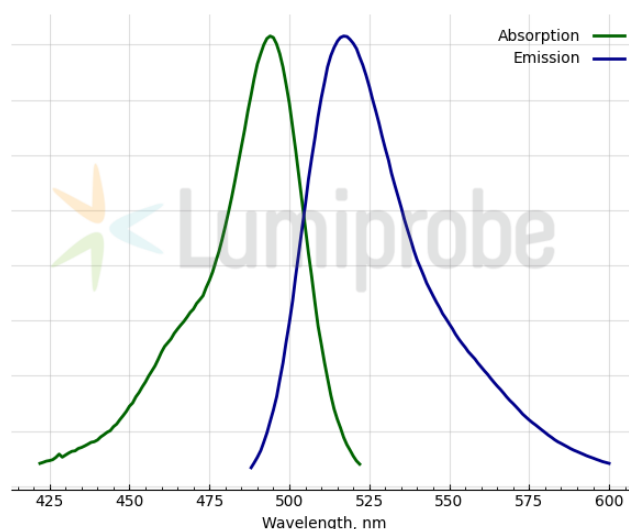
As FluoriCa-8 AM does not covalently bind to cellular components, it may be actively effluxed from the cell by organic anion transporters. *In vivo* cell imaging with FluoriCa-8 AM is usually performed within one or two hours after loading, but the dye can be re-loaded to cells if it is needed. FluoriCa-8 AM can also be fixed *in situ* by [EDC/EDAC](#) for downstream immunofluorescence studies.

FluoriCa-8 AM has low solubility in the water. It is recommended to prepare 1 mM stock solution in [labeling grade DMSO](#) prior to cell loading. Use the final concentration of 1-5  $\mu\text{M}$  and incubation at RT for 15-60 min as a start point of your protocol.

FluoriCa-8 AM solutions in DMSO may be stored at -20 °C for up to 2 months.



**Structure of FluoriCa-8 AM**



**Absorption and emission spectra of the Calcium ion-FluoriCa-8 AM**

### General properties

Appearance:	yellow-orange powder
Molecular weight:	1060.97
CAS number:	1345980-40-6
Molecular formula:	$\text{C}_{51}\text{H}_{52}\text{N}_2\text{O}_{23}$
Solubility:	good in DMSO
Quality control:	NMR $^1\text{H}$ and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

Legal statement:

This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

**Spectral properties**

Excitation/absorption maximum, nm: 494

Emission maximum, nm: 517