

For research use only

POLARIC™-500c6F

Code No.	Product Name	Amount	Storage	Stability
GC101	POLARIC™-500c6F	1 µg × 10 vials	Store under -20 °C, keep desiccated and protected from light.	1 year (when unopened)

1. Introduction

■ About POLARIC™-500c6F

POLARIC™-500c6F is solvatochromic dye for cell staining. Solvatochromic dye changes its fluorescence wavelength upon the solution environment such as localization to organelle, etc.

POLARIC™-500c6F is most appropriate for time-lapse observation because it is held in cell long time, compare to other dyes. And, due to low toxicity, it is suitable to observe living cells. POLARIC™-500c6F changes emission spectra 550–630nm dynamically in each environment by a single excitation around 500 nm.

2. Live cell staining protocol

■ Materials Required but not Provided

- Dimethylsulfoxide (DMSO) or ethanol
- Hank's Balanced Salt Solution (HBSS)

■ Preparation of Reagent and Cell Staining

1. To prepare a stock solution, dissolve the POLARIC™-500c6F 1 µg in 17.1 mL of dimethylsulfoxide (or EtOH) to 0.1 mM.
2. Dissolution to HBSS to make 0.025-0.1 µM staining solution.
3. Remove the culture medium from cell culture dish and wash twice at medium.
Caution : Glass bottom dish etc. are recommended as cell culture dish, because it has no intrinsic fluorescence.
4. Add staining solution to the dish and incubate for 30 minutes under 37 °C, 5% CO₂ conditions. Though there are slightly difference due to cell type or growth condition, usually cells are well stained around 30-60 minutes.
5. After staining, wash 3 times by HBSS buffer. Replace to HBSS buffer and observe the cells using a fluorescence microscopy.

■ Fluorescence Imaging

488nm are suited for excitation wavelength. Long-pass filters, for example, GFP-LP, B-2A (Nikon Co. Ltd.) or U-MWB2 (Olympus Co. Ltd.) etc. are usable. Emission is detected around 550-630nm. The change of emission peak is due to difference in organelles. POLARIC™ -500c6F stains plasma membrane (green) and mitochondria (orange).