



POLARIC™ PLT-500c6

[Cat No. PMC-AK12-COS]

For research use only

POLARIC™ PLT-500c6 induces dramatic changes in the emission spectra depending on hydrophobic variation of the microenvironment of cell organelles.

I-1. Contents

Name	Unit size	Shipping	Storage	Caution
POLARIC™ PLT-500c6	10 µg/tube 5 tubes	Room temperature	Protect from light >4°C	<i>Always wear gloves and safety glasses when working these materials.</i>

※ For staining 5 x 96-wells plates

※ Only for ethanol resolution

I-2. Advantages

- Extremely low cytotoxicity
- Minimum cell damage by excitation wavelengths around 460 - 520nm.
- Fade-resistant fluorescence
- Dramatically changes the emission spectra depending on hydrophobicity / hydrophilicity of the microenvironment of cell organelles.



Fig1. Emission spectra change of solvatochromic fluorophore

II. Experimental Protocol

1. After brief centrifugation, resolve the red dye pellet in 3µL of ethanol and transfer dye solution into 10mL of medium (staining solution). Staining solution can be stored at 4°C for 2 weeks. Protect from light.
2. Culture the cells onto a glass bottom dish (nonluminescent glass).
3. Remove the culture medium from the culture dish and add the same volume of **pre-warmed** staining solution.
4. Incubate at 37°C/ 5% CO₂ for 10min – 2hrs. Staining conditions should be optimized for your each cell type.
5. Wash the cells 3 times with culture medium after staining.
6. Visualize the cells using a fluorescence microscope at Ex 460 nm – 520 nm and Em 520 nm – 700 nm.

Storage

Store POLARIC™ PLT-500c6 reagents at room temperature. Protect from moisture and light. Use only fresh solutions. Store staining solution at 4°C and use solution within two weeks.

IV. Applications

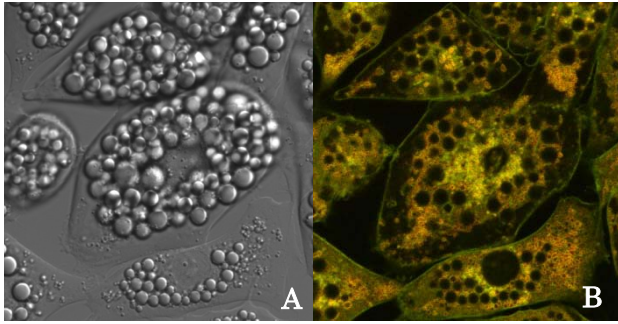


Fig 2. Rat Visceral Adipocyte

A. differential interference contrast microscopy

B. POLARIC™ PLT-500c6 stained cell

Mitochondria produces orange fluorescence, cell membrane produces green fluorescence, ER produces yellow fluorescence.

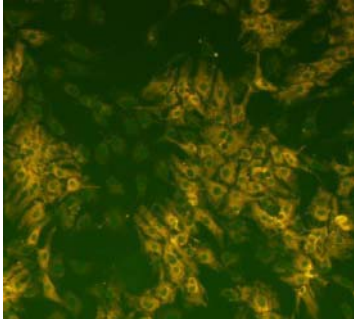


Fig 3. Rat Cardiomyocyte double staining by Hoechst33342 and POLARIC™ PLT-500c6

POLARIC™ PLT-500c6 can stain rat cardiomyocyte and non-cardiomyocyte with different colors. Cardiomyocytes stained with POLARIC™ PLT-500c6 can live and beat over for 2 months while retaining stain.



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Inspiration for Life Science

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