Vacuole staining in Phaeodactylum tricornutum using RatioWorks™ PDMPO Version 2

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Abstract

Simple and rapid vacuole staining protocol for Phaeodactylum tricornutum. Note that RatioWorks™ PDMPO and LysoSensor™ Yellow/Blue DND-160 are the same thing and can thus be used interchangeably. RatioWorks™ PDMPO was used in this protocol.

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Guidelines

Materials

LysoSensor™ Yellow/Blue DND-160 L7545 by Thermo Fisher Scientific

RatioWorks™ PDMPO 21204 by AAT Bioquest

Protocol

Prepare 5.46 mM RatioWorks™ PDMPO stock in 100% DMSO.

Step 1.

Dilute 10x with 100% DMSO.

Step 2.

Transfer 500 µL Phaeodactylum tricornutum culture to 1.5 mL epptube.

Step 3.

Add 1 µL 10x RatioWorks™ PDMPO dilution to cells for ~1 µM final concentration.

Step 4.

Incubate 10 min at room temperature.

Step 5.

Visualize with 405 nm laser line and emission window set to 525–575 nm.

Step 6.

Note: Leica TCS SP5 confocal microscope was used for images below.

EXPECTED RESULTS