

Endoplasmic Reticulum Probe Green

Catalog# / Size 421926 / ea

Regulatory Status RUO

Description Endoplasmic reticulum (ER) is the largest organelle in the cell and is a major site of protein synthesis and transport, protein folding, lipid and steroid synthesis, carbohydrate metabolism, and calcium storage. Development of live-cell microscopy techniques has revealed that the ER membrane structures are in constant motion, and how its dynamic, intricate, and varied architecture influences its diverse functions.

Endoplasmic Reticulum Probe Green is a cell-permeant fluorescent dye that is highly selective for ER membranes in most cell types. With its great specificity, brightness, and photostability, this probe is an ideal tool for studies on ER function in live cells.

Product Details

Verified Reactivity Human

Reported Reactivity Most Eukaryotic cells

Formulation 1 vial of Endoplasmic Reticulum Probe, 1 vial of DMSO

Preparation Thaw the probe and DMSO at room temperature before starting the experiment. To make the 500X stock solution, add 20 µL of DMSO to the vial of Endoplasmic Reticulum Probe and mix well.

Storage & Handling -20°C

Application [Live cell imaging - Quality tested](#)
[FC - Verified](#)

Recommended Usage We recommend 100 µL of diluted 1X Endoplasmic Reticulum Probe Green per well when using a 96-well plate. This product provides enough probe for an entire 96-well plate when using 100 µL per well.

Application Notes This probe employs a cell-permeant fluorescent dye that is selective for the endoplasmic reticulum in most cell types.

Components:

1 vial of lyophilized Endoplasmic Reticulum Probe Green
1 vial of DMSO

Storage:

Upon receipt of the kit, store all components at -20°C and protected from light. Once the DMSO is added to the probe and reconstituted to make the 500X stock solution, store aliquots at -20°C and protected from light. Avoid freeze thaw cycles.

Required Materials Not Included:

Stain Buffer: Phenol-free cell culture media (without serum), HBSS or PBS

Imaging Guidelines:

Ex/Em = 503/511 nm
Fluorescence microscope filter set: FITC

Flow Guidelines:

Analysis in FITC or similar channel

Preparation of 500X Endoplasmic Reticulum Stock Solution:

1. Thaw the probe and DMSO at room temperature before starting the experiment.
2. To make the 500X Endoplasmic Reticulum Stock Solution, add 20 µL of DMSO to the vial of Endoplasmic Reticulum Probe and mix well.
3. Store unused 500X Endoplasmic Reticulum Stock Solution at -20°C in single use aliquots to avoid freeze thaw cycles. Unused stock solution is stable for at least 2 weeks at ≤ -20°C.

Live-Cell Imaging Protocol:

1. Prepare the 1X Endoplasmic Reticulum Staining Solution by diluting the 500X Endoplasmic Reticulum Stock Solution 1:500 in phenol-free media, HBSS or PBS and mix well.
Note: Desired final volume to be determined by user. We recommend 100 μ L per well in a 96-well plate.
2. Remove media from live cells and add the desired volume of 1X Endoplasmic Reticulum Staining Solution.
3. **Optional:** Include live-cell nuclear counterstain such as DRAQ5™ (Cat. No. 424101).
4. Incubate cells at 37°C for 15 - 30 minutes.
5. Remove the 1X Endoplasmic Reticulum Staining Solution.
6. Gently wash cells twice with phenol-free media, HBSS or PBS.
7. Proceed immediately to live-cell imaging.

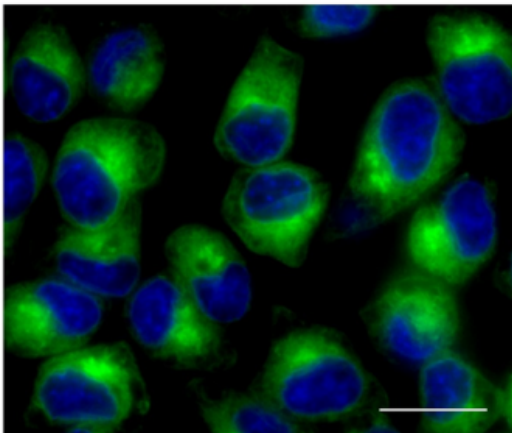
Flow Cytometry Protocol

1. Prepare cell suspension with 0.25 - 2.5 $\times 10^6$ cells in 499 μ L of phenol-free media, HBSS or PBS.
2. Add 1 μ L of 500X Endoplasmic Reticulum Stock Solution to the cell suspension (1:500 dilution).
Note: Staining conditions and probe concentration may have to be modified according to cell type and assay used.
3. Incubate cells at room temperature for 15 - 30 minutes.
4. Wash cells twice with PBS or equivalent buffer and then add desired volume of the same buffer.
5. Proceed to analysis using a Flow Cytometer.

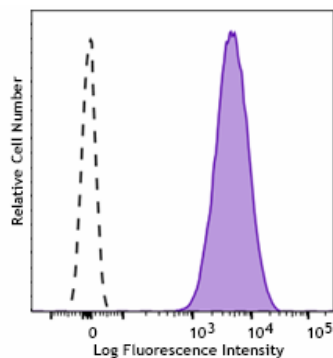
Antigen Details

Distribution	Endoplasmic Reticulum
Gene ID	NA

Product Data



Live-cell fluorescence image overlay of A549 cells stained with the Endoplasmic Reticulum Probe Green (green) and Hoechst 33342 (blue). Image was acquired using a 60X objective. Scale Bar = 20 μ m



Jurkat cells stained with Endoplasmic Reticulum Probe Green (positive control, filled histogram). Open histogram (negative control) represents unstained cells.

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