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Product Information

MemTrack™ Deep Red Membrane Stain

Catalog Number	Unit Size
C059	100 µL

Storage upon receipt:

- -20°C
- Protect from light

Product Description

The plasma membrane is a convenient cell boundary marker commonly used for probes. Lipophilic dyes are typically used as plasma membrane stains, but they can internalize rapidly and offer a narrow window for imaging. Robust plasma membrane staining is important for a range of applications including translocation assays, plasma membrane dynamics, and as a general tool for cell identification in traditional and automated imaging and analysis.

MemTrack™ Deep Red membrane stain delivers uniform staining of the plasma membrane in live and fixed cells across various mammalian cell types. The stain is slow to internalize when compared to traditional probes (such as, DiI, DiO.) and provides rapid plasma membrane staining in live cells for over 4 hours depending on the cell type and experimental conditions. The stain is amphipathic molecule providing a lipophilic moiety for excellent membrane loading and a negative charge for “anchoring” of the probe in the plasma membrane. Although the stain provides ample opportunity for live cell imaging, the staining pattern is also maintained after formaldehyde fixation, enabling more multiparametric imaging options. However, this staining does not survive detergent extraction and, therefore, cannot be used with probes requiring permeabilization.

Table 1. Spectral characteristics of MemTrack™ Deep Red Membrane Stain

Product Name	E_x (nm)	E_m (nm)
MemTrack™ Deep Red	645	665

Guidelines for Use

Use this staining protocol with the MemTrack™ Deep Red membrane stain as a guideline for plasma membrane staining of live, adherent cultured cells on coverslips. Optimal conditions can vary depending on the characteristics of the cells used.

1. Prepare 1X working solution of the MemTrack™ Deep Red membrane stain in warm physiologically relevant buffer from the provided 1000X concentrated stain solution. For example, to prepare 5 mL of 1X working solution, add 5 µL of the stain to 5 mL of physiologically relevant media.

Note: The optimal concentration can vary depending on cell type and staining conditions. We can try 0.5X-1.5X working solutions with different cell types.

2. Grow cells on coverslips inside a tissue culture dish with the appropriate culture medium.

Note: To use suspension cells, grow the suspension cells in the appropriate culture medium to the desired confluency, then spot the suspension cells on poly D-Lysine coated coverslips. Use the following staining protocol for adherent or suspension cells.

3. When cells have reached the desired confluency, remove the coverslip from the culture medium, wash with physiologically relevant buffer, and quickly submerge the coverslip in the staining solution from step 1 for 5-10 minutes at 37ºC.

4. Remove the staining solution and rinse the coverslip with physically relevant buffer 3 times.

5. Mount the coverslip and image immediately.

(Optional) Fix after staining

1. Remove the staining solution and fix the cells after staining (step 3) with warm 4% formaldehyde in buffer or media and incubate at 37°C for 5-10 minutes.

2. Rinse the coverslip with buffer 3 times.

3. Mount the coverslip and image immediately or within 24 hours if sample is mounted in an antifade reagent.