LiveONLY™ Nuclear Red

Catalog number: 17688
Unit size: 200 tests

Component	Storage	Amount (Cat No. 17688)
LiveONLY™ Nuclear Red	Freeze (< -15 °C), Minimize light exposure	200 tests

OVERVIEW

LiveONLY™ Nuclear Red is a nuclear dye designed to stain the nucleus exclusively in live cells. This unique feature allows for clear distinction between live cells and dead or membrane-compromised cells. Its cell-permeable design enables selective accumulation in the nucleus, producing red fluorescence without requiring fixation or permeabilization.

The simple mix-and-read protocol requires minimal hands-on time, making it ideal for seamless integration into standard imaging workflows. Compatible with a wide range of cell lines and imaging systems, LiveONLY™ Nuclear Red is ideal for live-cell applications such as real-time cell tracking, viability assessment, and high-content screening.

AT A GLANCE

1. Prepare the cell samples and treat cells as desired.
2. Add the dye working solution.
3. Incubate for 10 to 30 minutes.
4. Analyze with fluorescence microscope using Cy5 filter.

Note: Allow dye to warm to room temperature before opening the vials. Because this reagent binds to nucleic acids, it should be treated as a potential mutagen and handled with appropriate care. The DMSO stock solution should be handled with particular caution as DMSO is known to facilitate the entry of organic molecules into tissues.

KEY PARAMETERS

Fluorescence microscope

Emission	Cy5 filter
Excitation	Cy5 filter
Recommended plate	Black wall/clear bottom

PREPARATION OF WORKING SOLUTION

LiveONLY™ Nuclear Red dye working solutiion

Add 25 µL of LiveONLY™ Nuclear Red to 10 mL of cell culture medium or HHBS buffer (Cat# 20011) and mix well.

Note: 10 mL volume is sufficient for 100 tests. Make LiveONLY™ Nuclear Red dye working solution sufficient for the assays and use promptly.

Note: Store unused LiveONLY™ Nuclear Red at -20 °C for further use.

SAMPLE EXPERIMENTAL PROTOCOL

The following protocol can be used as a guideline and can be adapted for any cell type. Growth medium, cell density, the presence of other factors may influence staining.

Note: For optimal staining, try a range of dye concentrations to determine that best yield the optimal staining.

Note: Thaw the content of the vial at room temperature before use.

1. Prepare the cell samples and treat cells as desired in a 96-well plate.
2. Remove the cell culture medium.
3. Add 100 µL of LiveONLY™ Nuclear Red dye working solution and incubate for 10 to 30 minutes at 37°C in a 5% CO_2 incubator, protected from light. (Total volume = 100 µL/well).
4. Remove the LiveONLY™ Nuclear Red dye working solution and replace it with 100 µL/well of HHBS buffer (cat# 20011) or buffer of your choice.
5. Observe the cells using a fluorescence microscope with Cy5 filter set.

EXAMPLE DATA ANALYSIS AND FIGURES

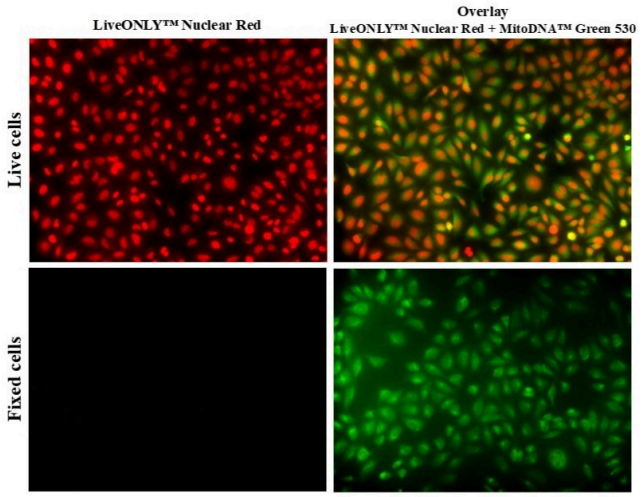

Figure 1. The fluorescence images of HeLa cells stained with LiveONLY™ Nuclear Red (#17688) and MitoDNA™ Green 530 (#22685). The LiveONLY™ Nuclear Red (#17688) is showing selective nuclear staining in live cells only; dead cells do not show any nuclear staining.

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