CYTO-13

Catalog number: 17554
Unit size: 5 mg

Component	Storage	Amount
CYTO-13	Freeze (< -15 °C), Minimize light exposure	5 mg

OVERVIEW

CYTO-13 is a fluorogenic, DNA-selective and cell-permeant dye for analyzing DNA content in living cells. CYTO-13 has its green fluorescence significantly enhanced upon binding to DNA. It can be used in fluorescence imaging, microplate and flow cytometry applications. This DNA-binding dye might be used for multicolor analysis of live cells with proper filter sets. Based on our in-house evaluations, it has equivalent DNA staining properties almost identical to SYTO-13™ DNA stain (SYTO-13™ is the trade mark of ThermoFisher).

KEY PARAMETERS

Fluorescence microscope

Excitation	FITC filter set
Emission	FITC filter set
Recommended plate	Black wall/clear bottom
Instrument specification(s)	FITC filter set

PREPARATION OF STOCK SOLUTIONS

Unless otherwise noted, all unused stock solutions should be divided into single-use aliquots and stored at -20 °C after preparation. Avoid repeated freeze-thaw cycles.

Make CYO-13 stock solution in DMSO at your desired concentration.

Note Unused CYTO-13 stock solution can be stored at -20 °C in small aliquots.

PREPARATION OF WORKING SOLUTION

Make CYO-13 working solution in Hanks with 20 mM Hepes buffer (HH buffer) or buffer of your choice at your desired concentration.

Note In initial experiments, it may be best to try several dye concentrations to determine the optimal concentration that yields the desired result. High dye concentration tends to cause nonspecific staining of other cellular structures.

SAMPLE EXPERIMENTAL PROTOCOL

Caution: The following protocol can be adapted for most cell types. Growth medium, cell density, the presence of other cell types and factors may influence staining. Residual detergent on glassware may also affect staining of many organisms, and cause brightly stained material to appear in solutions with or without cells present.

1. Prepare cells as desired.
2. Remove the cell culture medium.
3. Add CYTO-13 working solution (2 to 10 μM) into the cells (either suspension or adherent cells), and stain the cells for 15 to 60 minutes.
4. Remove the dye working solution and add HH buffer or buffer of your choice.
5. Analyze the cellular staining with a fluorescence microscope using FITC filter.

EXAMPLE DATA ANALYSIS AND FIGURES

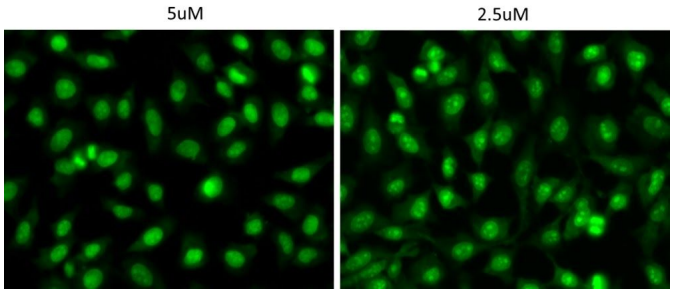

Figure 1. Images of HeLa cells stained with CYO-13 at 5 uM (Left) and 2.5 uM (Right) for 20 minutes at 37°C incubator. Images were acquired using fluorescence microscope with FITC filter

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