

# Live-Dead Cell Staining Kit

(Catalog #K501-100; 100 stainings; Store kit at  $-20^{\circ}\text{C}$ )

## I. Introduction:

Distinguishing between live and dead cells is very important for investigation of growth control and cell death. The *Live-Dead Cell Staining Kit* provides the ready-to-use reagents for convenient discrimination between live and dead cells. The kit utilizes Live-Dye™, a cell-permeable green fluorescent dye (Ex/Em = 488/518 nm), to stain live cells. Dead cells can be easily stained by propidium iodide (PI), a cell non-permeable red fluorescent dye (Ex/Em = 488/615). Stained live and dead cells can be visualized by fluorescence microscopy using a band-pass filter (detects FITC and rhodamine). The kit provides sufficient reagents for 100 stainings using 24-well plate.

## II. Kit Contents:

Component	K501-100	Part Number
Solution A (1 mM Live-Dye)	50 $\mu\text{l}$	K501-100-1
Solution B (2.5 mg/ml PI)	50 $\mu\text{l}$	K501-100-2
Staining Buffer	50 ml	K501-100-3

## III. Cell Staining Protocol:

1. Prepare enough Staining Solution for your assay (0.5 ml per well in 24 well dish): mix 1  $\mu\text{l}$  of Solution A and 1  $\mu\text{l}$  of Solution B in 1 ml of Staining Buffer. Scale up accordingly for larger numbers of assays.
2. Collect cells ( $1 \times 10^6$  cells) by centrifugation at 500 X g for 5 minutes.
3. Resuspend to 0.5 ml Staining Solution
4. Incubate for 15 minutes at  $37^{\circ}\text{C}$ .
5. Place the cell suspension on a glass slide. Cover the cells with a glass coverslip.  
For analyzing adherent cells, grow cells directly on a coverslip. Following incubation with the Staining Solution, invert coverslip on a glass slide and visualize cells.
6. Observe cells immediately under a fluorescence microscope using a band-pass filter (detects fluorescein and rhodamine).  
Healthy cells stain only the cell-permeable Live-Dye, fluorescing green. Dead cells can stain both the cell-permeable Live-Dye and the cell non-permeable PI (red), the overlay of green and red appears to be yellow-red.

## IV. Caution:

As the optimal staining conditions may vary among different cell types, we recommend that a suitable concentration of Solution A and B be determined individually.

Please note that PI is suspected to be highly carcinogenic, so careful handling of the reagent is required.

## V. Storage and Stability:

Store kit at  $-20^{\circ}\text{C}$ . Protect from light. Store Staining Buffer at  $4^{\circ}\text{C}$  after opening. All reagents are stable for 1 year under proper storage conditions.

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