
Live/Dead Double Staining Kit
Cat. No. QIA76

BACKGROUND

Distinguishing between live and dead cells is essential for the investigation of growth control and cell death. The Live/Dead Double Staining Kit provides ready-to-use staining reagents to conveniently discriminate between live and dead cells. The kit utilizes Cyto-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). Cyto-Dye has also been used to discriminate between apoptotic and non-apoptotic cells.

KIT CONTENTS

- Solution A (1 mM Cyto-Dye), 50 µl
- Solution B (2.5 mg/ml PI), 50 µl
- Staining Buffer, 50 ml

DOUBLE STAINING PROTOCOL

1. Preparation of Staining Solution: Prior to use, mix 1 µl of solution A and 1 µl of solution B in 1 ml of Staining Buffer.
2. Collect cells (1×10^6 cells) by centrifugation at 500 x g for 5 minutes.
3. Resuspend to 1 ml Staining Solution.
4. Incubate for 15 minutes at 37°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 cover slip 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 Cyto-Dye, fluorescing green. Dead cells stain both the cell-permeable Cyto-Dye and the cell non-permeable PI (red), the overlay of green and red appears yellow.

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.

STORAGE AND STABILITY

- Store kit at -20°C. Protect from light.
- Store Staining Buffer at 4°C after opening.
- All reagents are stable for 1 year under proper storage conditions.

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REFERENCES

1. Frey, T., et al. 1995. *Cytometry* **21**, 265-269.
2. Luther, E., and Kamenstsky, L.A. 1996. *Cytometry* **23**, 272-276.

RELATED PRODUCTS

- Quick Cell Proliferation Assay Kit (Cat. No. QIA75).
- Suicide Track DNA Ladder Kit (Cat. No. AM41).
- Annexin FITC and BIOTIN kits (Cat. Nos. PF032 and PF036).

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