

Acridine Orange Staining Kit

Introduction

The Acridine Orange Staining Kit is a kit for rapid staining of intracellular DNA/RNA by the fluorescent nuclear dye Acridine Orange (AO). AO can penetrate cell membranes and stain cells green or yellow-green. In addition, AO is also commonly used in combination with EB or PI for apoptosis detection. When apoptosis, chromosomes condense or break into fragments of varying sizes. AO can stain normal cells in green and apoptotic cells with dense yellow-green or yellow-green fragments, and a cell-impermeable nuclear dye can stain necrotic cells.

Components and Storage

Components	K2251-100 T	K2251-500 T
Acridine Orange (1000X)	100 μ L	500 μ L
Staining Buffer	100 mL	500 mL

Store the kit at -20°C, stable for 1 year. Acridine Orange (1000X) needs to be stored away from light.

Protocol

- Staining working solution preparation:** Dilute an appropriate amount of Acridine Orange (1000X) with Staining Buffer in a 1:1000 ratio to make a staining working solution according to the experimental needs.
- Cell staining:** Harvest cells and wash cells with PBS two times. Resuspend cells with an appropriate amount of staining working solution to a density of 1×10^6 cells/mL. Incubate cells at room temperature protected from light for 2-10 min.

***Note:** The optimal time for incubation varies depending on the cell types.

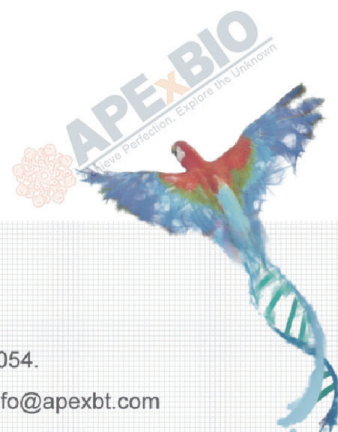
- Detection:** After incubation, wash cells with PBS two times. Resuspend the cells with an appropriate amount of PBS. Then detect the fluorescence signal by fluorescence microscopy or flow cytometry. AO (Ex/Em: 502/525 nm, when binding to DNA). If observed using fluorescence microscopy, FITC filters can be used respectively.

***Note:** Detection should be performed as soon as possible after staining.

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2. Fluorescent dyes are easy to quench. Please protect them from light when use and storage.
3. For your safety and health, please wear lab coats and gloves during the experiment.
4. For research use only. Not to be used in clinical diagnostic or clinical trials.



APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com