CYTOXite™ Green Dead Cell Stain

Catalog number: 15720, 15721
Unit size: 100 Tests, 500 Tests

Component	Storage	Amount (Cat No. 15720)	Amount (Cat No. 15721)
CYTOXite™ Green Dead Cell Stain	Freeze (< -15 °C), Minimize light exposure	100 Tests	500 Tests

OVERVIEW

CYTOXite™ Green Dead Cell Stain is a membrane-impermeant fluorescent dye formulated to detect disruption of cell membrane integrity and quantify cell death in real time. The dye is excluded from healthy cells with intact membranes, resulting in little or no intrinsic fluorescence. When cells lose membrane integrity, the dye enters and binds to cellular DNA, producing a significant increase in fluorescence signal that enables sensitive detection of non-viable cells. The stain is compatible with mix-and-read assay formats and supports continuous monitoring of cytotoxicity without the need for washing steps. It can be used alone or in combination with other assays for multiplexed analysis of cell health, including proliferation and apoptosis. The reagent is suitable for high-throughput applications and fluorescence-based detection platforms using standard 488 nm excitation.

AT A GLANCE

1. Prepare cells in growth medium
2. Add CYTOXite™ Green Dead Cell Stain working solution
3. Incubate cells at desired times at 37°C, 5% CO2 incubator
4. Monitor cells with fluorescence microscope using FITC filter set

Important: Thaw CYTOXite™ Green Dead Cell Stain dye at room temperature before starting the experiment.

KEY PARAMETERS

Fluorescence microscope

Emission	FITC filter set
Excitation	FITC filter set
Recommended plate	Black wall/clear bottom

PREPARATION OF WORKING SOLUTION

Prepare working solution by adding 10 µL of CYTOXite™ Green Dead Cell Stain into 10 mL of cell culture medium or HH Buffer (AAT Cat# 20011, not provided).

Note: Protect the working solution from light by covering it with foil or placing it in the dark.

Note: For best results, this solution should be used within a few hours of its preparation.

Note: 10 mL of working solution is enough for 100 tests.

SAMPLE EXPERIMENTAL PROTOCOL

1. Plate cells (100 µL per well) at an appropriate density in a 96-well plate.
   Note: The seeding density needs to be optimized for the cell line used. For example, one can start with 10,000 to 50,000 cells/mL as a seeding stock.
2. For cell cytotoxicity treatments, one can make desired dilutions directly into the CYTOXite™ Green Dead Cell Stain working solution.
3. Aspirate the cell culture medium and add 100 µL CYTOXite™ Green Dead Cell Stain working solution to appropriate wells of the 96-well plate.
4. Incubate the plate at desired time points in the incubator at 37°C, 5% CO2.
5. Monitor the plate with a fluorescence microscope using the FITC filter set.
   Note: There is no need to remove the dye working solution. The analysis can be performed every 2 to 3 hours till the experiment is complete.

EXAMPLE DATA ANALYSIS AND FIGURES

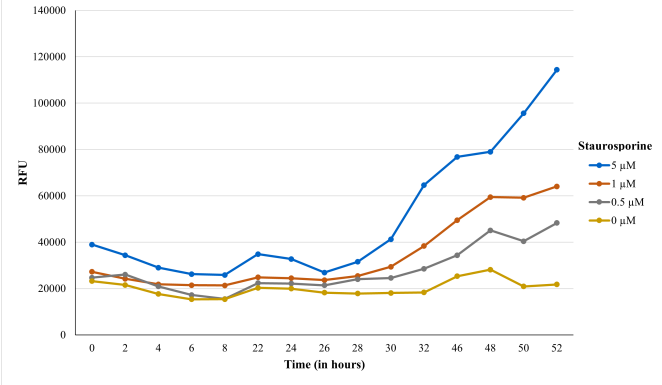

Figure 1. Concentration- and time-dependent increase in DNA staining by CYTOXite™ Green Dead Cell Stain following treatment of Jurkat cells with staurosporine. Time-course of staurosporine-induced Jurkat cell death was measured by green fluorescent object count using fluorescence microscopy.

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