Cell Meter™ Cell Proliferation Assay Kit

Catalog number: 22505
Unit size: 200 Tests

Component	Storage	Amount (Cat No. 22505)
Nuclear Green™ LCS1	Freeze (< -15 °C), Minimize light exposure	1 vial (50 µL)
Reaction Buffer	Freeze (< -15 °C)	1 bottle (20 mL)

OVERVIEW

Cell Meter™ Cell Proliferation Assay Kit is a sensitive fluorescence-based method for quantifying cells and assessing cell proliferation and cytotoxicity in a microplate format. The kit uses our Nuclear Green LCS1, a proprietary fluorescent dye that exhibits strong fluorescence upon binding to nucleic acids. The use of Nuclear Green LCS1 improves accuracy over cell metabolism-based cell proliferation or cytotoxicity assays that can be influenced by cell changes that are unrelated to cell numbers. The kit does not require cell lysis, long incubations or removal of cells with minimal hands-on time. It is compatible with high throughput screening.

AT A GLANCE

Protocol Summary

1. Prepare the cell samples and treat cells as desired
2. Remove cell culture medium
3. Add dye working solution
4. Incubate for 10 minutes
5. Analyze with fluorescence microplate reader using Ex/Em = 490/525 nm

Important: Allow all the components to warm to room temperature before opening the vials. Because this reagent binds to nucleic acids, it should be treated as a potential mutagen and handled with appropriate care. The DMSO stock solution should be handled with particular caution as DMSO is known to facilitate the entry of organic molecules into tissues.

KEY PARAMETERS

Fluorescence microplate reader

Cutoff	515 nm
Emission	525 nm
Excitation	490 nm
Recommended plate	Black wall/clear bottom

PREPARATION OF WORKING SOLUTION

Nuclear Green™ LCS1 dye working solution

Add 25 µL of Nuclear Green™ LCS1 to 10 mL of Reaction Buffer and mix well.

Note: 10 mL volume is sufficient for 100 tests. For best results, the Nuclear Green™ LCS1 dye working solution should be used promptly and in its entirety.

Note: Store any unused Nuclear Green™ LCS1 (Component A) at -20 °C.

SAMPLE EXPERIMENTAL PROTOCOL

The following protocol can be used for guidelines.

1. Prepare the cell samples and treat cells as desired.
2. Remove the cell culture medium and wash twice with PBS.

   Note: Removal of cell culture medium is necessary since it may interfere with the fluorescence of Nuclear Green™ LCS1.
3. **Optional:** After washing with PBS, experiments involving multiple time points and/or samples can be stored at -80 °C for a few days or proceed to step 4.
4. Add 100 µL of Nuclear Green™ LCS1 dye working solution and incubate for 10 to 60 minutes at RT, protected from light.
5. Measure the sample fluorescence using a fluorescence microplate reader with Ex/Em = 490/525 nm (Cutoff = 515 nm).

EXAMPLE DATA ANALYSIS AND FIGURES

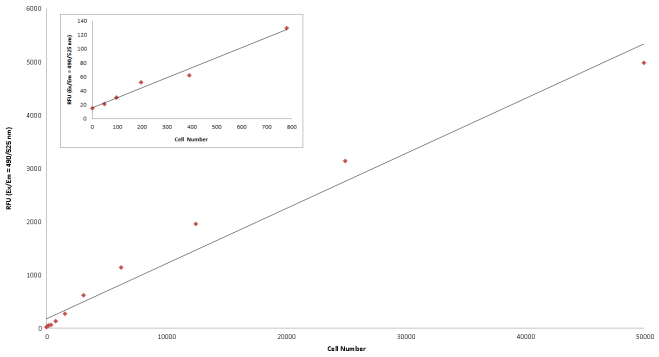

Figure 1. Quantification of HeLa cells using Cell Meter™ Cell Proliferation Assay kit. The linear range of cells from 50 to 50,000 HeLa cells was plated and assay was performed as per protocol. The insert shows the linearity that can be obtained at very low number of cells.

DISCLAIMER

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