NUCLEAR-ID® Green cell cycle kit

Cell Cycle Results Independent of Incubation Time, Temperature, Dye and Cell Concentrations

NUCLEAR-ID® Green Cell Cycle Analysis Kit provides a convenient approach for studying the induction and inhibition of cell cycle progression by flow cytometry. The kit is suitable for (1) determining the percentage of cells in a given sample that are in G_0/G_1, S and G_2/M phases, as well as to quantify cells in the sub-G_1 phase prior to apoptosis, and (2) DNA studies in live, permeabilized and fixed cells for normal cell lines and cell lines exhibiting multiple ploidy levels. The kit contains sufficient reagents for approximately 100 flow cytometry assays. A control cell cycle perturbation agent, Nocodazole, is provided for monitoring changes in cell cycle dynamics. Potential applications for live-cell studies are in the determination of cellular DNA content and cell cycle distribution for the detection of variations in growth patterns, for monitoring apoptosis, and for evaluating tumor cell behavior and suppressor gene mechanisms.

Citations: 3 View Online »

Ordering Information Order Online »

ENZ-51014-100	1Kit

Manuals, SDS & CofA View Online »

- Easy staining protocol, simply add the dye and analyze by flow cytometry
- Excited using common 488 nm laser source, generating a green ~530 nm emission
- No permeabilization step or RNase treatment necessary
- Cell cycle results independent of incubation time, temperature, dye and cell concentrations
- Provides DNA content information in live or fixed cells
- Monitor changes in cell cycle dynamics arising from drug treatment or other perturbations
- Performance validated using a wide range of cell densities

Handling & Storage

Handling	Protect from light. Avoid freeze/thaw cycles.
Short Term Storage	-20°C
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	Flow Cytometry, Fluorescence microscopy
Application Notes	This kit is suitable for DNA studies in live, permeabilized and fixed cells for normal cell lines and cell lines exhibiting multiple ploidy levels.
Contents	NUCLEAR-ID® Green Cell Cycle Detection Reagent, 100 µl Nocodazole Control, 10 µl 10X Assay Buffer, 15 ml
Quality Control	1. Absorption peak of NUCLEAR-ID® Green dye: λ_{max} = 507 ± 4 nm 2. % purity of NUCLEAR-ID® Green dye by HPLC: ≥93% 3. A sample from each lot of NUCLEAR-ID® Green Cell Cycle Analysis Kit is used to analyze Jurkat cells using the procedures described in the user manual. Cells with Nocodazole gave $\%G_2$ value of >50%. Untreated cells gave the following results: (a) G_0/G_1 peak CV < 15%; (b) $\%G_1$ > 35%; (c) $\%G_2$ < 30%; and (d) G_2/G_1 ratio > 1.72.
Quantity	100 assays

Technical Info / Product Notes

The NUCLEAR-ID® Green cell cycle analysis kit is a member of the CELLESTIAL® product line, reagents and assay kits comprising fluorescent molecular probes that have been extensively benchmarked for live cell analysis applications. CELLESTIAL® reagents and kits are optimal for use in demanding imaging applications, such as confocal microscopy, flow cytometry and HCS, where consistency and reproducibility are required .

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