

# PRODUCT DATA SHEET



ENZ-51014-100

## Nuclear-ID<sup>®</sup> Green cell cycle kit for flow cytometry

### Product Number/Sizes

ENZ-51014-100

1 Kit

- Complete kit provides **DNA content information** in live, permeabilized or fixed cells
- **Performance validated** using a wide range of cell densities
- **Monitors changes in cell cycle dynamics** arising from drug treatment or other perturbations
- **Excited** using common laser sources generating far red / green emission
- True **multiplexed** capability with additional probes and dyes
- **Easy staining protocol** simply add the dye and analyze by flow cytometry
- **Stringently manufactured** to control and eliminate non-specific assay artifacts

Enzo Life Sciences' 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<sub>0</sub>/G<sub>1</sub>, S and G<sub>2</sub>/M phases, as well as to quantify cells in the sub-G<sub>1</sub> 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.

### Product Specifications

QUANTITY:	100 assays
QUALITY CONTROL:	1. Absorption peak of Nuclear-ID™ Green dye: $\lambda_{\max} = 507 \pm 4 \text{ nm}$ 2. % purity of Nuclear-ID™ Green dye by HPLC: $\geq 93\%$ 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 <sub>2</sub> value of >50%. Untreated cells gave the following results: (a) G <sub>0</sub> /G <sub>1</sub> peak CV < 15%; (b) %G <sub>1</sub> > 35%; (c) %G <sub>2</sub> < 30%; and (d) G <sub>2</sub> /G <sub>1</sub> ratio > 1.72.
KIT/SET CONTAINS:	Nuclear-ID™ Green Cell Cycle Detection Reagent, 100 $\mu$ l Nocodazole Control, 10 $\mu$ l 10X Assay Buffer, 15 ml
APPLICATION:	This kit is suitable for DNA studies in live, permeabilized and fixed cells for normal cell lines and cell lines exhibiting multiple ploidy levels.
SHORT TERM STORAGE:	-20°C
LONG TERM STORAGE:	-80°C
HANDLING:	Avoid freeze/thaw cycles. Protect from light.

### Background/Technical Information

The Nuclear-ID™ Green Cell Cycle Analysis Kit is a member of the CELLestial<sup>®</sup> product line, reagents and assay kits comprising fluorescent molecular probes that have been extensively benchmarked for live cell analysis applications. CELLestial<sup>®</sup> 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. For the manual please click here.

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**WARNING:** THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN, DIAGNOSTICS OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

**MATERIAL SAFETY DATA:** This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet.

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