# NUCLEOLAR-ID®
# Green detection kit

Enzo Life Sciences' NUCLEOLAR-ID® Green Detection Kit contains a proprietary dye suitable for live-cell staining of nucleoli. The dye allows examination of nucleolar dynamic changes in intracellular distribution, trafficking and localization arising from biological processes such as the cell cycle and ribosome biogenesis. The kit is compatible with most fluorescence detection systems, including conventional and confocal fluorescence microscopes, as well as High Content Screening (HCS) platforms. This kit is specifically designed for visualizing nucleoli in living cells. The dye in the kit is resistant to photobleaching, facilitating its use in imaging applications. This nucleolar dye may be used in conjunction with common live-cell nuclear counterstains such as Hoechst 33342, Draq5™, Vybrant® DyeCycle™ Ruby and Enzo's NUCLEAR-ID® Red dye. A control nucleolus perturbation agent, actinomycin D, is provided for monitoring changes in nucleolar dynamics. Potential applications for this kit include monitoring impaired ribosome biogenesis, inhibition of transcription, cell cycle dynamics and cellular stress, as well as the distribution, trafficking and dynamics of nucleolar proteins, the distribution of viral proteins, and potentially as an aid in identifying cancer cells.

**Citations:** 13 View Online »

## Ordering Information Order Online »

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| **ENZ-51009-500** | 1Kit |

## Manuals, SDS & CofA View Online »

- Compatible with common live-cell nuclear counterstains (Hoechst 33342, Draq5™, Vybrant® DyeCycle™ Ruby, NUCLEAR-ID® Red dyes)
- High resistance to photobleaching and concentration quenching, ensuring strong, consistent fluorescence signal, even after extended viewing periods
- Validated for utility in live cell imaging applications, demonstrating appropriate response to treatment with well-characterized organelle-perturbation agents
- Stringently manufactured, to control and eliminate non-specific assay artifacts

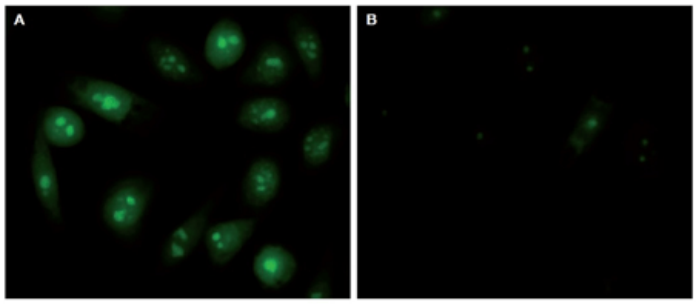


Figure 3: Cells stained with NUCLEOLAR-ID® Green Detection Reagent show maximal fluorescence signal within the nucleoli and faint fluorescence throughout the nucleus and cytoplasm, as shown in panel A. When the cells are treated with low doses of actinomycin D, loss of nucleolar staining is observed, as shown in panel B. Counterstaining with NUCLEAR-ID® Red Detection Reagent facilitates highlighting the nucleoli relative to the weak cytoplasmic staining.

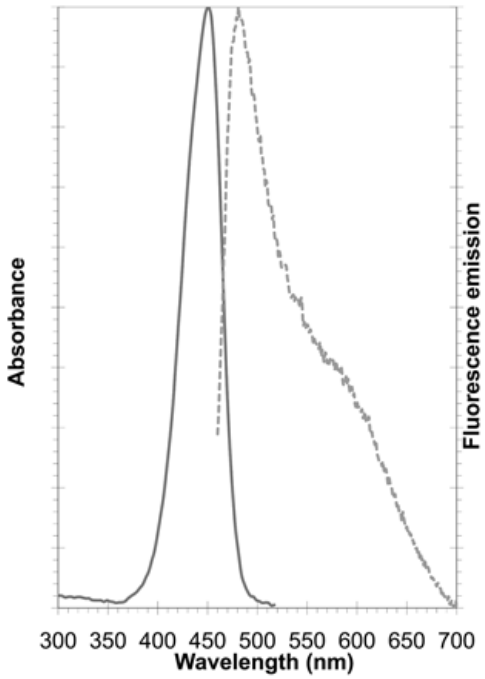


Figure 1: Excitation and emission spectra of NUCLEOLAR-ID®

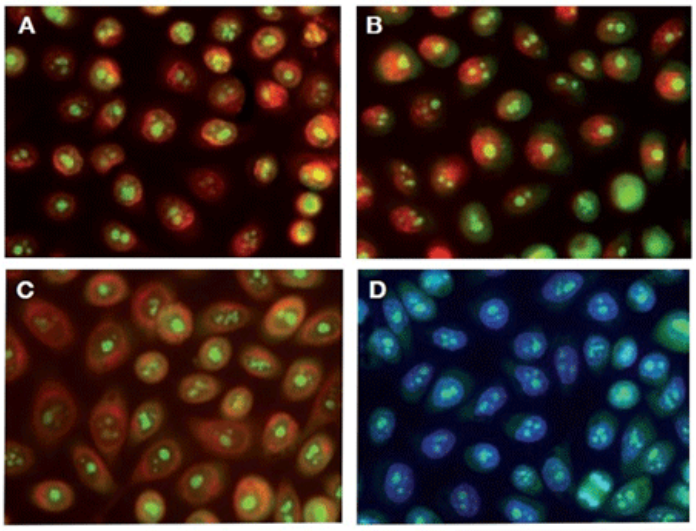


Figure 2: NUCLEOLAR-ID® Green dye stained live U2OS cells counterstained with NUCLEAR-ID® Red (A), Draq5™ (B), Vybrant® DyeCycle™ Ruby (C), and Hoechst 33342 (D). Nucleoli appear as green structures contrasted against the selected nuclear counterstain by fluorescence microscopy. As an RNA stain, the NUCLEOLAR-ID® Green dye displays some cytoplasmic staining as well, but the nuclear counterstain facilitates unambiguous identification of the nucleoli as green fluorescence signal within the confines of the highlighted nuclear fluorescence signal.

## Handling & Storage

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| **Use/Stability** | With proper storage, the kit components are stable up to the date noted on the product label. Store kit at -20°C in a non-frost free freezer, or -80°C for longer term 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

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| **Application** | Fluorescence microscopy, Fluorescent detection |
| **Application Notes** | Specifically designed for visualizing microscopically nucleoli in living cells. |
| **Contents** | **NUCLEOLAR-ID® Green Detection Reagent**, 50 µL<br>**Actinomycin D Control**, 125 µg<br>**10X Assay Buffer**, 15 mL |
| **Quality Control** | 1. Absorption peak of NUCLEOLAR-ID® Green dye: $\lambda_{max}$ = 439 ± 9 nm<br>2. % purity of NUCLEOLAR-ID® Green dye by HPLC: ≥93%<br>3. A sample from each lot of NUCLEOLAR-ID® Green Detection Kit is used to stain HeLa cells using the procedures described in the user manual. Cells stained with NUCLEOLAR-ID® Green Detection Reagent show maximal fluorescence signal within the nucleoli, with only faint fluorescence throughout the nucleus and cytoplasm. Cells induced by actinomycin D show reduction of nucleolar signal. |
| **Quantity** | 500 assays |

**Technical Info / Product Notes**

The NUCLEOLAR-ID® Green detection 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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