

## NUCLEAR-ID™ GREEN/RED

Total Nuclear-ID™ Green/Red Nucleolar/Nuclear  
Detection Kit

ENZ-51006-500

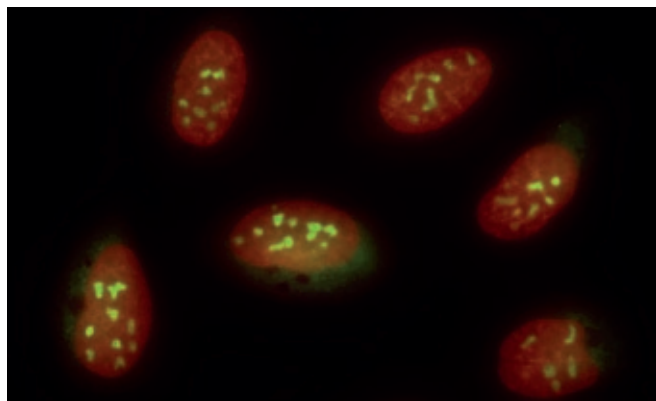
500 Reactions

HIGHLIGHT

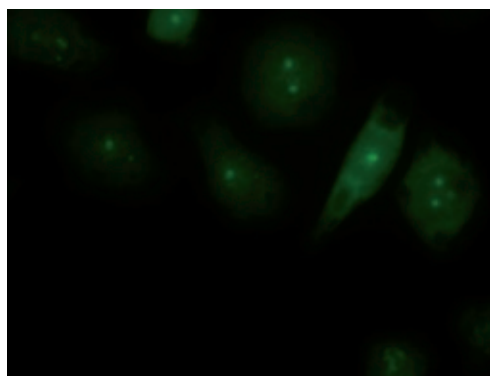
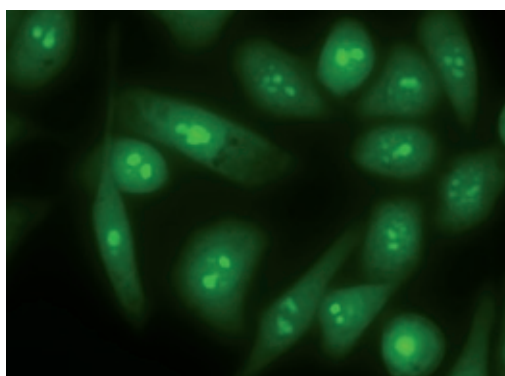
- **Simultaneous staining** of both the nucleolus and the nucleus in live cells
- **High resistance to photobleaching** and concentration quenching, ensuring strong, consistent fluorescence signal, even after extended viewing periods
- Validated for utility in **live cell imaging applications**, demonstrating appropriate response to treatment with well characterized nucleolus-perturbation agents
- Stringently manufactured, to control and eliminate non-specific assay artifacts

Enzo Life Sciences' Total Nuclear-ID™ Green/Red Nucleolus/Nucleus Detection Kit contains two proprietary dyes suitable for simultaneous staining of nucleoli and nuclei in live cells. The dyes allow 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 and nuclei in living cells. 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.



**FIGURE 1:** Live U2OS cells, stained with Total Nuclear-ID™ Green/Red Nucleolar/Nuclear Detection Kit demonstrates staining of the nucleus (red) and nucleolus (yellowish-green) via fluorescence microscopy. As an RNA stain, Nucleolus-ID™ Green dye does display some cytoplasmic staining as well, but Nuclear-ID™ Red dye facilitates unambiguous identification of the nucleoli as green fluorescence signal within the confines of the highlighted red nuclear fluorescence signal.



**FIGURE 2:** Cells stained with Nucleolar-ID™ Green Detection Reagent show maximal fluorescence signal within the nucleoli, and faint fluorescence throughout the nucleus and cytoplasm (A). When the cells are treated with low doses of actinomycin D, loss of nucleolar staining is observed (B). Counterstaining with Nuclear-ID™ Red Detection Reagent facilitates highlighting the nucleoli relative to the weak cytoplasmic staining.

## Related Products

Product	Prod. No.	Size
GFP-Certified™ Lyso-ID™ Red Lysosomal Detection Kit	ENZ-51005-500	500 Reactions
GFP-Certified™ Mito-ID™ Red Mitochondrial Detection Kit	ENZ-51007-500	500 Reactions
Acridine Orange (Ultra Pure)	ENZ-52405	100 mg
DAPI (Ultra Pure)	ENZ-52404	100 mg
Hoechst 33258 (Ultra Pure)	ENZ-52402	100 mg
Hoechst 33342 (Ultra Pure)	ENZ-52401	100 mg
Propidium Iodide (Ultra Pure)	ENZ-52403	100 mg

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