



MITO-ID™ GREEN DETECTION KIT

for microscopy

Mito-ID™ Green Detection Kit
for microscopy
ENZ-51022-K500

500 Assays



- Potent mitochondria-selective dye suitable for live, permeabilized and fixed cell staining
- Easily multiplexed with common fluorescent dyes (coumarin, Texas Red, and cyanine 5) and fluorescent proteins (BFP, CFP, RFP)
- Highly resistant to photobleaching and concentration quenching, ensuring strong, consistent fluorescence signal, even after extended viewing periods
- Highlights mitochondria regardless of the organelle's membrane potential status
- Stringently manufactured, to control and eliminate non-specific assay artifacts

Enzo Life Sciences' Mito-ID™ Green Detection Kit contains a proprietary membrane-permeable mitochondria-selective dye suitable for use with live, permeabilized and even fixed cells. Unlike conventional dyes, such as DiOC6(3), JC-1, rhodamine 123, and tetramethylrhodamine ethyl ester, Mito-ID™ Green dye highlights mitochondria regardless of their energetic state. The dye is compatible with most fluorescence detection systems, including conventional and confocal fluorescence microscopes, as well as, High Content Screening (HCS) platforms. The kit is useful for assessing mitochondrial morphology changes, estimating mitochondrial mass and co-localizing RFP-tagged proteins to the mitochondrial compartment.

This kit has been specifically designed for use with RFP-expressing cell lines and cells expressing blue or cyan fluorescent proteins (BFPs, CFPs). One important application of Mito-ID™ Green dye is in fluorescence co-localization imaging with red fluorescent protein (RFP)-tagged proteins. This is a powerful approach for determining the targeting of molecules to intracellular compartments, and for screening of associations and interactions between these molecules. Additionally, the kit is suitable for use with live or post-fixed cells in conjunction with fluorescent probes, such as labeled antibodies, or other fluorescent conjugates displaying similar spectral properties as coumarin, Texas Red or cyanine 5. A nuclear counter stain (Hoechst 33342) is provided to highlight this organelle.

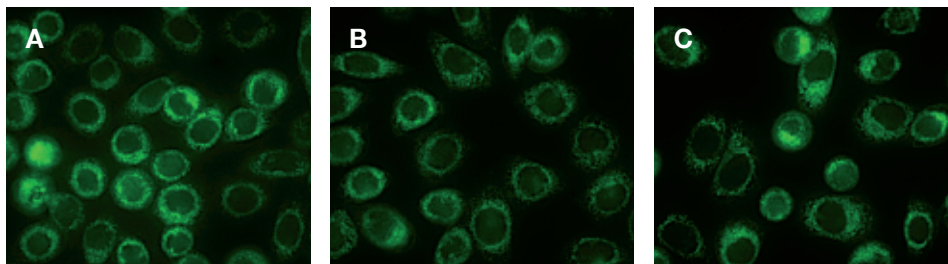


FIGURE 1: The Mito-ID™ Green dye selectively stains mitochondria of living cells (A) and is relatively insensitive to mitochondrial membrane potential uncouplers of phosphorylation, such as CCCP (carbonyl cyanide 3-chlorophenylhydrazone) (B) as well as ion-channel perturbing drugs, such as valinomycin (C).

Cellular Analysis

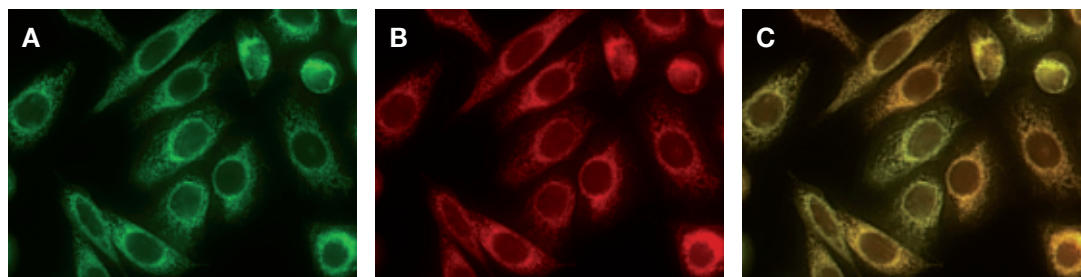


FIGURE 2: HeLa cells were stained with both Mito-ID™ Green (A) and Mito-ID™ Red (B) dyes. Mito-ID™ Green dye co-localizes with the Mito-ID™ Red dye, shown as yellow signal (C), demonstrating selectivity for mitochondria. Previously, Mito-ID™ Red dye has been shown to co-localize with mitochondria expressing GFP.

Related Products

Product	Prod. No.	Size
Mito-ID™ Red Detection Kit (GFP-Certified™) for microscopy	ENZ-51007-500	500 Assays
Lyso-ID™ Red Detection Kit (GFP-Certified™) for microscopy	ENZ-51005-500	500 Assays
Total Nuclear-ID™ Green/Red Nucleolar/Nuclear Detection Kit for microscopy	ENZ-51006-500	500 Assays
DiOC6(3) iodide (Ultra Pure)	ENZ-52303	100 mg
Mito-ID™ Membrane Potential Detection Kit for microscopy and flow cytometry	ENZ-51018-K100	100 Assays
Mito-ID™ Membrane Potential Cytotoxicity Kit for microplates	ENZ-51019-KP002	2 x 96 wells
JC-1 (Ultra Pure)	ENZ-52304	5 mg
Rhodamine 123 (Ultra Pure)	ENZ-52307	25 mg
TMRE (Ultra Pure)	ENZ-52309	25 mg

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