

PRODUCT DATA SHEET



ENZ-53004 Nuclear-ID™ Blue/Green cell viability reagent

Product Number/Sizes

ENZ-53004-C100 100 µl

Product Specifications

PURITY: ≥93% (HPLC)
QUANTITY: 100µl (for 1000 microscopy assays).
SHIPPING: SHIPPED ON DRY ICE
SHORT TERM STORAGE: -20°C
LONG TERM STORAGE: -80°C
HANDLING: Avoid freeze/thaw cycles. Protect from light.

Product Description

The Nuclear-ID™ Blue/Green cell viability reagent (Prod. No. ENZ-53004) is a mixture of a blue fluorescent cell-permeable nucleic acid dye and a green fluorescent cell-impermeable nucleic acid dye that is suited for staining dead nuclei. The staining pattern arising from the simultaneous combination of these two dyes permits determination of viable and dead cell populations by fluorescence/confocal microscopy. The reagent, supplied as a 1000x solution, is sufficient for 1000 microscopy assays. The single-tube format makes this cell viability reagent easy to use. It leaves the cytoplasm unstained, potentially allowing visualization of other cell markers.

Background/Technical Information

Wavelength Maxima

Live (Blue): Excitation: 350nm Emission: 461nm
Dead (Green): Excitation: 503nm Emission: 524nm

Wide Field Fluorescence/Confocal Microscopy

Reagent Preparation:

Mix 1µL of Nuclear-ID™ Blue/Green Cell Viability Reagent in 1 mL of buffer of choice. This volume is sufficient for 10 assays and may be scaled according to need.

Staining Adherent cells:

1. Grow cells directly onto glass slides or polystyrene tissue culture plates until ~80% confluent via standard tissue culture practices.
2. Remove growth media.
3. Dispense the freshly diluted staining solution in a volume sufficient for covering the cell monolayer.
4. Protect samples from light and incubate for 30 minutes at 37°C.
5. Remove the excess staining solution and, if necessary, add a few drops of buffer to prevent the cells from drying out.
6. Cover cells with a glass cover slip and observe under a fluorescence/confocal microscope with a dual filter set for DAPI (Ex/Em: 350/470nm) and GFP/FITC (Ex/Em: 488/514 nm).

Staining Non-Adherent Cells:

1. Grow cells via standard tissue culture practices.
2. Collect about 1×10^5 cells. Centrifuge at 500 x g for 5 minutes. Remove supernatant.
3. Re-suspend cells in a volume of the freshly diluted staining solution sufficient for covering the cell pellet.
4. Protect samples from light and incubate for 30 minutes at 37°C.
5. Centrifuge at 500 x g for 5 minutes. Remove supernatant.
6. Re-suspend cells in 100µL buffer.
7. Plate 10-15µL of cells on a glass slide.
8. Cover cells with a glass cover slip and observe under a fluorescence/confocal microscope with a dual filter set for DAPI (Ex/Em: 350/470nm) and GFP/FITC (Ex/Em: 488/514 nm).

The Nuclear-ID™ Blue/Green cell viability reagent 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.

NORTH/SOUTH AMERICA

ENZO LIFE SCIENCES INTERNATIONAL, INC.
5120 Butler Pike
Plymouth Meeting, PA 19462-1202
USA
T 1-800-942-0430/(610) 941-0430
F (610) 941-9252
E info-usa@enzolifesciences.com

SWITZERLAND & REST OF EUROPE

ENZO LIFE SCIENCES AG
Industriestrasse 17, Postfach
CH-4415 Lausen
Switzerland
T +41/0 61 926 89 89
F +41/0 61 926 89 79
E info-ch@enzolifesciences.com
www.enzolifesciences.com

GERMANY

ENZO LIFE SCIENCES GMBH
Marie-Curie-Strasse 8
DE-79539 Lörrach
Germany
T +49/0 7621 5500 526
Toll Free 0800 664 9518
F +49/0 7621 5500 527
E info-de@enzolifesciences.com
www.enzolifesciences.com

BENELUX

ENZO LIFE SCIENCES BVBA
Melkerijweg 3
BE-2240 Zandhoven
Belgium
T +32/0 3 466 04 20
F +32/0 3 466 04 29
E info-be@enzolifesciences.com
www.enzolifesciences.com

UK & IRELAND

ENZO LIFE SCIENCES (UK) LTD.
Palatine House
Matford Court
Exeter EX2 8NL
UK
T 0845 601 1488 (UK customers)
T +44/0 1392 825900 (from overseas)
F +44/0 1392 825910
E info-uk@enzolifesciences.com
www.enzolifesciences.com

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Switzerland

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F +41/0 61 926 89 79

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Germany

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F +49/0 7621 5500 527

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F +32/0 3 466 04 29

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F +44/0 1392 825910

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