EarlyTox Nuclear Dyes

Optimized for use in the SpectraMax® i3x Multi-Mode Microplate Reader with the SpectraMax® MiniMax™ 300 Imaging Cytometer, the EarlyTox™ Nuclear Dyes from Molecular Devices are fluorogenic, DNA-selective reagents suitable for analyzing DNA content in living or fixed cells. They can be used for cell counting and a variety of cell-based assays. Live Green Dye and Dead Green Dye are detected by the 541 nm channel using standard FITC filters. Live Red Dye is detected by the 713 nm channel using standard Cy5 filters.

- Live Green Dye is cell-permeant and stains both live and dead cells (Excitation: 503 nm/Emission: 526 nm).
- Dead Green Dye is cell impermeant and stains dead, fixed, or apoptotic cells that have damaged outer membranes (Excitation: 503 nm/Emission: 526 nm).
- Live Red Dye is cell-permeant and stains both live and dead cells (Excitation: 622 nm/Emission: 645 nm).

EarlyTox Nuclear Dyes can be used in fluorescence imaging, microplate reader, and flow cytometry applications. All three dyes are suitable for staining nuclei and can be used for a variety of applications, such as cell count, cell cycle, cell proliferation, or cell toxicity assays. Nuclear dyes can also be used for multicolor analysis of live or fixed cells.

Available Kits

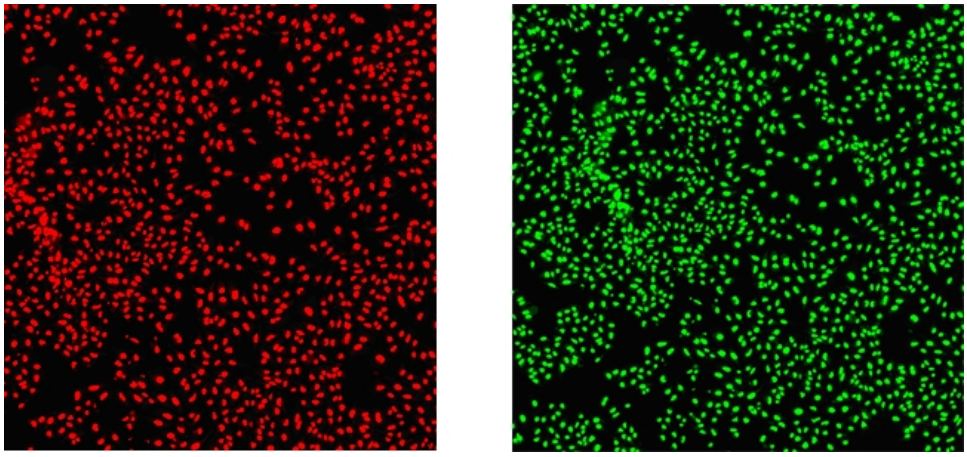
Dye	Part Number
EarlyTox™ Live Green Dye	R8215
EarlyTox™ Dead Green Dye	R8216
EarlyTox™ Live Red Dye	R8217

Contents

R3617 B
September 2023

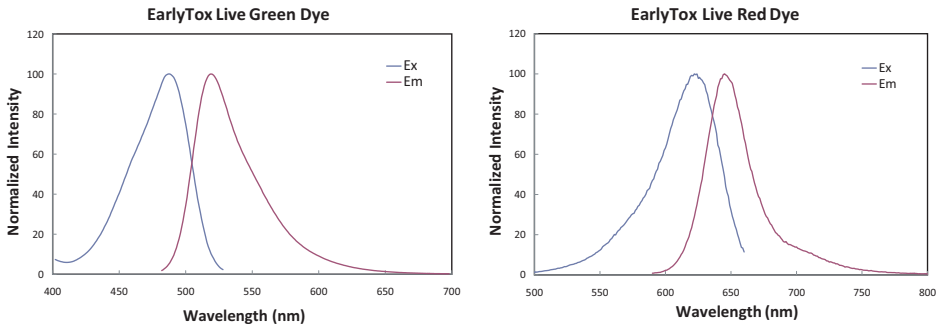
MOLECULAR DEVICES

Examples



Typical Staining Pattern of EarlyTox Nuclear Dyes

Pictured are HeLa cells imaged on the SpectraMax MiniMax 300 Imaging Cytometer using a 10-ms exposure time. Left, Live Red Dye. Right, Live Green Dye.



Excitation and Emission Spectra of Nuclear Dyes

Staining Protocol

Suggested Working Concentrations

Molecular Devices recommends 1:2000 to 1:4000 dilutions of dyes as a starting point.

Since different cell types and applications can vary, Molecular Devices recommends optimizing dye concentrations for your specific application and cell type.

One vial of the selected EarlyTox Nuclear Dye is sufficient for at least two (2) 96-well or 384-well plates.

Cell Staining

1. Grow the cells in 96-well or 384-well plates with the desired experimental treatments.
2. Prepare 1:2000 dilutions of dye (add 10 µL of dye to 20 mL of DPBS) immediately before cell staining.
3. Gently remove the cell media from the plates by pipetting or aspirating (do not wash the cells).
4. Add the staining solution directly into the wells.
   - Add 100 µL per well for 96-well plates.
   - Add 25 µL per well for 384-well plates.
5. Incubate the plate for 15 to 30 minutes at 37°C and 5% CO_2.
6. Proceed with image acquisition using the appropriate wavelengths.
7. Dead Green Dye may be fixed using a 4% paraformaldehyde solution and then stored in the dark for later use.

Storage and Handling

On receipt of the EarlyTox Nuclear Dye, store the contents at –20°C. Under these conditions the dyes are stable for six months in the original packaging.

WARNING! Reagents can contain chemicals that are harmful. Exercise care when handling reagents as described in the related safety data sheet (SDS or MSDS). The safety data sheet is available in the Knowledge Base on the Molecular Devices support web site: support.moleculardevices.com/

Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest level of technical service.

Our Support website—support.moleculardevices.com/—describes the support options offered by Molecular Devices, including service plans and professional services. It also has a link to the Molecular Devices Knowledge Base, which contains documentation, technical notes, software upgrades, safety data sheets, and other resources. If you still need assistance, you can submit a request to Molecular Devices Technical Support.

Please have the instrument serial number (on the rear of the instrument), or reagent kit lot number, and any related sample data files available when you call.

For research use only. Not for use in diagnostic procedures.

Patents: http://www.moleculardevices.com/patents

Product manufactured by Molecular Devices, LLC.
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