LysoBrite™ Lysosome Dyes

Dyes and Stains

Fluorescent dyes used to label and track lysosomes in live cells

Catalog #100-0819	500 Tests
Catalog #100-0850	500 Tests
Catalog #100-0851	500 Tests

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Product Description

LysoBrite™ dyes are fluorescent dyes that selectively stain lysosomes and other acidic organelles. Due to their hydrophobic nature, LysoBrite™ dyes permeate live cells and selectively accumulate in the lysosomes via the lysosome's pH gradient. The fluorescence property of these dyes significantly increases within the lysosome's acidic environment; this fluorescence can be measured using flow cytometry and fluorescence imaging. Due to their selective fluorescence inside lysosomes, LysoBrite™ dyes provide low background and high contrast during imaging. They can be used with proliferating and non-proliferating cells, and are suitable for suspension and adherent cells.

Product Information

PRODUCT NAME	CATALOG #	SIZE	STORAGE	SHELF LIFE
LysoBrite™ Lysosome Dye, Deep Red	100-0819	500 Tests	Store at -20°C. Protect product from prolonged exposure to light.	Stable until expiry date (EXP) on box label.
LysoBrite™ Lysosome Dye, Red DND-99	100-0850	500 Tests	Store at -20°C. Protect product from prolonged exposure to light.	Stable until expiry date (EXP) on box label.
LysoBrite™ Lysosome Dye, Green	100-0851	500 Tests	Store at -20°C. Protect product from prolonged exposure to light.	Stable until expiry date (EXP) on box label.

Physical & Spectral Properties

PRODUCT NAME	FORMULATION	MOLECULAR WEIGHT (g/mol)	EXCITATION WAVELENGTH (nm)	EMISSION WAVELENGTH (nm)
LysoBrite™ Lysosome Dye, Deep Red*	500X solution in dimethyl sulfoxide (DMSO)	749.99	597	619
LysoBrite™ Lysosome Dye, Red DND-99*		399.25	573	592
LysoBrite™ Lysosome Dye, Green*		453.34	501	510

*Please refer to the Safety Data Sheet (SDS) for hazard information. This product contains components dissolved in DMSO. DMSO is a strong solvent and skin penetrant, and can transport many substances through the skin. DMSO can also penetrate some protective glove materials including latex and silicone. Extra caution should be utilized when handling this product.

Directions for Use

Please read the entire protocol before proceeding.

Preparation of LysoBrite™ Working Solution

1. Warm LysoBrite™ Lysosome Dye to room temperature (15 - 25°C).
2. To prepare a LysoBrite™ working solution, add 20 µL of LysoBrite™ Lysosome Dye to 10 mL of phosphate-buffered saline (PBS). 10 mL of working solution is sufficient for one 96-well plate. Use the working solution immediately; do not store.

   NOTE: If not used immediately, aliquot and store LysoBrite™ stock solution at -20°C. After thawing aliquots, use immediately; do not re-freeze.

   NOTE: The optimal concentration of the fluorescent lysosome dye varies depending on the application. The staining conditions may be modified according to cell type and the permeability of the cells or tissues to the dye.

Staining Cells

Refer to section A for staining adherent cells or section B for staining cells in suspension.

A. ADHERENT CELLS

1. Warm a sufficient volume of PBS to 37°C.
2. Culture cells in appropriate culture medium in either a black-wall/clear-bottom 96-well plate or on coverslips inside a Petri dish. When cells have reached the desired level of confluence, add an equal volume of LysoBrite™ working solution.
3. Incubate cells in a 37°C and 5% CO_2 incubator for 30 minutes.
4. Remove LysoBrite™ working solution and wash cells twice with warm PBS. Fill the wells or Petri dish with warm PBS or culture medium.

B. CELLS IN SUSPENSION

NOTE: Suspension cells may be attached to coverslips that have been treated with Corning® Cell-Tak™ Cell and Tissue Adhesive (Corning Catalog #354240), then stained as adherent cells.

1. Warm a sufficient volume of PBS to 37°C.
2. Add an equal volume of LysoBrite™ working solution to the cells. Incubate cells in a 37°C and 5% CO_2 incubator for 30 minutes.
3. Remove the working solution and wash cells twice with warm PBS. Fill the wells with warm PBS or culture medium.

Imaging Stained Cells

Observe stained cells using a fluorescence microscope equipped with the desired filter set.

NOTE: If the cells are not sufficiently stained, increase either the working solution concentration or the incubation time to allow the dye to accumulate in the cells.