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## Product Specifications

### LBL-Dye M580 - Red Cellular Tracer

<https://proimaging.fr/product/lbl-dye-m580/>

#### Product Information

**Product Name:** LBL-Dye M580

**Product Reference:** CZ277

**Unit Size:** 1mg

**Shipping Conditions:** Room temperature for up to 3 weeks

**Storage Conditions:** Store 18 months at -20°C and protect from light

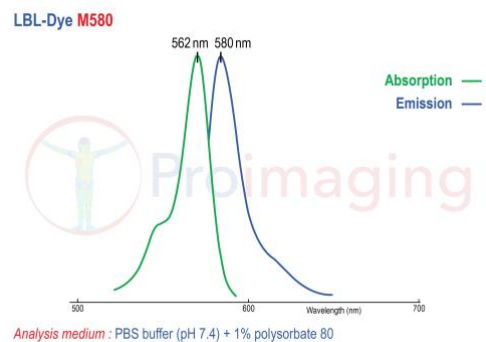
**Molecular Weight:** ~ 740

**Max Absorption:** 562 nm

**Max Emission:** 580 nm

**Solubility:**

- DMSO
- PBS Buffer (pH 7.4) + 1% polysorbate 80



#### Product Description

**LBL-Dye M580** is a cell permeant lipophilic fluorescent dye (580 nm emission wavelength) allowing cellular staining.

It is a photostable and non-cytotoxic probe, particularly well-adapted for long-time imaging on living cells.

**LBL-Dye M580** is compatible with widefield, confocal, HCS, flow cytometry in living (or fixed with PFA after labeling) cells and tissues.

**Product for Research Use Only. Not for Human Use.**

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## Protocol of Use

### **Preparing Stock Solution**

#### **Solubility in DMSO / PBS Buffer (pH 7.4) + 1% polysorbate 80**

To prepare a stock solution, dissolve the **1 mg** lyophilized **LBL-Dye M580** product in **125 µl** of high-quality, anhydrous dimethylsulfoxide (DMSO) to a **final concentration of 8 mg/ml**. The solution must be aliquoted and stored at  $\leq -20^{\circ}\text{C}$  and protected from light.

### **Experimental Protocols**

#### Cell Preparation and Staining

The concentration of probe for optimal staining varies by application, cell type or on other factors, such as the permeability of the cells or tissues to the probe. In general, use working concentrations of **0,01% to 0,025% (0,8 to 2 µg/ml) – x4 000-10 000 from stock solution**.

#### 1. Preparation of staining solutions

Dilute **1 µl LBL-Dye M580 stock solution for 4 ml** of appropriate buffer or growth medium.

#### 2. Staining adherent cells

Cells grow on plate or coverslips with the appropriate culture medium. When cells have reached the desired confluency, remove the media from the dish and add prewarmed ( $37^{\circ}\text{C}$ ) staining solution containing **LBL-Dye M580** probe. The probe can be applied directly in culture medium without removal. While incubation times vary depending on the model system and probe used, incubation for 15–45 minutes under growth conditions appropriate for the cell type is generally sufficient but may need to be optimized. After staining is complete, visualize the staining after exposure at **optimal absorbance of 562 nm and detect at 570-610 nm of emission wavelength**. If background is observed, replace the staining solution with fresh prewarmed media or buffer and observe cells using a fluorescence microscope or fluorescence microplate reader. The cells can be fixed with PFA4% to preserve the staining in fixed cells and tissues.

#### 3. Staining suspension cells

Centrifuge with adapted speed to obtain a cell pellet and aspirate the supernatant. Resuspend the cells gently in prewarmed culture medium ( $37^{\circ}\text{C}$ ) containing the **LBL-Dye M580** probe. While incubation times vary depending on cell type, incubation for 15–45 minutes under growth conditions is generally sufficient but may need to be optimized. After staining is complete, observe directly or re-pellet the cells by centrifugation and resuspend cells in fresh prewarmed medium if background signal is high.

Cells may be analyzed by flow cytometry, microplate-based analysis, or fluorescence microscopy. The cells can be fixed with PFA4% to preserve the staining in fixed cells and tissues.