

## CellVue™ NIR780 Cell Labeling Kit

Catalog Number: 88-0875

For Research Use Only. Not for use in diagnostic procedures.

### Product Information

**Contents:** CellVue™ NIR780 Cell Labeling Kit  
**Catalog Number:** 88-0875



**Formulation:** 1 mM dye stock in ethanol  
**Temperature Limitation:** Store at 2-8°C Light sensitive material.

**Batch Code:** Refer to vial

**Use By:** Refer to vial

### Description

CellVue® dyes are lipophilic dyes that can be used to label the cell membrane for the purpose of identifying and tracking labeled cells. Cell labeling is rapid and stable and can be combined with fluorescently labeled antibodies and other markers of cellular function for flow cytometric analysis and fluorescent microscopy. Mini CellVue® Kits are supplied with one vial of dye stock (1 mM in ethanol) and one vial of labeling vehicle (Diluent C); Midi CellVue® Kits are supplied with two vials of dye stock (1 mM in ethanol) and six vials of Diluent C.

CellVue® NIR780 is a near-infrared fluorescent cell labeling reagent. It can be excited off the red laser line (633 nm) and has a peak emission of 776 nm that can be detected in filter sets designed for APC-eFluor® 780. CellVue® NIR780 is compatible with most multi-color applications, however, due to similar emission properties it cannot be used in combination with APC-eFluor® 780 or APC-Alexa Fluor® 750 reagents.

### Applications Reported

CellVue® NIR780 Cell Labeling Kit has been reported for use in flow cytometric analysis, microscopy, immunocytochemistry, and cell labeling.

### Applications Tested

CellVue® NIR780 has been tested by flow cytometric analysis of mouse spleen cells labeled with a final concentration of 2 µM. Labeling with CellVue® dyes should be done before staining with antibodies. Please see the enclosed protocol for suggested labeling conditions. It is highly recommended that the concentration and labeling conditions be carefully determined by each investigator for optimal performance in the assay of interest.

### References

Tario JD Jr, Gray BD, Wallace SS, Muirhead KA, Ohlsson-Wilhelm BM, Wallace PK. Novel lipophilic tracking dyes for monitoring cell proliferation. Immunol Invest. 2007;36(5-6):861-85.

### Related Products

00-4501 CellVue Diluent C (For CellVue™ Cell Labeling Kits)

### Legal

CellVue® is a registered trademark of PTI Research, Inc. Patent <http://www.mtarget.com/mm5/pdfs/patents.pdf>

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# CellVue™ Labeling Kit Protocol

## Protocols: CellVue™ Kit General Cell Labeling

### Experimental Procedure

*Note: All procedures should be carried out at room temperature. No azide or other metabolic inhibitors should be present during labeling.*

1. Wash cells one time with serum-free media to remove serum proteins and lipids that may interfere with cell labeling.
2. Carefully discard the supernatant, leaving no more than 25  $\mu\text{L}$  of residual media on the pellet.
3. Gently resuspend cells at  $2 \times 10^7$  cells/mL with Diluent C. Do not vortex, pipette several times to be sure cells are in a single-cell suspension.
4. Immediately before labeling, prepare a 2X working solution of dye in Diluent C. For a final labeling concentration of 2  $\mu\text{M}$ , prepare a 4  $\mu\text{M}$  solution by adding 4  $\mu\text{L}$  of the 1 mM dye stock to 1 mL of Diluent C. To ensure uniform labeling, never add dye stock directly to cell suspension.
5. Rapidly add 1 mL of cells to 1 mL of 2X working dye solution and immediately mix the sample by pipetting to ensure uniform labeling. The final cell concentration should be approximately  $1 \times 10^7$  cells/mL and the final dye concentration should be 2  $\mu\text{M}$ .
6. Incubate the cells for 2–5 minutes, with periodic mixing. Longer incubations will result in brighter labeling, but may begin to adversely affect cell viability.
7. Stop labeling by adding an equal volume of serum and let sit for 1 minute.
8. Centrifuge cells and discard supernatant.
9. Wash cells three times with complete media (do not use Diluent C). To reduce any effect of residual dye bound to the tube, cells may be transferred to a fresh tube.
10. Count, culture or transfer cells as desired.

*Note: This protocol has been tested for in vitro or ex vivo labeling of cells. Because labeling occurs as a function of the dye partitioning into the cell membrane, concentrations of dye that are too high or labeling times that are too long will result in a loss of membrane integrity and poor cell recovery. Labeling with CellVue™ dyes should be done prior to staining with monoclonal antibodies. Labeling conditions and concentrations should be carefully determined by each investigator to ensure optimal performance in the assay of interest.*

*Additional Diluent C can be purchased separately. Refer to Cat. No. 00-4501.*

## Documentation and support

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  - Safety Data Sheets (SDSs; also known as MSDSs)

Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

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