CellVue™ Maroon Cell Labeling Kit

Catalog Number: 88-0870
For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: CellVue™ Maroon Cell Labeling Kit
REF **Catalog Number:** 88-0870

Formulation: 1 mM dye stock in ethanol
Temperature Limitation: Store at 2-8°C Light sensitive material.
LOT **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. The Mini CellVue® Kits are supplied with one vial of dye stock (1 mM in ethanol) and one vial of labeling vehicle (Diluent C).

CellVue® Maroon is a far-red fluorescent cell labeling reagent. It is optimally excited at 647 nm and has a peak emission of 667 nm; however, it can be detected equally in filter sets designed for APC, Alexa Fluor® 700, and APC-eFluor® 780 or similar fluorochromes. Therefore, using antibodies conjugated to these fluorochromes in combination with using CellVue® Maroon is not recommended.

Applications Reported

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

Applications Tested

CellVue® Maroon has been tested by flow cytometric analysis of mouse spleen cells labeled at 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

Gertner-Dardenne J, Poupot M, Gray B, Fournié JJ. Lipophilic fluorochrome trackers of membrane transfers between immune cells. Immunol Invest. 2007;36(5-6):665-85.

Barbier M, Gray BD, Muirhead KA, Ronot X, Boutonnat J. A flow cytometric assay for simultaneous assessment of drug efflux, proliferation, and apoptosis. Cytometry B Clin Cytom. 2004 May;59(1):46-53.

Related Products

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

Legal

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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 µL of residual media on the pellet.
3. Gently resuspend cells at $2x10^7$ 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 µM, prepare a 4 µM solution by adding 4 µL 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 $1x10^7$ cells/mL and the final dye concentration should be 2 µM.
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.

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

Limited product warranty

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