CellVue® Fluorescent Dye Kits for Cell Membrane Labeling

What are they?

CellVue® dyes are fluorescent probes for irreversible labeling of plasma membranes of live cells.

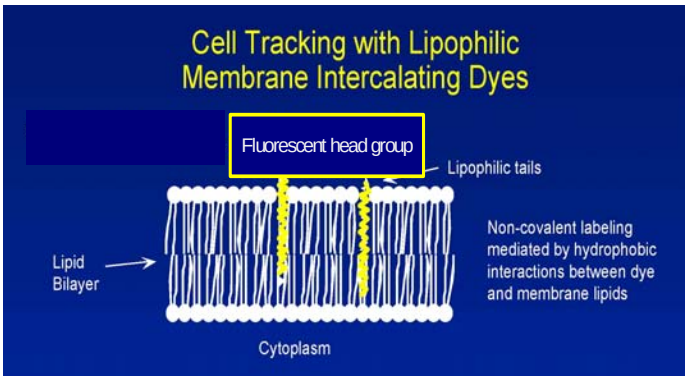
What do CellVue® Kits for Cell Membrane Labeling Offer?

- Versatility – use with any cell type or bioparticle with a membrane
- Provides stable labeling with minimal transfer from cell to cell
- Provides rapid, uniform membrane labeling
- Combine with fluorescent antibodies or markers of cell function
- Suitable for cell tracking and proliferation studies
- Several colors (UV to NIR) for multi-parameter studies (use with existing fluorochromes for more colors)
- Far-Red and NIR versions can provide greater signal to noise due to reduced background autofluorescence
- Compatible with flow cytometers, confocal and in vivo imaging equipment
- Convenient, easy-to-use kit format

How do they work?

The CellVue® cell linker kits use proprietary membrane labeling technology to stably incorporate a fluorescent dye with long aliphatic tails into the lipid regions of the cell membrane, see Figure 1. The labeling vehicle provided with the kit (Diluent C) is an iso-osmotic aqueous solution which contains no physiologic salts or buffers, detergents, or organic solvents and is designed to maintain cell viability while maximizing dye solubility and staining efficiency. The pattern of staining is dependent upon the cell type being labeled and the membranes of the cells.

Figure 1.

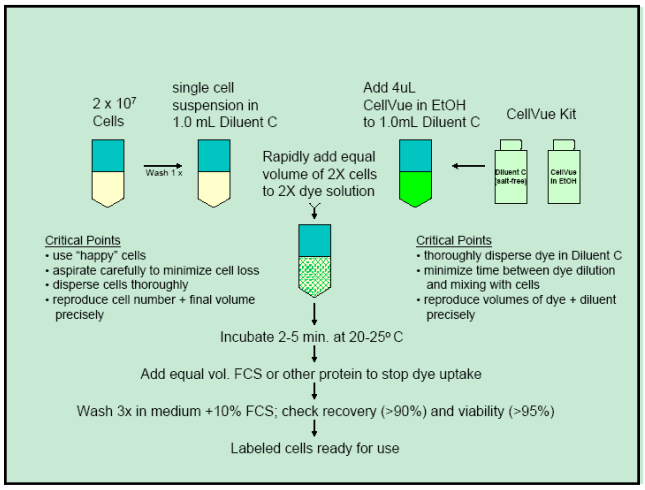


What are the advantages of Far Red and Near Infrared Fluorescence?

- Reduced autofluorescence background
- Greater signal to noise
- Greater ability to multiplex with visible probes due to minimal spectral overlap
- Excellent for use in combination with other cell tracking probes such as CFSE or PKH26

Methods for Cell Labeling with CellVue® Dyes

Mixing Steps and Critical Preparation Points



References:

- Thomas DL, Kranz DM, Roy EJ. Experimental manipulations of afferent immune responses influence efferent immune responses to brain tumors. Cancer Immunol. Immunother. Feb16 (2008)
- Bantly AD, Gray BD, Breslin E, Weinstein EG, Muirhead KA, Ohlsson-Wilhelm BM, Moore JS. *CellVue® Claret, a new Far-Red Dye, Facilitates Polychromatic Assessment of Immune Cell Proliferation*. Immunological Investigations, 36, No 5-6, 581-605 (2007)
- Gertner-Dardenne J, Poupot M, Gray B, Fournie JJ. *Lipophilic Fluorochrome Trackers of Membrane Transfers between Immune Cells*. Immunological Investigations, 36, No 5-6, 665-685 (2007)
- Tario, JD, Gray BD, Wallace SS, Muirhead KA, Ohlsson-Wilhelm BM, Wallace PK. Novel *Lipophilic Tracking Dyes for Monitoring Cell Proliferation*. Immunological Investigations, 36, No 5-6, 861-885 (2007)
- Gertner J, Wiedemann A, Poupot M and Fournie J-J. *Human gamma delta T lymphocytes strip and kill tumor cells simultaneously*. Immunology Letters, 110(1): 42-53 (2007)
- Al-Mehdi AB, Patel M, Haroon A, Reed D, Ohlsson-Wilhelm B, Muirhead K and Gray BD. *Increased Depth of Cellular Imaging in the Intact Lung using Far Red and Near Infrared Fluorescent Probes*. Int. J. Biomed Imaging. 1-7 (2006).
- Stewart CC, Woodring ML, Podniesinski E and Gray BD. *Flow cytometer in the infrared: inexpensive modifications to a commercial instrument*. Cytometry, Part A, 67A, #2, 104-111, (2005)
- See product inserts for other pertinent references.

CellVue® Kits are available in 3 sizes:

Mini Kit (small): 1 vial containing 0.1 ml, 1 X 10^{-3} M in ethanol fluorochrome dye stock and 1 vial containing 10 ml of diluent.

Midi Kit (medium): 1 vial containing 0.2 ml, 1 X 10^{-3} M in ethanol fluorochrome dye stock and 6 vials containing 10 ml of diluent.

Maxi Kit (large): 1 vial containing 0.5 ml, 1 X 10^{-3} M in ethanol fluorochrome dye stock and 6 vials containing 10 ml of diluent.

CELLVUE® PRODUCT LIST

Catalog Number	Name	Description	Price
C-1001	**CellVue® Maroon**	The CellVue Maroon Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Ex max = 647 nm and Em max = 667 nm. Provides stable labeling of the lipid regions of cell membranes.	
C-1003	**CellVue® Plum**	The CellVue Plum Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Ex max = 652 nm and Em max = 671 nm. Provides stable labeling of the lipid regions of cell membranes.	
C-1004	**CellVue® Burgundy**	The CellVue Burgundy Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Ex max = 683 nm and Em max = 707 nm. Provides stable labeling of the lipid regions of cell membranes.	
C-1005	**CellVue® Lavendar**	The CellVue Lavender Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Ex max = 425 nm and Em max = 461 nm. Provides stable labeling of the lipid regions of cell membranes.	
C-1006	**CellVue® NIR815**	The CellVue NIR815 Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Ex max = 786 nm and Em max = 814 nm. Provides stable labeling of the lipid regions of cell membranes.	
C-1007	**CellVue® NIR780**	The CellVue NIR780 Fluorescent Cell Linker Kit contains a 1 mM dye stock solution and cell labeling diluent. Dye fluorescence properties: Abs max = 745 nm and Em max = 776 nm. Provides stable labeling of the lipid regions of cell membranes.	
C–1008	**Diluent C**	Six vials containing 10 mL of Diluent C for membrane labeling with CellVue dyes.	

COMPANY PROFILE

Dundee Cell Products (DCP) is a supplier of high quality products and innovative tools for biochemistry and molecular and cell biology research. We also offer Quantitative Proteomics (SILAQTM) based on stable isotope labeling of amino acids in culture (SILAC) and Drug Discovery services to the academic and biotech/pharma sectors in the areas of our core technologies and expertise.

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