CellBrite® Steady Membrane Staining Kits

Cell surface staining kits with fluorescent membrane dye plus enhancer for imaging live cell surface for several hours to days.

Product Description

CellBrite® Steady Membrane Staining Kits allow fluorescence imaging of cell surface for up to several days in culture. The CellBrite® Steady Dyes are unique fluorescent membrane probes that distribute between the cell surface and intracellular compartments, so cells retain cell surface staining over time. With the use of CellBrite® Steady Enhancer, intracellular staining can be reduced or eliminated for imaging of cell outlines or boundaries.

- Retained on cell surface, unlike other membrane dyes that are rapidly internalized
- Image live cell surface membranes for 24 hours or longer
- Optional Enhancer masks intracellular signal for selective imaging of cell surface
- Rapid, even staining in complete cell culture medium
- Dye colors from blue to near-IR, with STORM-compatible options

Unlike other membrane/cell surface stains that are rapidly lost from the cell surface by endocytosis after labeling, CellBrite® Steady Dyes equilibrate between intracellular compartments and the plasma membrane. Cells retain surface staining in addition to intracellular staining over the course of hours to days in culture. CellBrite® Steady Enhancer is an optional reagent included in the kits that can be used to mask intracellular fluorescence of CellBrite® Steady Dyes, for more selective visualization of cell boundaries.

Kit Components

Kit sizes are based on 200 uL labeling volume, actual number of labelings may vary based on culture chamber size/staining volume.

- Trial size kit (100 labelings):
  - CellBrite® Steady Dye, 1000X in DMSO, 20 uL
  - CellBrite® Steady Enhancer, 1000X in DMSO, 20 uL
- Full size kit (500 labelings):
  - CellBrite® Steady Dye, 1000X in DMSO, 100 uL
  - CellBrite® Steady Enhancer, 1000X in DMSO, 100 uL

Selecting a CellBrite® Steady Dye

CellBrite® Steady Dyes are available in colors from blue to near-infrared. CellBrite® Steady 550, 650, and 685 fluorophores are compatible with super-resolution imaging by STORM. Masking of intracellular fluorescence by CellBrite® Steady Enhancer tends to show more complete masking of intracellular fluorescence for far-red CellBrite® Steady 650 and CellBrite® Steady 685 dyes.

Tips for Success

Washing after staining is optional for imaging by confocal microscopy, but is required for imaging by epifluorescence. For dyes with fluorescence in the visible range (405, 488, and 550), staining may or may not be visible through the microscope eyepieces without washing, so you may need to use brightfield or another marker to focus on cells initially for no-wash confocal imaging.

CellBrite® Steady Dyes have low toxicity and can be continuously incubated in cell culture medium. Enhancer may be toxic to some cell types, especially at higher concentrations. Enhancer may be incubated together with membrane dyes or added after staining to minimize any potential effect of Enhancer on cells. See the Product Protocol for details.

Find the Right Stain for Your Application

CellBrite® Steady Dyes must be used for staining live cells. They cannot be used to stain cells that are already fixed (the dyes primarily label intracellular membranes in fixed cells). Our original CellBrite® Cytoplasmic Membrane Dyes can be used to stain cells after fixation. To find the right stain for your application, see our Membrane & Cell Surface Stains Comparison, or download our Membrane & Surface Stains Brochure.

Membrane staining with CellBrite® Steady Dyes is retained immediately after fixation with formaldehyde, but does not tolerate methanol or detergent. If cells are stored after formaldehyde fixation, over time the dyes will redistribute to stain cytoplasmic structures. Enhancer does not tolerate fixation; if Enhancer-treated cells are fixed after staining, masking will be lost and intracellular fluorescence will return. For fixable cell surface staining that tolerates permeabilization for immunofluorescence staining, we recommend our CellBrite® Fix Membrane Stains or MemBrite® Fix Cell Surface Staining Kits.

CellBrite® Steady Dyes readily transfer between cells, and are not recommended for cell tracking, co-culture, or transplantation studies. Our stable, non-toxic ViaFluor® SE Cell Proliferation Kits can be used to covalently label cells for long-term tracking by microscopy or flow cytometry. See our Tech Tip: Using ViaFluor® SE Stains for Cell Tracing and Co-Culture to learn more.

CellBrite® Steady Dyes have been validated for labeling of purified extracellular vesicles (EVs) and exosomes. However, our tests have shown CellBrite® Steady to bind non-specifically to bead-bound exosomes. For optimal labeling of both purified and bead-bound exosomes we recommend our ExoBrite™ True EV Membrane Stains. Learn more about our ExoBrite™ stains and validated antibodies for Exosome & EV Labeling.

Watch our video where Technical Applications Scientist II, Jacqueline Steenhuis PhD answers your top questions about Biotium's various membrane stains for fluorescence microscopy.

For additional support or product recommendations, contact us at techsupport@biotium.com.

Product attributes

Probe cellular localization	Membrane/cell surface
For live or fixed cells	For live/intact cells
Assay type/options	Long term staining (24-72h)
Colors	Blue, Green, Red, Far-red, Near-infrared

CellBrite® Steady Membrane Staining Kits

Product	Ex/Em	Laser Line(s) (nm)	Detection Channel	Size	Catalog Number
CellBrite® Steady 405 Membrane Staining Kit	406/428 nm	405	DAPI	100 Labelings	30105-T
500 Labelings	30105				
CellBrite® Steady 488 Membrane Staining Kit	505/529 nm	488	FITC	100 Labelings	30106-T
500 Labelings	30106				
CellBrite® Steady 550 Membrane Staining Kit	562/579 nm	555 or 561	TRITC or Rhodamine	100 Labelings	30107-T
500 Labelings	30107				
CellBrite® Steady 568 Membrane Staining Kit	569/586 nm	555 or 561	Alexa Fluor® 568	100 Labelings	30150-T
500 Labelings	30150				
CellBrite® Steady 594 Membrane Staining Kit	580/615 nm	555, 561, or 594	Texas Red®	100 Labelings	30142-T
500 Labelings	30142				
CellBrite® Steady 650 Membrane Staining Kit	656/676 nm	640	Alexa Fluor® 647	100 Labelings	30108-T
500 Labelings	30108				
CellBrite® Steady 685 Membrane Staining Kit	686/708 nm	685	Alexa Fluor® 680	100 Labelings	30109-T
500 Labelings	30109				
CellBrite® Steady 750 Membrane Staining Kit	755/789 nm	730	Alexa Fluor® 750	100 Labelings	30141-T
500 Labelings	30141				