

## MemBrite® Fix Cell Surface Staining Kits



Wide choice of dye colors for covalent staining the surface of live cells to conveniently visualize cell boundaries in immunofluorescence experiments.

### Product Description

MemBrite® Fix Cell Surface Staining Kits provide a convenient way to visualize cell boundaries in multicolor staining experiments. Staining is rapid and uniform, with a wide choice of colors. MemBrite® Fix dyes covalently label the surface of live cells. The staining withstands fixation and permeabilization for subsequent immunofluorescence staining.

#### Fixable Cell Surface Stains

MemBrite® Fix Stains are novel reactive fluorescent dye stains that react irreversibly with cell surface proteins, for staining that can withstand formaldehyde or alcohol fixation, and detergent permeabilization. Unlike lectins such as WGA, which bind specific targets that may vary between cell types, MemBrite® Fix dyes react widely with cell surface proteins. MemBrite® Fix staining is rapid and non-toxic to cells, and because MemBrite® Fix dyes are highly water soluble, they stain cells much more evenly than traditional lipophilic membrane dyes like DiO, Dil, PKH, Vybrant®, or CellMask™.

MemBrite® Fix staining kits also can be used to stain yeast and gram-positive bacteria, but not gram-negative bacteria. See our [Cellular Stains Table](#) for more information on how our dyes stain various organisms. MemBrite® Fix 405/430 has been validated for staining of extracellular vesicles (EVs) and exosomes.

MemBrite® Fix Staining Kits belong to Biotium's line of novel cell surface stains that include [CellBrite® Fix Membrane Stains](#). CellBrite® Fix Membrane Stains are fluorogenic dyes that rapidly accumulate in the plasma membrane, where they react covalently with the cell surface. CellBrite® Fix stains require only a single staining step compared to MemBrite® Fix staining, which is a two-step protocol. On the other hand, MemBrite® Fix dyes are available with a wider selection of colors. MemBrite® dyes do not associate with lipids in membranes, and consequently have lower cytoplasmic background after detergent permeabilization compared to CellBrite® Fix.

#### Selecting a MemBrite® Fix Dye

Several MemBrite® Fix dyes have been validated in super-resolution imaging applications or 2-photon microscopy. MemBrite® Fix-ST dyes are recommended for super-resolution imaging by STORM. MemBrite® Fix or MemBrite® Fix-ST dyes can be used for standard microscopy applications; however, MemBrite® Fix dyes are generally more photostable than MemBrite® Fix-ST dyes. See the [MemBrite® Fix Product Table](#) below for details.

#### Tips for Success

Note that MemBrite® Fix dye stain dead cell more intensely than live cells. With prolonged dye incubation, or if cells are cultured after staining, the dye also will be internalized by endocytosis, resulting in labeling of intracellular vesicles. Please see our [Tech Tip: Five Steps for Success with Membrane and Surface Stains](#) for tips on staining and imaging (step 5) with MemBrite® Fix.

#### Find the Right Stain for Your Application

MemBrite® Fix dyes must be used to stain live cells before fixation. 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 and permeabilization, see our [Tech Tip: Combining Lipophilic Membrane Dyes with Immunofluorescence](#). To find the right stain for your application, see our [Membrane & Cell Surface Stains Comparison](#), or download our [Membrane & Surface Stains Brochure](#).

MemBrite® Fix dyes are designed to be fixed shortly after staining. With prolonged dye incubation, or if cells are cultured after staining, the dyes will be internalized by endocytosis, resulting in labeling of intracellular vesicles. By 24 hours after staining, most of the dye will be localized inside the cell, not on the cell surface. For long-term visualization of cell boundaries in culture, we recommend our [CellBrite® Steady Membrane Staining Kits](#). These kits include unique fluorescent membrane probes that retain cell surface staining in live cell cultures for 24 hours or longer. The kits also include an optional CellBrite® Steady Enhancer solution which masks intracellular signal for even greater specificity of cell boundaries.

See also our [GlycoLiner™ Cell Surface Glycoprotein Labeling Kits](#) designed for covalent labeling of glycoproteins on the cell surface of live cells. GlycoLiner™ also has significantly less cytoplasmic background in dead cells than CellBrite® Fix or MemBrite® Fix stains, providing easier imaging of cell surfaces.

**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](mailto:techsupport@biotium.com).

#### Product attributes

Probe cellular localization	Membrane/cell surface, Membrane/vesicular
Cell permeability	Membrane impermeant
For live or fixed cells	Covalent & fixable stains, For live/intact cells
Assay type/options	Co-cultures, Long term staining (24-72h)
Colors	Blue, Green, Red, Far-red, Near-infrared
Fixation options	Fix after staining (formaldehyde), Fix after staining (methanol), Permeabilize after staining

## MemBrite® Fix Cell Surface Staining Kits

Catalog number	Size <sup>1</sup>	Dye <sup>2</sup>	Spectrally similar to	Specialized applications
<a href="#">30092-T</a>	100 reactions	MemBrite® Fix 405/430	Alexa Fluor® 405 CellBrite® Blue	SIM exosome staining
<a href="#">30092</a>	500 reactions			
<a href="#">30093-T</a>	100 reactions	MemBrite® Fix 488/515	FITC Alexa Fluor® 488 DiO CellBrite® Green	STED TIRF 2-photon microscopy
<a href="#">30093</a>	500 reactions			
<a href="#">30094-T</a>	100 reactions	MemBrite® Fix 543/560	TAMRA Cy®3 Alexa Fluor® 546 DiI CellBrite® Orange	N/A
<a href="#">30094</a>	500 reactions			
<a href="#">30095-T</a>	100 reactions	MemBrite® Fix 568/580	Alexa Fluor® 568 Rhodamine Red DiI CellBrite® Orange	SIM STORM TIRF
<a href="#">30095</a>	500 reactions			
<a href="#">30096-T</a>	100 reactions	MemBrite® Fix 594/615	Texas Red® Alexa Fluor® 594	2-photon microscopy
<a href="#">30096</a>	500 reactions			
<a href="#">30097-T</a>	100 reactions	MemBrite® Fix 640/660	Cy®5, Alexa Fluor® 647 DiD CellBrite® Red	FLImP SIM TIRF
<a href="#">30097</a>	500 reactions			
<a href="#">30098-T</a>	100 reactions	MemBrite® Fix 660/680	Alexa Fluor® 660	N/A
<a href="#">30098</a>	500 reactions			
<a href="#">30099-T</a>	100 reactions	MemBrite® Fix 680/700	Cy®5.5 Alexa Fluor® 680 IRDye® 680LT CellBrite® NIR 680	STORM <sup>3</sup> Single-molecule imaging STED 2-photon microscopy
<a href="#">30099</a>	500 reactions			
<a href="#">30101-T</a>	100 reactions	MemBrite® Fix-ST 650/665	Cy®5 Alexa Fluor® 647 DiD CellBrite® Red	STORM
<a href="#">30101</a>	500 reactions			
<a href="#">30102-T</a>	100 reactions	MemBrite® Fix-ST 667/685	Alexa Fluor® 660	STORM
<a href="#">30102</a>	500 reactions			
<a href="#">30103-T</a>	100 reactions	MemBrite® Fix-ST 681/698	Cy®5.5 Alexa Fluor® 680 IRDye® 680LT CellBrite® NIR 680	Single-molecule imaging STORM
<a href="#">30103</a>	500 reactions			
<a href="#">30104-T</a>	100 reactions	MemBrite® Fix-ST 755/777	Alexa Fluor® 750 Cy®7 DyLight® 750	STORM
<a href="#">30104</a>	500 reactions			

FLImP: Fluorophore localization imaging with photobleaching; SIM: Structured illumination microscopy; STED: Stimulated emission depletion; STORM: Stochastic optical reconstruction microscopy; TIRF: Total internal reflection fluorescence

1. Kit size based on 200  $\mu$ L reaction volume, actual number of reactions will depends on staining volume used.

2. MemBrite™ Fix dyes are named for their Abs/Em maxima. Download the Product Information Sheet for spectra.

3. MemBrite® Fix-ST 681/698 dye is reported to have better performance in STORM imaging than MemBrite® Fix 680/700 dye.

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Vybrant is a registered trademark and CellMask is a trademark of Thermo Fisher Scientific.

## References

Download a list of curated [CellBrite® and MemBrite® references](#).

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Product link: <https://biotium.com/product/membrite-fix-cell-surface-staining-kits/>