ExoBrite™ True EV Membrane Stains



Lipophilic membrane dyes designed specifically for EV research and the best choice for general pan-EV staining. The dyes are validated to offer higher (near-complete) coverage of EVs with lower aggregation than other membrane dyes like PKH, DiO, and DiI.

Product attributes

Colors	Blue, Green, Red, Far-red
Detection method/readout	fNTA, Flow cytometry

Product Description

Elevate your EV research with ExoBrite™ True EV Membrane Stains. Offering unparalleled coverage and solubility, ExoBrite™ True EV Membrane Stains are genuine lipophilic membrane dyes that set a new standard in pan-EV labeling over classic dyes like PKH or DiO/DiI/DiD for EV staining.

Features

- Lipophilic membrane dyes designed for pan-EV labeling
- Superior alternative to common membrane dyes like PKH, DiO, DiI, DiD
- Near-complete coverage of EVs in a sample
- Broad compatibility with EVs isolated from different sources
- Compatible with antibody co-staining
- Available in 4 colors for Pacific Blue®, FITC, PE, and APC channels

Detect EVs, not dye aggregates

Membrane dyes like PKH, DiO, and DiI, while common tools for labeling EVs, can pose significant challenges when used for EV staining. For example, membrane dyes often have poor solubility and thus form aggregates that can be confused with EVs. ExoBrite™ True EV Membrane Stains were designed specifically to address the issues of membrane dye aggregation while remaining a true lipophilic membrane stain for pan-EV labeling.

ExoBrite™ True EV Membrane Stains are the best choice for general pan-EV staining. They demonstrate higher (near-complete) coverage of EVs over competitor membrane dyes in fluorescence nanoparticle tracking analysis (fNTA). The dyes also offer clear differentiation of EVs from non-specific particles during flow detection. ExoBrite™ True EV Membrane Stains labeled all EV types tested to date (see Validated EV Sources below).

Note: We do not recommend using ExoBrite™ True EV Membrane Stains to stain bead-bound EVs. For bead-bound EVs we recommend using ExoBrite™ CTB EV Stains or ExoBrite™ WGA EV Stains.

Significantly Greater Coverage of EVs Over Other Membrane Dyes Such as PKH, DiO, and DiI

Also view ExoBrite™ CTB, WGA, and Annexin EV Surface Stains

ExoBrite™ EV Surface Stains are fluorescent conjugates of probes for labeling EV membrane surface targets. The stains were designed to offer lower aggregation than competitor membrane dyes and are suitable for detecting bead-bound EVs, unlike ExoBrite™ True EV Membrane Stains and other hydrophobic membrane dyes. ExoBrite™ EV Surface Stains are available as cholera toxin subunit B (CTB), wheat germ agglutinin (WGA), or Annexin V conjugates. Biotium also offers a convenient ExoBrite™ EV Surface Stain Sampler Kit that includes each ExoBrite™ EV Surface Stains (CTB, WGA, and Annexin V) for assessing which stain offers the best coverage for the EV samples of interest.

Note: ExoBrite™ EV Stains have been found to label EVs derived from several tested cell lines (see Validated EV Sources below), but may not stain EVs from every source.

ExoBrite™ True EV Membrane Stains

Product	Ex/Em	Detection Channels	Size	Catalog Number
ExoBrite™ 400/460 True EV Membrane Stain	402/460 nm	Pacific Blue®	100 Labelings	30136-T
			500 Labelings	30136
ExoBrite™ 515/540 True EV Membrane Stain	515/542 nm	FITC	100 Labelings	30129-T
			500 Labelings	30129
ExoBrite™ 555/575 True EV Membrane Stain	556/576 nm	PE	100 Labelings	30130-T
			500 Labelings	30130
ExoBrite™ 645/675 True EV Membrane Stain	644/671 nm	APC	100 Labelings	30137-T
			500 Labelings	30137

Validated EV Sources for ExoBrite™ EV Surface Stains

EV Source	ExoBrite™ True EV Membrane Stains	ExoBrite™ CTB Stains	ExoBrite™ WGA Stains	ExoBrite™ Annexin Stains
A549 cells	Yes	Yes	Yes	Yes
CHO cells	Yes	No	Yes	Yes
hASC (human adipose stem cells)	ND	No[1]	ND	ND
HEK293T cells	ND	Yes[1]	ND	ND
HeLa cells	Yes	No	Yes	Yes
HUVEC (human umbilical vein endothelial cells)	ND	No[1]	ND	ND
J774 cells	Yes	Yes	Yes	Yes
Jurkat cells	Yes	Yes	Yes	Yes
MCF-7 cells	Yes	Yes	Yes	Yes
Plasma	ND	No	ND	Yes
Raji cells	ND	Yes	Yes	Yes
RAW 264.7	Yes	ND	ND	ND
Serum	ND	No	ND	Yes
Skeletal myoblasts	ND	Yes[1]	ND	ND
THP-1	Yes	ND	ND	ND
U2OS cells	Yes	No	Yes	Yes
U937 cells	Yes	No	Yes	Yes
NIH3T3 cells	Yes	ND	ND	ND
HepG2 cells	ND	ND	Yes	ND
Yeast (S. cerevisiae)	Yes	No	Yes	Yes

[1]Customer-reported data
Value of “Yes” or “No” indicates coverage of EVs based on Biotium’s internal data or customer-reported data. Value of “ND” indicates no data.

Biotium also offers other validated ExoBrite™ reagents for flow cytometry, western blotting, or super-resolution imaging.

Learn about ExoBrite™ Antibody Conjugates for optimal detection of CD9, CD63, and CD81 EV markers by flow cytometry and western blotting. For super-resolution imaging by STORM, learn about our ExoBrite™ STORM CTB EV Staining Kits available in four CF® Dyes validated for STORM.

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