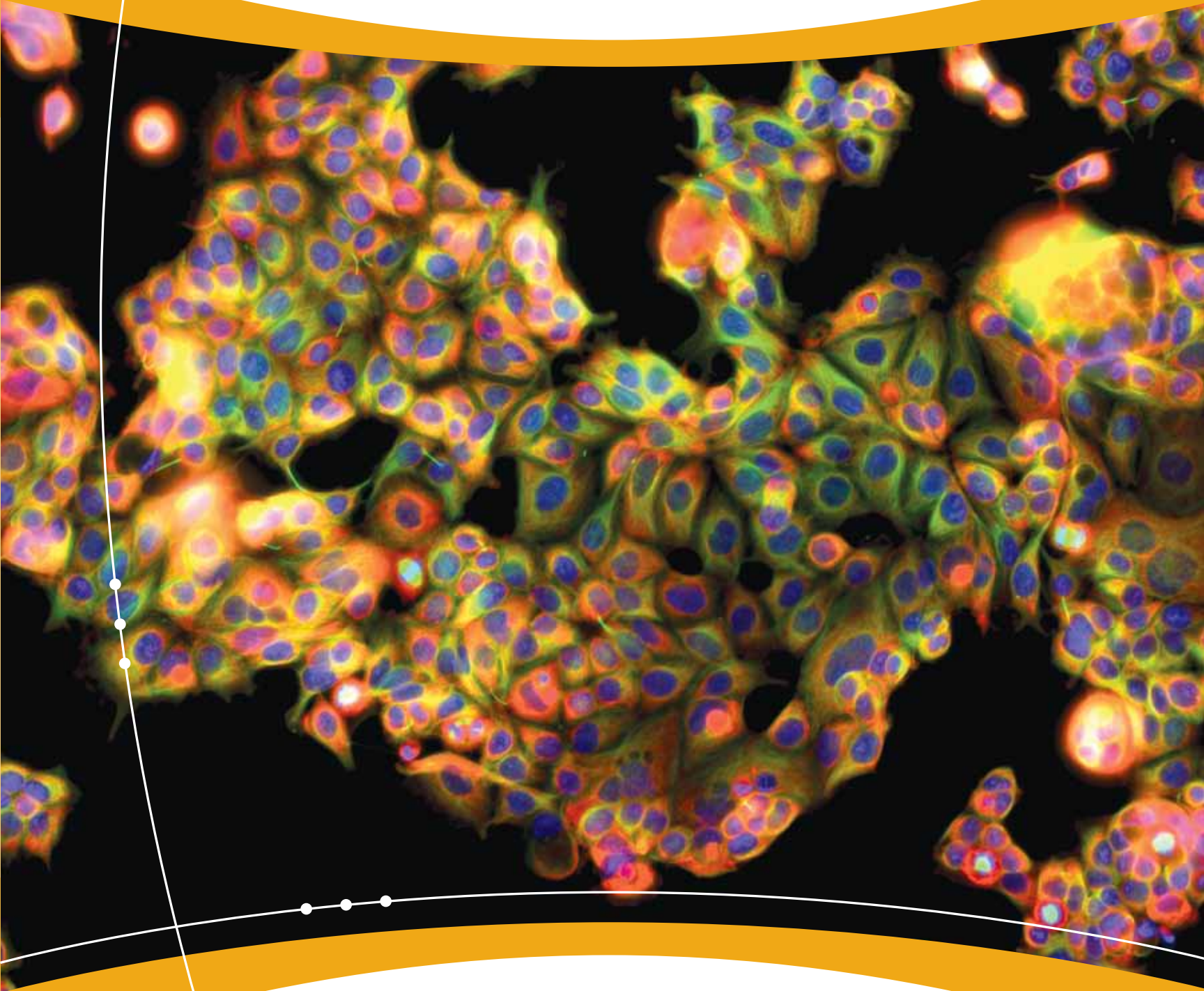
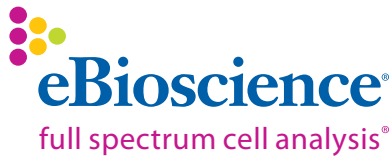


Multicolor Immunofluorescent Imaging

Product Guide





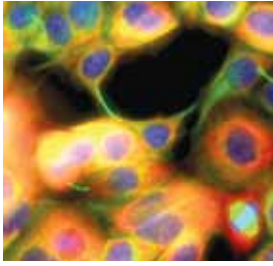
eBioscience is committed to developing and manufacturing high-quality, innovative reagents in an ISO certified facility. As a provider of more than 10,000 products, we empower our customers worldwide to obtain exceptional results by using reagents that offer a new standard of excellence in the areas of innovation, quality and value.

Table of Contents

Multicolor Immunofluorescent Imaging	1
1. Multicolor Fluorescence Imaging	2
Overview	2
Advantages of Direct Conjugates	3
Advantages of Multispectral Imaging.	3
2. Fluorophore-conjugated Antibodies for IHC and ICC	5
eFluor® Nanocrystals	5
eFluor® Nanocrystal Conjugation Kits.	9
eFluor® Organic Dyes	12
Organic Dyes	15
3. Purified Antibodies and Biotin Conjugates for IHC and ICC	17
4. Support Reagents for IHC and ICC	24
Buffers and Solutions	24
Secondary Reagents and Dyes	26
5. Direct Conjugates and Multicolor Imaging for Stem Cell and Cancer Research	30

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

eFluor® is a registered trademark of eBioscience, Inc. Alexa Fluor® is a registered trademark of, and licensed under patents assigned to Molecular Probes, Inc. (Life Technologies). Cy™, including Cy5, Cy5.5 and Cy7, is a trademark of Amersham Biosciences Ltd. (GE Healthcare).



Multicolor Immunofluorescent Imaging

Product Guide

eBioscience offers novel products that employ proprietary technologies optimized for use in flow cytometry, immunofluorescence imaging and other key life science applications. eFluor Organic Dyes have been designed and optimized for use with a variety of existing organic fluorochromes and nanocrystal technologies, including eBioscience's own eFluor Nanocrystals, providing optimal flexibility to researchers when designing multicolor experiments for *in vivo* imaging and microscopy.

eFluor[®] Nanocrystals and Organic Dyes for IHC, ICC and other Fluorescence Imaging Applications

With the introduction of our eFluor brand of fluorophores, including eFluor Nanocrystals and eFluor Organic Dyes, eBioscience offers the widest selection of dyes and fluorometric reagents available.

eFluor[®] Nanocrystals (NC)

- Direct conjugates for multiple applications
- Narrow emission spectra and excellent photostability

eFluor[®] Organic Dyes

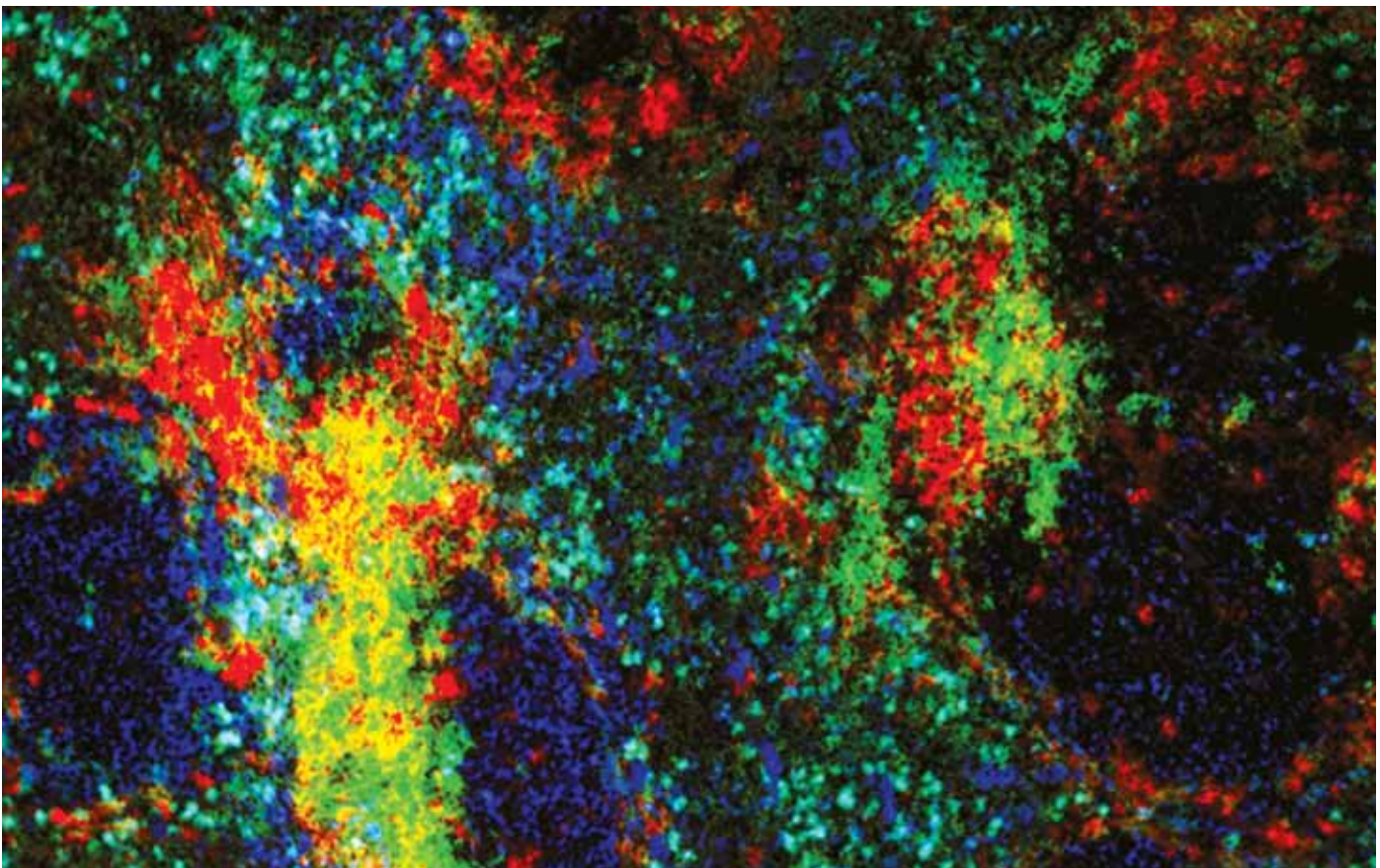
- Direct conjugates for multiple applications
- Robust performance for all work flow scenarios

Multicolor Fluorescence Imaging

- Overview
 - Advantages of Direct Conjugates
 - Advantages of Multispectral Imaging
-

Overview

Antibody-mediated detection of protein antigens in cells and tissues can be achieved with a variety of methods, including western blotting and flow cytometry. Another widely used and particularly exciting way to explore biological systems is through the use of microscopy, in which protein localization within cells (immunocytochemistry) and tissues (immunohistochemistry) can be visualized directly. Immunohistochemistry reveals the abundance, distribution and localization of biomarkers within a tissue. This technique gives insight into cellular structure and cellular mechanisms and as such is applicable for basic research, as well as being indispensable in clinical settings. Target antigens may be evaluated using specific antibodies directly conjugated with enzyme or fluorophores, or indirectly using similarly labeled secondary antibodies and reagents.



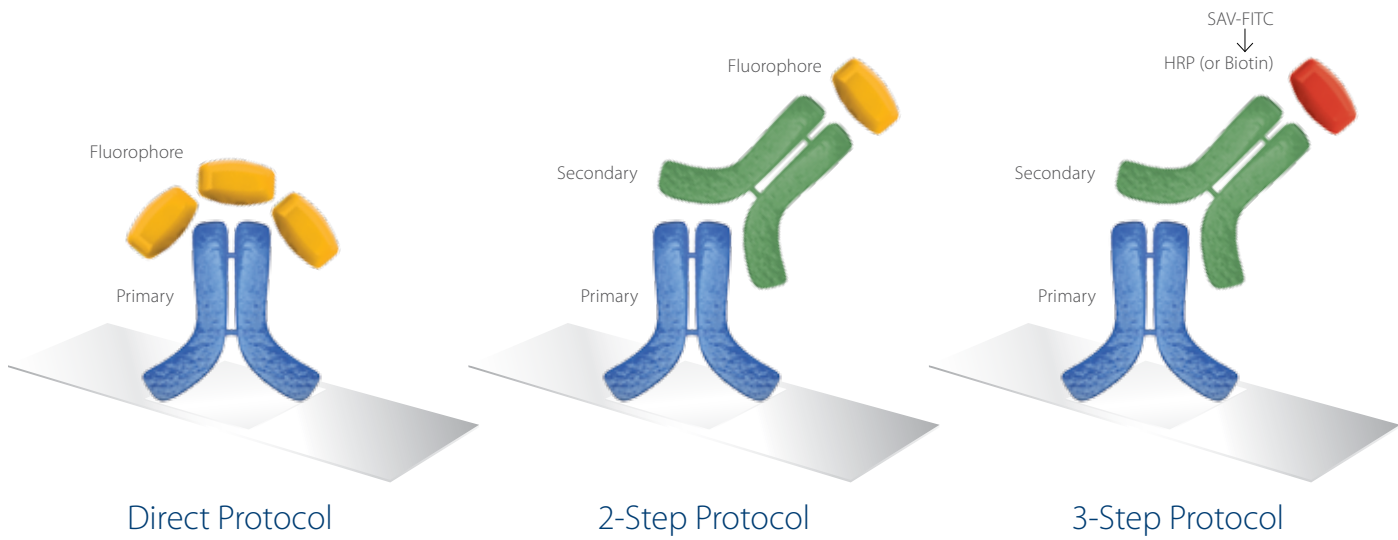
One step staining of immune cell markers highlights the structure / function relationship within splenic tissue.

Mouse spleen stained using Anti-Mouse CD4 eFluor 625NC (green), Anti-Mouse CD11b eFluor 605NC (aqua), Anti-Mouse CD11c eFluor 650NC (red) and Anti-Mouse CD45R (B220) eFluor 525NC (blue). Nuance multispectral imaging systems (Caliper Life Sciences, Woburn, MA).

Advantages of Direct Conjugates

eBioscience is known for the innovative design of new and unique research tools for your applications. We provide a broad offering of antibodies directly conjugated to fluorophores ideal for fluorescence imaging. With our commitment to high-performance and QC-validation in their intended application(s), these direct conjugates enable you to more easily perform multicolor immunostaining.

- **Simpler and faster** – evaluate multiple antigens in one antibody staining step.
- **Cost effective** – no need to use additional secondary antibodies or detection reagents.



Advantages of Multispectral Imaging

Multispectral imaging is ideal for simultaneous evaluation of multiple antigens within a complex tissue, where it is equally critical to be able to distinguish each antigen clearly and accurately. This technology is becoming of central utility for life science research, and is dependent on the availability of validated reagents and fluorescent dyes. The advancement of image capture systems for detection of fluorophores within multiple spectra offers advantages including:

- **Greater efficiency** – evaluate more antigens with fewer slide samples, decreasing the need for serial sections
- **Multiplexing capability** – combine fluorophore-conjugated antibodies with overlapping emission spectra
- **Quantitative** – well-suited for automation, quantitative fluorescence imaging analysis (QFIA) enables high throughput and long term, comparative analysis of samples

Choosing Fluorophores for Multicolor Experiments

Fluorophore Compatibility Table for Multicolor Experiments

	DAPI	FITC GFP Alexa Fluor® 488	TRITC Alexa Fluor® 555	eFluor® 605NC	eFluor® 615 Texas Red Alexa Fluor® 594	eFluor® 625NC	eFluor® 650NC	eFluor® 660 Alexa Fluor® 647 Cy5
DAPI		Yes	Yes	No	Yes	Yes	Yes	Yes
FITC GFP Alexa Fluor® 488	Yes		Yes	Yes	Yes	Yes	Yes	Yes
TRITC Alexa Fluor® 555	Yes	Yes		No	No	No	Yes	Yes
eFluor® 605NC	No	Yes	No		No	Possible with spectral imaging	Yes	Yes
eFluor® 615 Texas Red Alexa Fluor® 594	Yes	Yes	No	No		No	Possible with spectral imaging	Possible with spectral imaging
eFluor® 625NC	Yes	Yes	No	Possible with spectral imaging	No		Possible with spectral imaging	Yes
eFluor® 650NC	Yes	Yes	Yes	Yes	Possible with spectral imaging	Possible with spectral imaging		Yes
eFluor® 660 Alexa Fluor® 647 Cy5	Yes	Yes	Yes	Yes	Possible with spectral imaging	Yes	Yes	

Yes - indicates emission spectra of the two fluorophores can be distinguished using typical/standard filter sets for fluorophores listed (see below).

No - indicates using typical/standard filter sets for the fluorophore listed will not result in adequate discrimination of the two emission spectra. In some cases, using an adapted or optimized filter set or spectral imaging may allow discrimination of overlapping or adjacent emission spectra of fluorophores.

Standard Filter Sets for Fluorophores

Dye	Excitation (nm)	Dichroic	Emission (nm)
DAPI	365/50	400LP	450/65
FITC, GFP, Alexa Fluor® 488	475/40	510LP	535/45
TRITC, Alexa Fluor® 555	546/12	570LP	585/40
eFluor® 605NC	425/45	475LP	600/20
eFluor® 615, Texas Red, Alexa Fluor® 594	560/55	585LP	645/75
eFluor® 625NC	425/45	475LP	620/20
eFluor® 650NC	425/45	475LP	655/20
eFluor® 660, Alexa Fluor® 647, Cy5	620/60	660LP	700/75

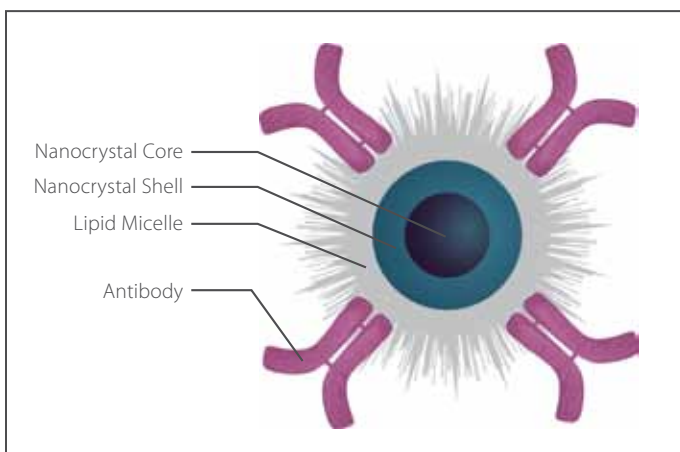
Fluorophore-conjugated Antibodies for IHC and ICC

- eFluor® Nanocrystals
- eFluor® Nanocrystal Conjugation Kits
- eFluor® Organic Dyes
- Organic Dyes

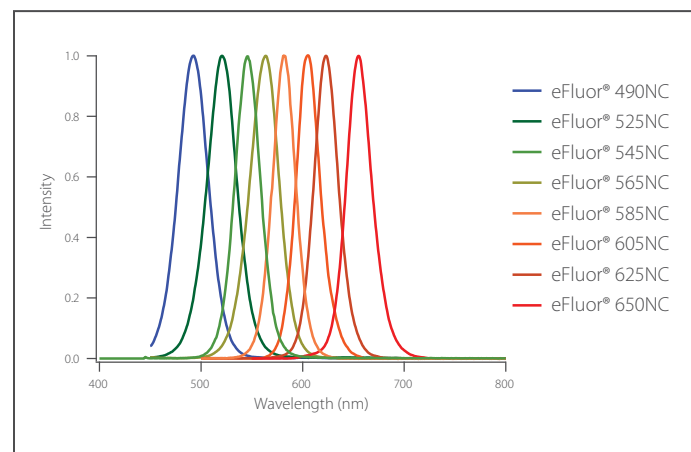
eFluor® Nanocrystals

These high quantum yield nanocrystals are composed of a core particle surrounded by a unique surface coating which reduces background staining and artifacts. eFluor Nanocrystals possess intrinsic spectral properties which allow them to emit light at a distinct wavelength when excited by a single wavelength light source. Using eFluor Nanocrystals for immunofluorescence allows you to take advantage of their inherent photostability as **nanocrystals are resistant to fading, even over long periods of illumination.**

- **Exceptionally photostable** – provides better archival capabilities
- **Narrow emission spectra** – provides increased multiplexing capability
- **Compatible with organic dyes** – maximize the data that can be obtained from a single sample
- **Minimal background** – unique outer coating reduces non-specific binding or background
- **Flexible** – use for staining cultured cells, as well as frozen or paraffin-embedded tissue samples



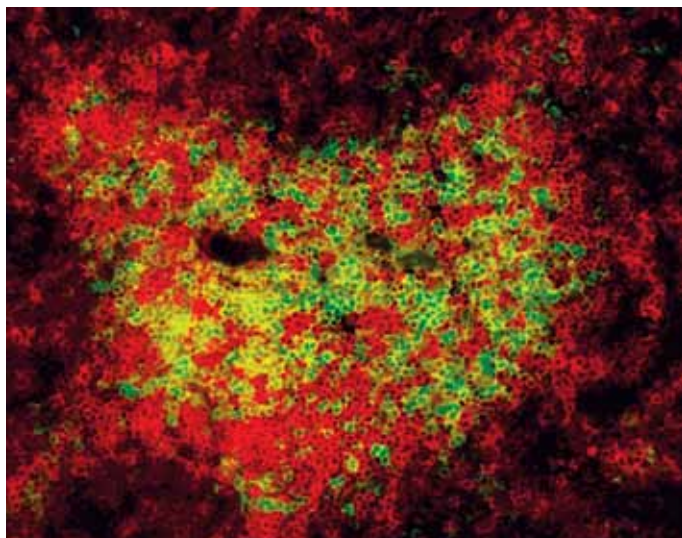
Representation of eFluor® Nanocrystal Antibody Conjugate



Nanocrystal Excitation and Emission Spectra

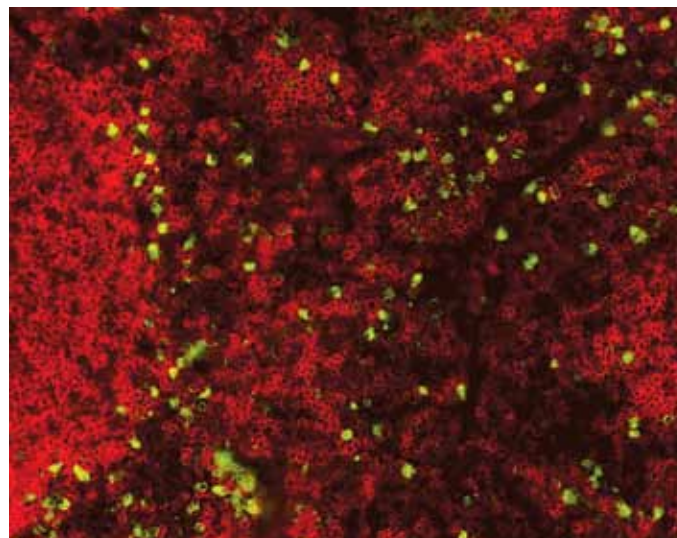
The unique properties of eFluor Nanocrystals result in fluorescent reagents that are excited by a broad range of excitation wavelengths but have narrow emission peaks.

Select eFluor® Nanocrystal-conjugated Antibodies for Immune Cell Phenotyping



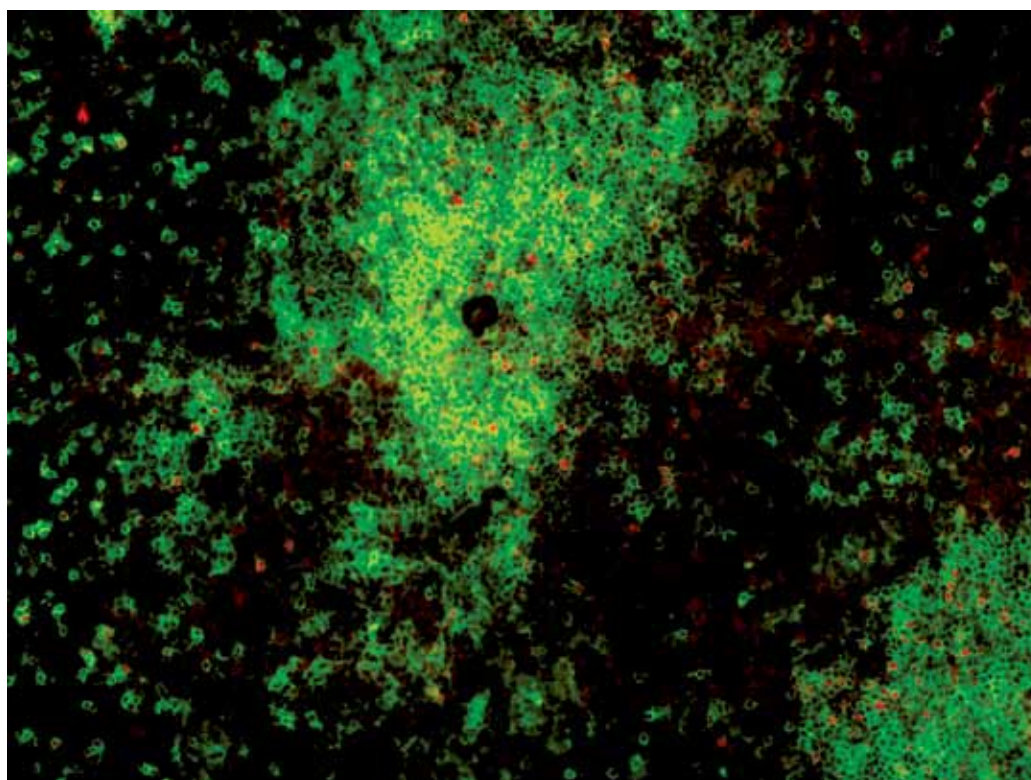
Mouse CD4 eFluor® 625NC and Mouse CD8a eFluor® 565NC

T cell subsets are identified in frozen mouse spleen stained using Anti-Mouse CD4 eFluor 625NC (red; cat. no. IH94-0042) and Anti-Mouse CD8a eFluor 565NC (green; cat. no. IH92-0081).



Mouse CD11b eFluor® 605NC and Human/Mouse CD45R (B220) eFluor® 650NC

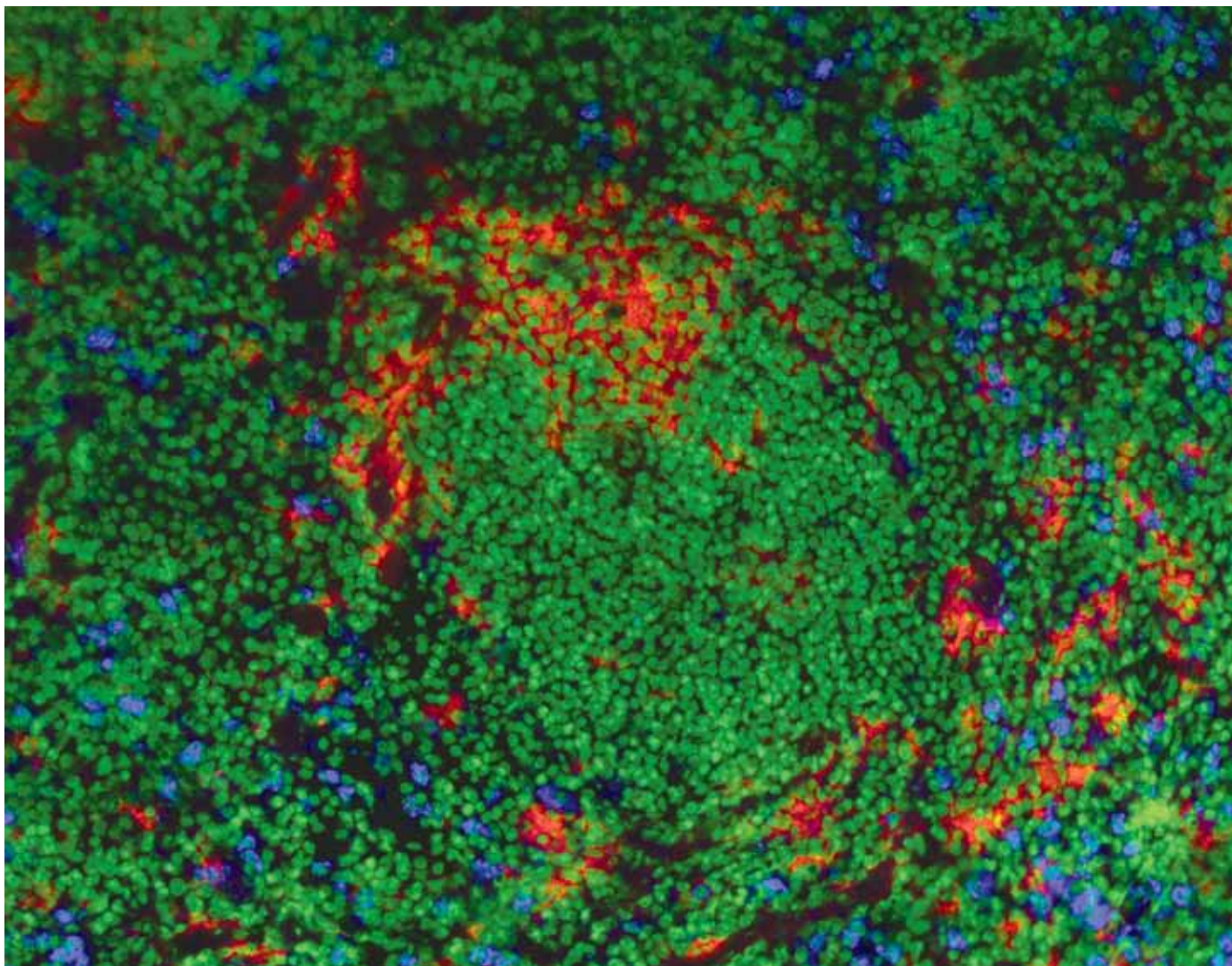
Myeloid cells and B cells are identified in frozen mouse spleen stained using Anti-Mouse C11b eFluor 605NC (green; cat. no. IH93-0112) and Anti-Human/Mouse CD45R (B220) eFluor 650NC (red; cat. no. IH95-0452).



Mouse CD4 eFluor® 605NC and Mouse/Rat Foxp3 eFluor® 650NC

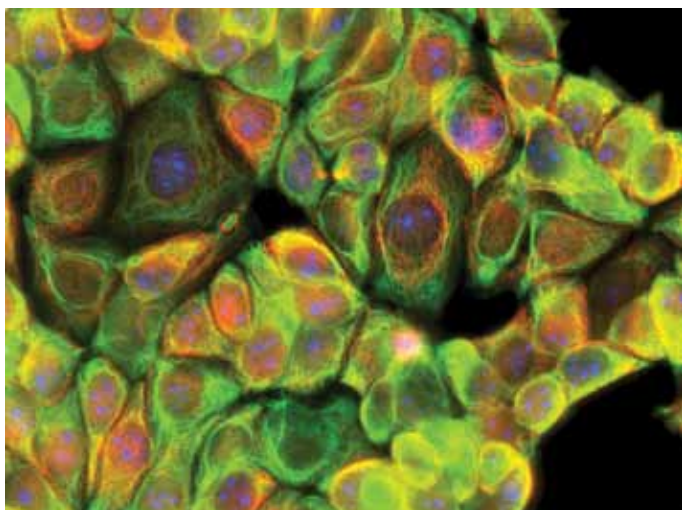
T cells and a subpopulation of regulatory T cells are identified in frozen mouse spleen stained using Anti-Mouse CD4 eFluor 605NC (green; cat. no. IH93-0042) and Anti-Human/Mouse Foxp3 eFluor 650NC (red; cat. no. IH95-5773).

eFluor® Nanocrystals are Fully Compatible with Organic Dyes



Mouse CD11c eFluor® 650NC, CD11b eFluor® 605NC and DRAQ5™

Dendritic cells and myeloid cells are identified in frozen mouse spleen stained using Anti-Mouse CD11c eFluor 650NC (red; cat. no. IH95-0114), Anti-Mouse CD11b eFluor 605NC (blue; cat. no. IH93-0112) and nuclear counterstaining with DRAQ5 (green; cat. no. 65-0880).



Human Cytokeratin eFluor® 605 NC, alpha Tubulin eFluor® 650NC and Ki-67 Alexa Fluor® 647

Fixed and permeabilized MCF-7 cells stained using Anti-Human Cytokeratin eFluor 605NC (green), Anti-alpha Tubulin eFluor 650NC (red; cat. no. IH95-4502) and Anti-Human-Ki-67 Alexa Fluor 647 (blue; cat. no. 51-5699).

eFluor® Nanocrystal-conjugated Antibodies for IHC and ICC

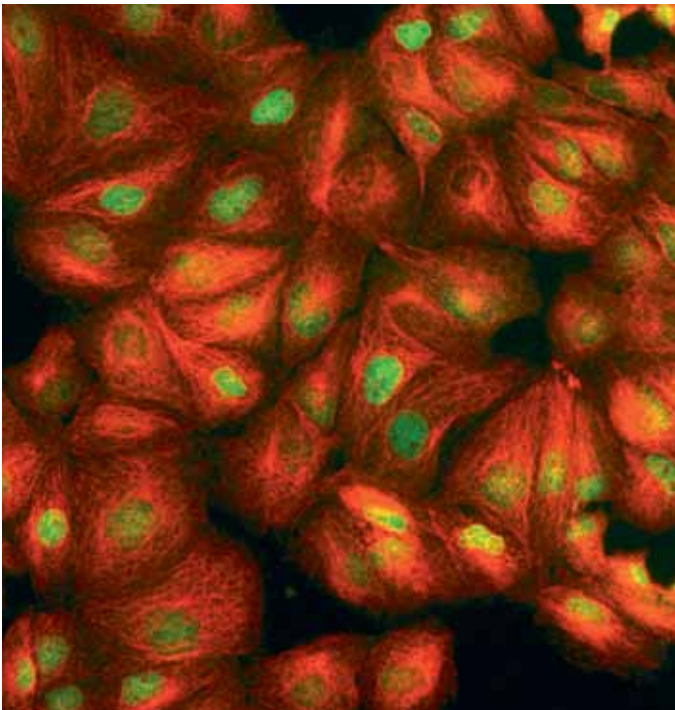
Product Description	Clone	Applications	Cat. No.
Anti-Mouse CD4 eFluor® 605NC (for IHC/ICC)	RM4-5	IHC, ICC	IH93-0042
Anti-Mouse CD4 eFluor® 625NC (for IHC/ICC)	RM4-5	IHC, ICC	IH94-0042
Anti-Mouse CD4 eFluor® 650NC (for IHC/ICC)	RM4-5	IHC, ICC	IH95-0042
Anti-Mouse CD8a eFluor®565NC (for IHC/ICC)	53-6.7	IHC, ICC	IH92-0081
Anti-Mouse CD8a eFluor® 605NC (for IHC/ICC)	53-6.7	IHC, ICC	IH93-0081
Anti-Mouse CD8a eFluor® 625NC (for IHC/ICC)	53-6.7	IHC, ICC	IH94-0081
Anti-Mouse CD8a eFluor® 650NC (for IHC/ICC)	53-6.7	IHC, ICC	IH95-0081
Anti-Mouse CD11b eFluor® 605NC (for IHC/ICC)	M1/70	IHC, ICC	IH93-0112
Anti-Mouse CD11b eFluor® 650NC (for IHC/ICC)	M1/70	IHC, ICC	IH95-0112
Anti-Mouse CD11c eFluor® 625NC (for IHC/ICC)	N418	IHC, ICC	IH94-0114
Anti-Mouse CD11c eFluor® 650NC (for IHC/ICC)	N418	IHC, ICC	IH95-0114
Anti-Mouse CD31 (PECAM-1) eFluor® 605NC (for IHC/ICC)	390	IHC, ICC	IH93-0311
Anti-Mouse CD31 (PECAM-1) eFluor® 650NC (for IHC/ICC)	390	IHC, ICC	IH95-0311
Anti-Human/Mouse CD45R (B220) eFluor® 605NC (for IHC/ICC)	RA3-6B2	IHC, ICC	IH93-0452
Anti-Human/Mouse CD45R (B220) eFluor® 650NC (for IHC/ICC)	RA3-6B2	IHC, ICC	IH95-0452
Anti-Mouse CD106 (VCAM-1) eFluor® 605NC (for IHC/ICC)	429	IHC, ICC	IH93-1061
Anti-Mouse/Rat Foxp3 eFluor® 605NC (for IHC/ICC)	FJK-16s	IHC, ICC	IH93-5773
Anti-Mouse/Rat Foxp3 eFluor® 650NC (for IHC/ICC)	FJK-16s	IHC, ICC	IH95-5773
Anti-Mouse Ly-6G (Gr-1) eFluor® 625NC (for IHC/ICC)	RB6-8C5	IHC, ICC	IH94-5931
Anti-alpha Tubulin eFluor® 605NC (for IHC/ICC)	DM1A	IHC, ICC	IH93-4502
Anti-alpha Tubulin eFluor® 625NC (for IHC/ICC)	DM1A	IHC, ICC	IH94-4502
Anti-alpha Tubulin eFluor® 650NC (for IHC/ICC)	DM1A	IHC, ICC	IH95-4502

 New products are launched regularly. **Discover more at www.eBioscience.com.**

eFluor® Nanocrystal Conjugation Kits

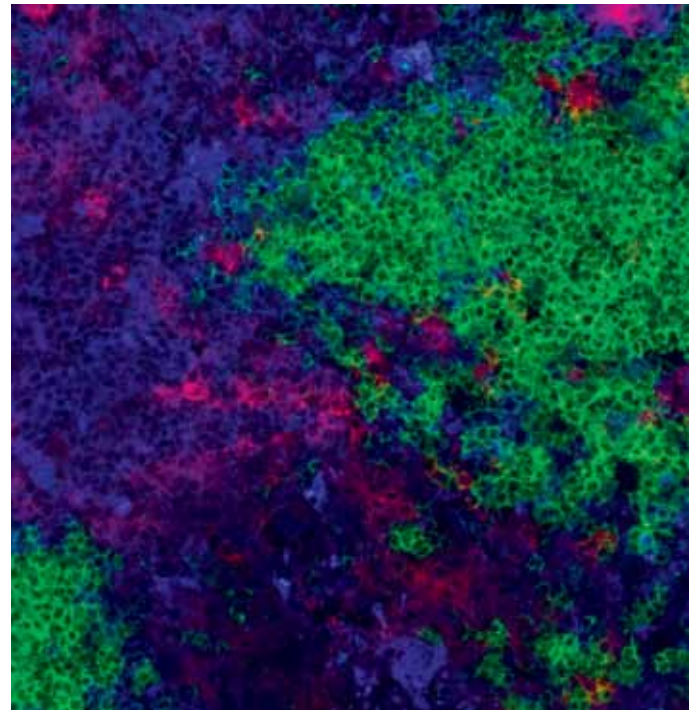
eBioscience recognizes that many life science laboratories develop their own unique or specialized antibodies and proteins, where a simple, easy-to-use method for generating fluorophore-conjugated proteins would be ideal. We have used our expertise in manufacturing quality, fluorophore-conjugated antibodies to create eFluor Nanocrystal Conjugation Kits, allowing you to conjugate eFluor Nanocrystals to free amine (-NH₂) groups present in your protein of interest.

- **Flexible** – use in multiple fluorescence applications such as flow cytometry and fluorescence imaging
- **Easy to perform** – optimized to deliver a complete, simple protocol for antibody conjugation
- **Fast** – under 30 minutes “hands on” time
- **Complete** – all key reagents are included, as well as detailed and simply-stated instructions for use
- **Optimized** – developed for antibody labeling; also suitable for labeling other types of proteins (MW 30-150 kDa)



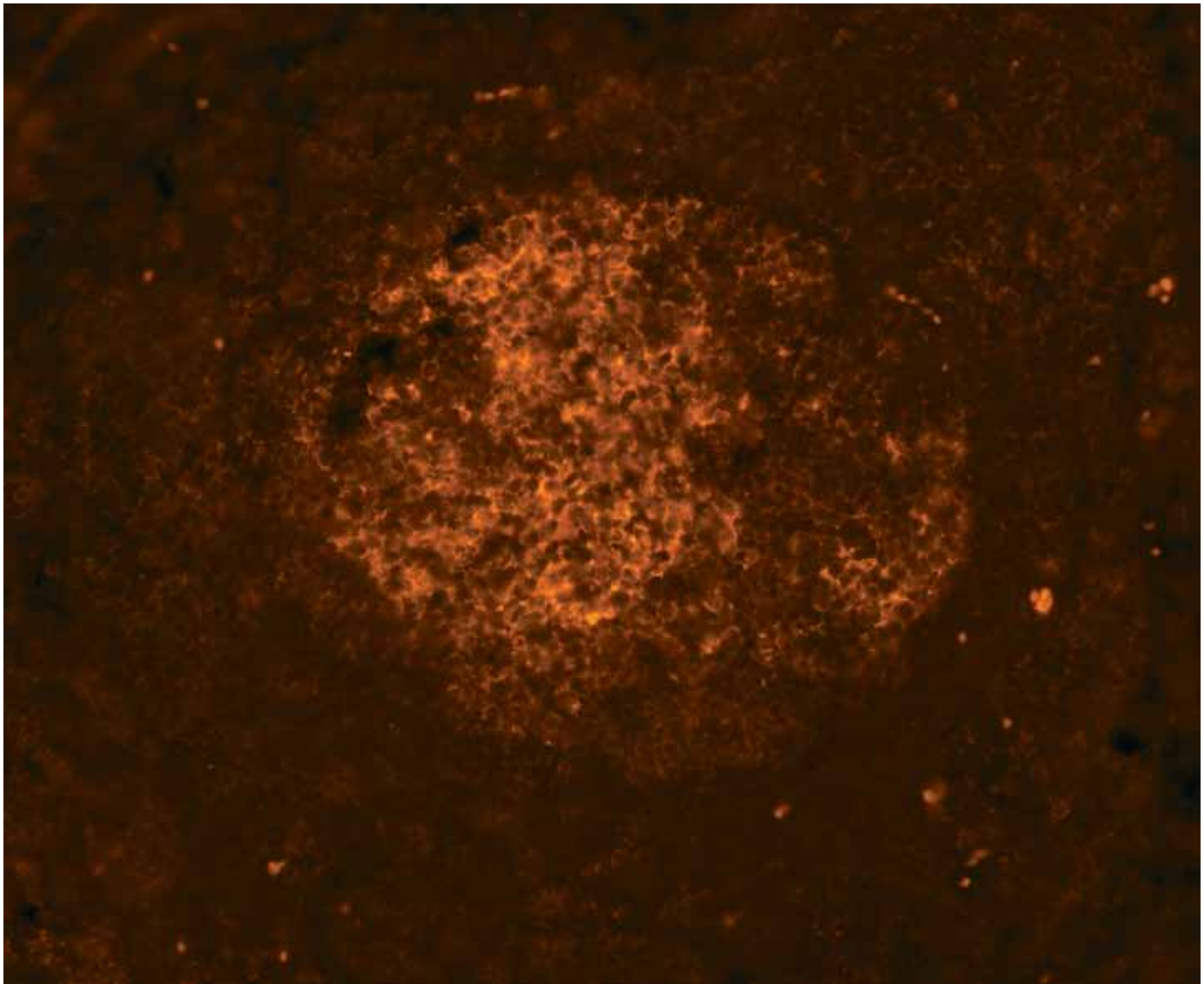
eFluor® Nanocrystal Conjugation of a Polyclonal Antibody

MDCK cells were fixed, permeabilized and stained with polyclonal Rabbit Anti-Histone H3 eFluor 605NC (green) conjugated using the eFluor 605 Nanocrystal Conjugation Kit – Amine Reactive (cat. no. 88-7071). Anti-alpha Tubulin eFluor 650NC (red; cat. no. 1H95-4502) staining is also shown.



eFluor® Nanocrystal-conjugated Antibodies for IHC on Frozen Tissue

Frozen mouse spleen stained with Anti-Mouse CD4 eFluor 605NC (blue) and Anti-Mouse CD11c eFluor 650NC (red) antibodies conjugated using the eFluor Nanocrystal Conjugation Kit - Amine Reactive. Anti-Human/Mouse CD45R (B220) Alexa Fluor 488 staining is shown in green.



eFluor® Nanocrystal-conjugated Antibodies for IHC on Formalin-fixed, Paraffin-embedded Tissue (FFPE)

Staining of a lymphoid follicle in FFPE human tonsil tissue using Anti-Human CD20 (clone L26) eFluor 605NC antibody conjugated using the eFluor Nanocrystal Conjugation Kit – Amine Reactive (cat. no. 88-7071).

Product Ordering Information

Product	Size	Fluorophore	Application Notes	Cat. No.
eFluor® Nanocrystal Conjugation Kit – Amine Reactive	Suitable for performing two protein / antibody conjugations	eFluor® 605NC	Conjugation to biomolecules containing primary amines (-NH ₂) Use labeled products for Immunocytochemistry, Immunohistochemistry, or Flow Cytometry	88-7071-98
eFluor® Nanocrystal Conjugation Kit – Amine Reactive	Suitable for performing two protein / antibody conjugations	eFluor® 650NC	Conjugation to biomolecules containing primary amines (-NH ₂) Use labeled products for Immunocytochemistry, Immunohistochemistry, or Flow Cytometry	88-7072-98

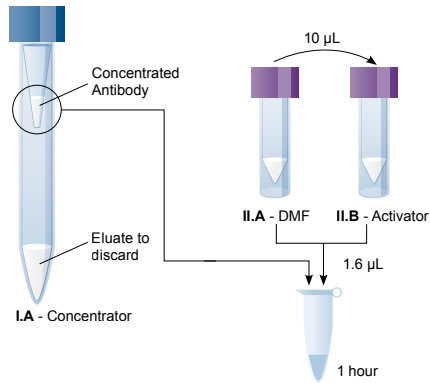
 New products are launched regularly. **Discover more at www.eBioscience.com.**

Simple 5-Step Protocol

Compare to other conjugation kits requiring over 10 steps!

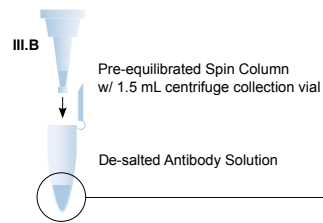
Step 1.

Amine-Group Activation of Sample



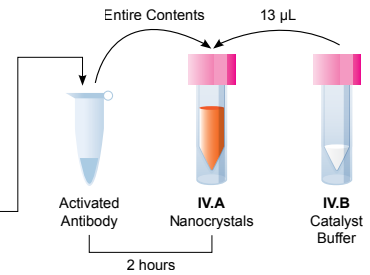
Step 2.

De-Salting of Activated Antibody



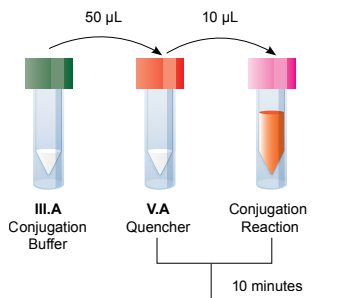
Step 3.

Conjugation of Activated Antibody to eFluor® Nanocrystal



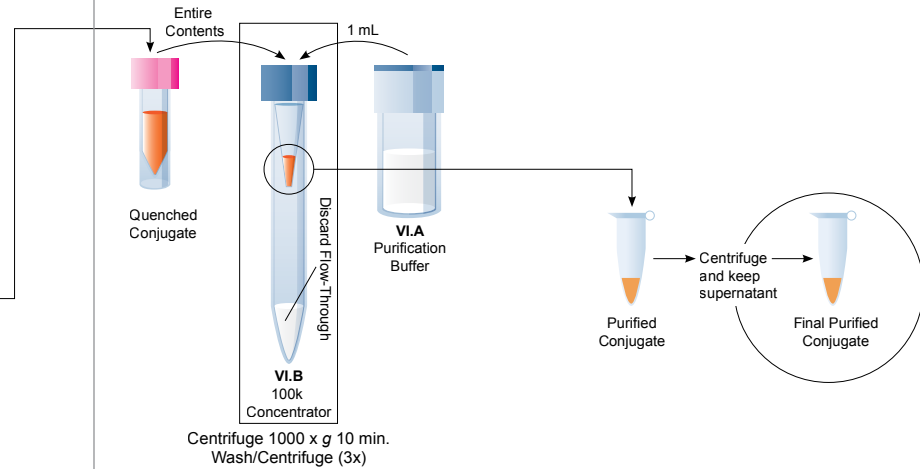
Step 4.

Quenching the Conjugation Reaction



Step 5.

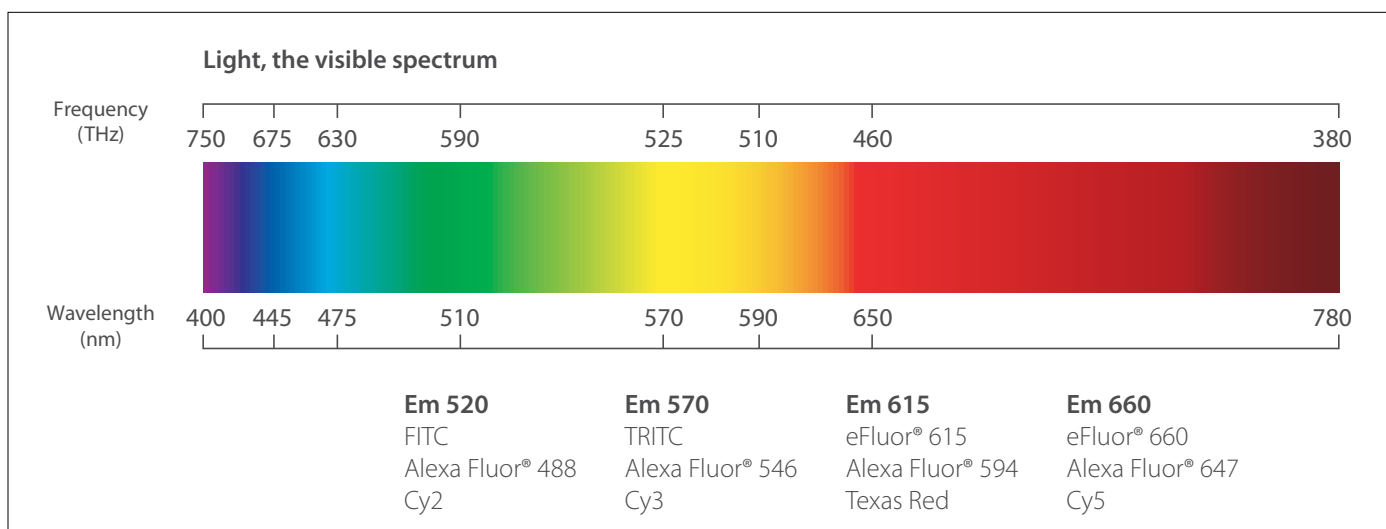
Purification of the eFluor® Nanocrystal Conjugate



Hands on time: < 25 min
Total Protocol: < 5 hr

eFluor® Organic Dyes

eBioscience offers many organic fluorescent dyes suitable for immunofluorescence imaging, including our own eFluor organic dyes. Each eFluor dye is named according to its peak emission, rather than excitation, enabling users to quickly understand the emission filter that will be needed for visualization. eFluor organic dyes are fully compatible with eFluor Nanocrystals as well as all conventional dyes, making them an ideal addition to your multicolor staining protocols.



Fluorophore Compatibility Table for Multicolor Experiments

	DAPI	FITC GFP Alexa Fluor® 488	TRITC Alexa Fluor® 555	eFluor® 615 Texas Red Alexa Fluor® 594	eFluor® 660 Alexa Fluor® 647 Cy5
DAPI		Yes	Yes	Yes	Yes
FITC GFP Alexa Fluor® 488	Yes		Yes	Yes	Yes
TRITC Alexa Fluor® 555	Yes	Yes		No	Yes
eFluor® 615 Texas Red Alexa Fluor® 594	Yes	Yes	No		Possible with spectral imaging
eFluor® 660 Alexa Fluor® 647 Cy5	Yes	Yes	Yes	Possible with spectral imaging	

Yes - indicates emission spectra of the two fluorophores can be distinguished using typical/standard filter sets for fluorophores listed (page 13).

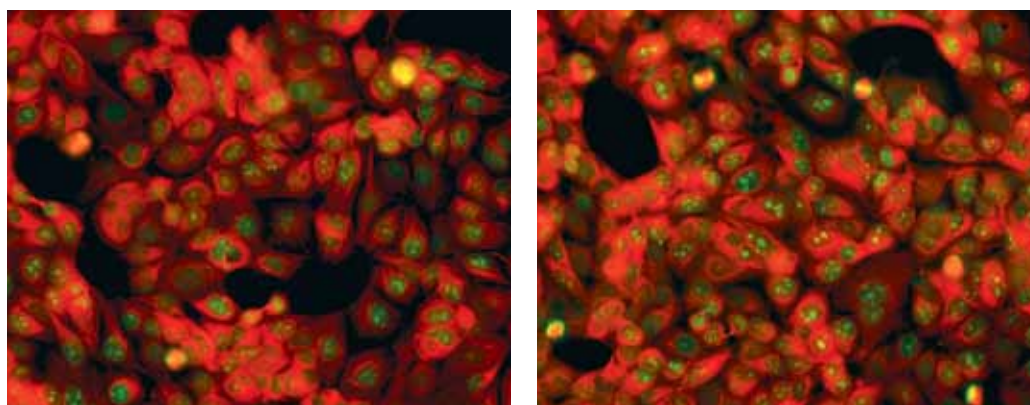
No - indicates using typical/standard filter sets for the fluorophore listed will not result in adequate discrimination of the two emission spectra. In some cases, using an adapted or optimized filter set or spectral imaging may allow discrimination of overlapping or adjacent emission spectra of fluorophores.

Standard Filter Sets for Fluorophores

Dye	Excitation (nm)	Dichroic	Emission (nm)
DAPI	365/50	400LP	450/65
FITC, GFP or Alexa Fluor® 488	475/40	510LP	535/45
TRITC, Alexa Fluor® 555	546/12	570LP	585/40
eFluor® 615, Texas Red, Alexa Fluor® 594	560/55	585LP	645/75
eFluor® 660, Alexa Fluor® 647, Cy5	620/60	660LP	700/75

eFluor® 615

Designed for fluorescence imaging; offering excellent resolution and photostability

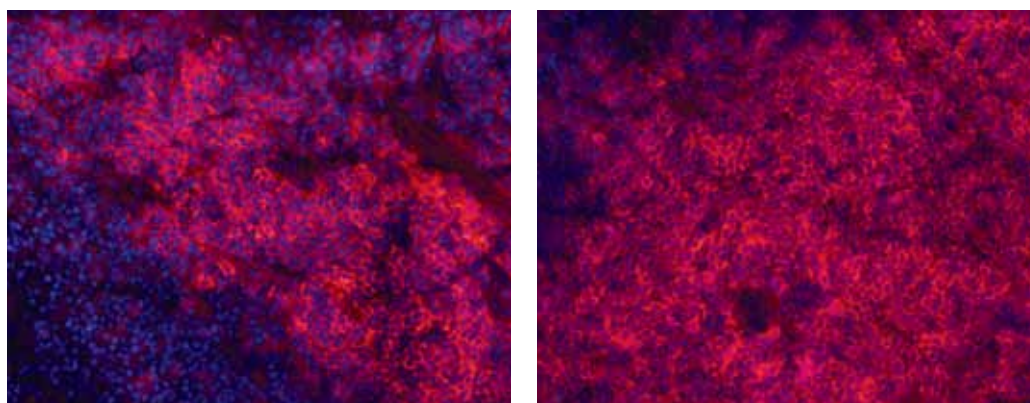


Comparison of Anti-alpha Tubulin eFluor® 615 and Anti-alpha Tubulin Alexa Fluor® 594

MCF-7 cells fixed, permeabilized and stained with Anti-Human Ki-67 FITC (cat. no. 11-5699; 1 µg/mL) and Anti-alpha Tubulin eFluor 615 (left, 342ms; cat. no. 42-4502) or Anti-alpha Tubulin Alexa Fluor 594 (right, 119ms). When using eFluor 615 antibody conjugates, we recommend a filter that will capture the 615 emission wavelength (for example, Excitation 560/55, 585LP, Emission 645/75). A standard Alexa Fluor 594 filter is acceptable.

eFluor® 660

Excellent specificity and photostability; use in place of Alexa Fluor® 647



Comparison of Anti-Mouse CD4 eFluor® 660 and Anti-Mouse CD4 Alexa Fluor® 647

Direct conjugate staining of frozen mouse spleen section using Anti-Mouse CD4 eFluor 660 (left, 729ms; cat. no. 50-0041) or Anti-Mouse CD4 Alexa Fluor 647 (right, 1225ms). Each antibody was used at 10 µg/mL and nuclei were stained with DAPI.

eFluor® Organic Dye-conjugated Antibodies for IHC and ICC

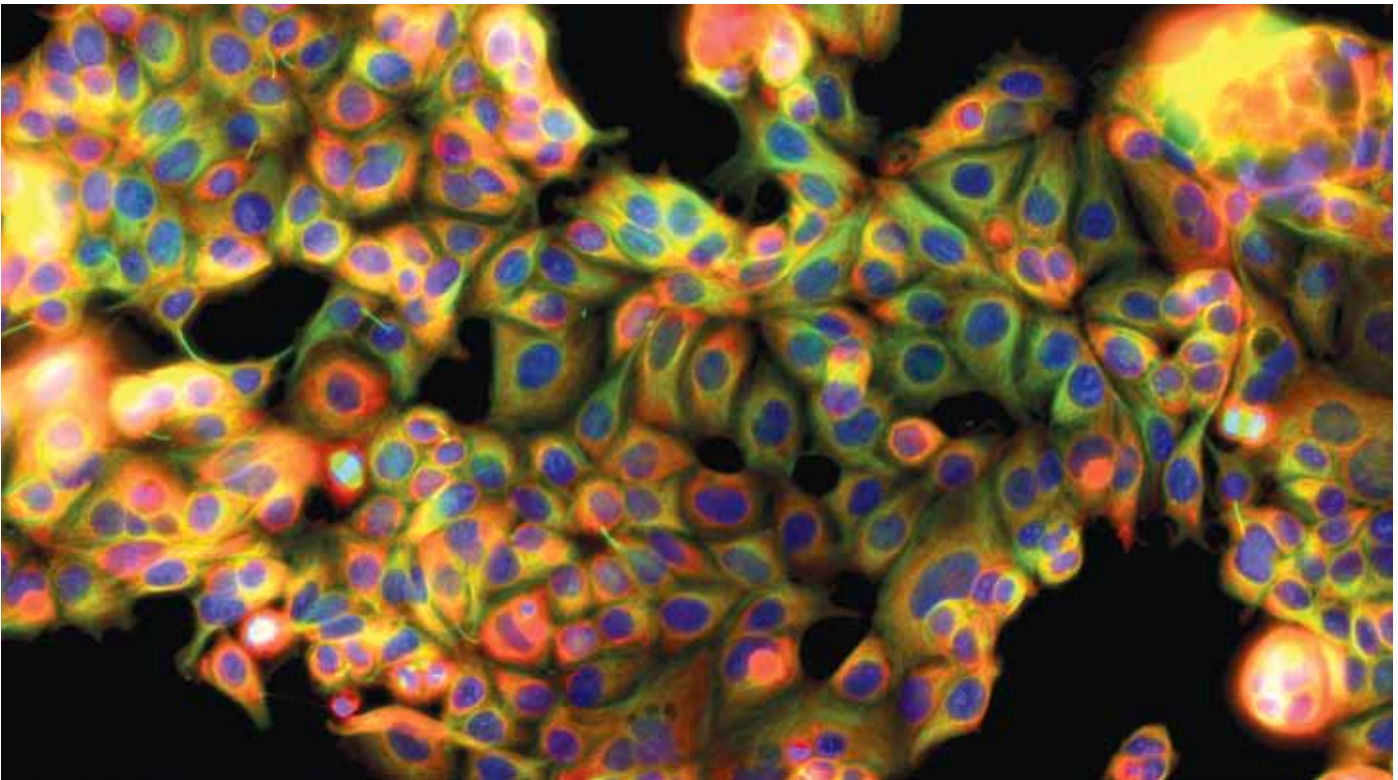
Product Description	Clone	Applications	Cat. No.
Anti-Mouse CD4 eFluor® 615	Rm4-5	IHC, ICC	42-0042
Anti-Mouse CD8a eFluor® 615	53-6.7	IHC, ICC	42-0081
Anti-Mouse CD11c eFluor® 615	N418	IHC, ICC	42-0114
Anti-Human CD15 eFluor® 615	HI98	IHC, ICC	42-0159
Anti-Human CD20 eFluor® 615	L26	IHC, ICC	42-0202
Anti-Human/Mouse CD45R (B220) eFluor® 615	RA3-6B2	IHC, ICC	42-0452
Anti-Human CD227 (Mucin 1) eFluor® 615	SM3	IHC, ICC	42-9893
Anti-Human Cytokeratin 7 eFluor® 615	LP5K	IHC, ICC	42-9005
Anti-Human Cytokeratin 8 eFluor® 615	LP3K	IHC, ICC	42-9938
Anti-Human Cytokeratin 19 eFluor® 615	BA17	IHC, ICC	42-9898
Anti-Pan Cytokeratin (AE1/AE3) eFluor® 615	AE1/AE3	IHC, ICC	42-9003
Anti-Mouse/Rat Foxp3 eFluor® 615	FJK-16s	IHC, ICC	42-5773
Anti-Glial Fibrillary Acidic Protein (GFAP) eFluor® 615	GA5	IHC, ICC	42-9892
Anti-HMGB1 eFluor® 615	Polyclonal	IHC, ICC	42-9900
Anti-Human Ki-67 eFluor® 450	20Raj1	FC	48-5699
Anti-Human Ki-67 eFluor® 615	20Raj1	IHC, ICC	42-5699
Anti-Mouse Lyve-1 eFluor® 615	ALY7	IHC, ICC	42-0443
Anti-Mouse Lyve-1 eFluor® 660	ALY7	FC, IHC	50-0443
Anti-Human PCNA eFluor® 615	PC10 (a.k.a. 3F81)	IHC, ICC	42-9910
Anti-Human Synaptophysin eFluor® 615	EP10	IHC, ICC	42-6525
Anti-alpha Tubulin eFluor® 615	DMIA	IHC, ICC	42-4502
Anti-Vimentin eFluor® 615	V9	ICC	42-9897
Anti-Mouse IgM eFluor® 615	II/41	IHC, ICC	42-5790
Mouse IgG1 K Isotype Control eFluor® 615	P3.6.2.1	IHC, ICC	42-4714
Mouse IgG1 K Isotype Control eFluor® 660	P3.6.2.1	FC, IHC	50-4714
Mouse IgG2b K Isotype Control eFluor® 615	eBMG2b	IHC, ICC	42-4732
Mouse IgM Isotype Control eFluor® 660	11E10	FC, IHC, ICC	50-4752
Rat IgG2a Isotype Control eFluor® 615	eBR2a	IHC, ICC	42-4321
Armenian Hamster IgG Isotype Control eFluor® 615	eBio299Arm	IHC, ICC	42-4888
Mouse IgG2a Isotype Control eFluor® 615	eBM2a	IHC, ICC	42-4724

 New products are launched regularly. **Discover more at www.eBioscience.com.**

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

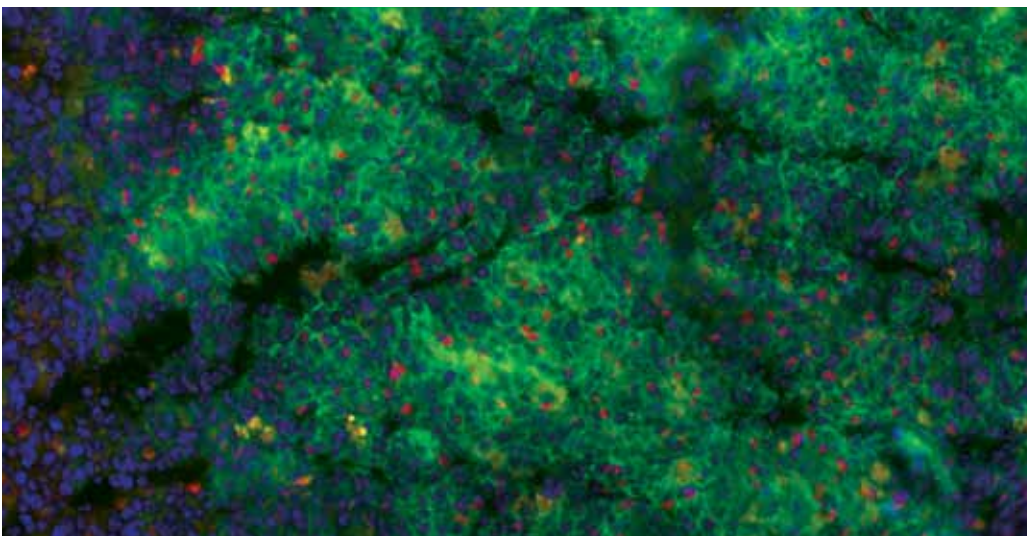
Organic Dyes

eBioscience is proud to support applications including immunohistochemistry and immunocytochemistry for a variety of antibodies conjugated to organic dyes. Choose products for mouse and human targets for key areas of research including **immunology**, **cancer biology** and **stem cell research**.



alpha Tubulin Alexa Fluor® 488, Cytokeratin 8 eFluor® 615, and DAPI

Multicolor staining of fixed, permeabilized MCF-7 cells using Anti-alpha Tubulin Alexa Fluor 488 (green; cat. no. 53-4502), Anti-Human Cytokeratin 8 eFluor 615 (red; cat. no. 42-9938) and DAPI (blue).



CD4 FITC and Foxp3 eFluor® 615

Multicolor staining of frozen mouse spleen identifies T cells and a subpopulation of regulatory T cells using Anti-Mouse CD4 FITC (green; cat. no.11-0042), Anti-Mouse Foxp3 eFluor 615 (red; cat. no. 42-5773) and DAPI (blue).

Organic Dye-conjugated Antibodies for IHC and ICC

Name	Clone	Application	Cat. No.
Anti-Mouse AIRE Alexa Fluor® 647	5H12	FC, IHC	51-5934
Anti-Human CD1c FITC	L161	FC, IHC, IP	11-0015
Anti-Human CD20 Alexa Fluor® 488	L26	IHC, IP	53-0202
Anti-Human CD23 FITC	EBVCS2	FC, IHC	11-0238
Anti-Mouse CD102 (ICAM-2) Alexa Fluor® 488	3C4 (mIC2/4)	FC, IHC	53-1021
Anti-Human CD104 (Integrin beta 4) Alexa Fluor® 647	439-9B	FC, IHC	51-1049
Anti-Human CD134 (OX40) FITC	ACT35 (ACT-35)	FC, IHC	11-1347
Anti-Mouse CD144 (VE-Cadherin) Alexa Fluor® 488	BV13	FC, IHC	53-1441
Anti-CD324 (E-Cadherin) Alexa Fluor® 488	DECMA-1	FC, ICC, IHC	53-3249
Anti-Human Chorionic Gonadotropin Alexa Fluor® 488	FB12	ICC, IHC	53-6508
Anti-Human Collagen Type IV Alexa Fluor® 647	1042	IHC	51-9871
Anti-Pan-Cytokeratin (AE1/AE3) Alexa Fluor® 488	AE1/AE3	ICC, IHC	53-9003
Anti-Human Cytokeratin 8 FITC	LP3K	ICC, IHC	11-9938
Anti-Human Cytokeratin 19 FITC	BA17	ICC, IHC	11-9898
Anti-Human/Mouse High Endothelial Venule Marker Alexa Fluor® 488	MECA-79	FC, IHC	53-6036
Anti-Human Foxp3 FITC	PCH101	FC, IHC	11-4776
Anti-Human Foxp3 Alexa Fluor® 488	236A/E7	FC, IHC	53-4777
Anti-Mouse/Rat Foxp3 FITC	FJK-16s	FC, IHC	11-5773
Anti-Glial Fibrillary Acidic Protein (GFAP) Alexa Fluor® 488	GA5 (GA-5, G-A-5)	FC, ICC, IHC	53-9892
Anti-Grim-19 FITC	1A8	ICC, IHC	11-9937
Anti-Human Ki-67 FITC	20Raj1	FC, ICC, IHC	11-5699
Anti-Human Ki-67 Alexa Fluor® 647	20Raj1	FC, ICC, IHC	51-5699
Anti-Mouse/Rat Ki-67 Alexa Fluor® 647	SolA15	FC, ICC, IHC	51-5698
Anti-Mouse Lyve-1 Alexa Fluor® 488	ALY7	FC, IHC	53-0443
Anti-Human Nestin Alexa Fluor® 488	10C2	ICC, IHC	53-9843
Anti-Human Neural/Glial Antigen 2 (NG2) Alexa Fluor® 488	9.2.27	FC, ICC, IHC	53-6504
Anti-Human/Mouse OCT3/4 Alexa Fluor® 647	EM92	FC, IHC, ICC	51-5841
Anti-Oligodendrocyte Marker O1 Alexa Fluor® 647	O1	FC, ICC, IHC	51-6506
Anti-Human PDX1 Alexa Fluor® 647	2A12	ICC, IHC	51-6500
Anti-Human Perforin FITC	dG9 (delta G9)	FC, IHC	11-9994
Anti-Human Placental Alkaline Phosphatase Alexa Fluor® 647	8B6	IHC	51-9870
Anti-Human Pokemon (LRF) Alexa Fluor® 647	13E9	ICC, IHC	51-3309
Anti-Smooth Muscle Myosin Alexa Fluor® 647	SMMS-1	ICC, IHC	51-6400
Anti-Human Synaptophysin Alexa Fluor® 647	EP10	ICC, IHC	51-6525
Anti-Human Trop2 (EGP-1) Alexa Fluor® 488	MR54	FC, ICC, IHC	53-6024
Anti-alpha Tubulin Alexa Fluor® 488	DM1A	ICC, IHC	53-4502

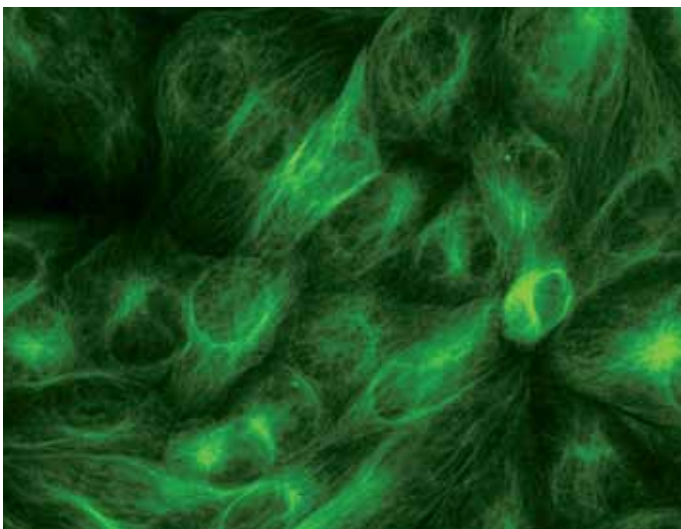
 New products are launched regularly. **Discover more at www.eBioscience.com.**

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

Purified Antibodies and Biotin Conjugates for IHC and ICC

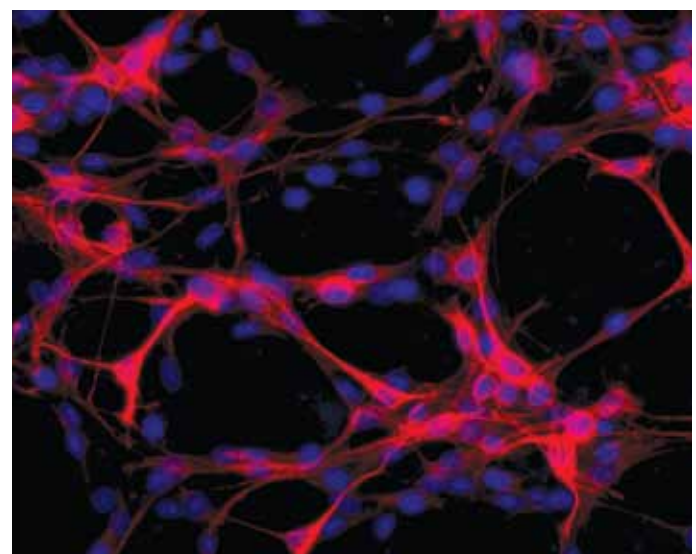
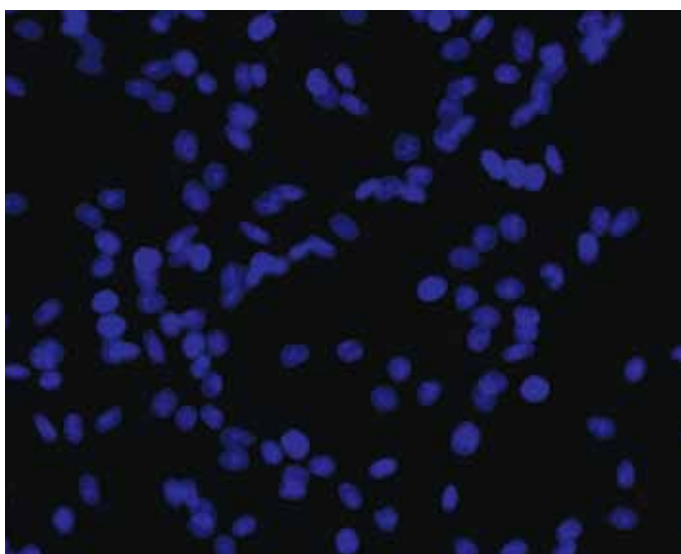
eBioscience specializes in quality antibodies against human, mouse and rat targets for immunology, cancer biology and stem cell research. Antibodies that are published and tested for use in microscopy are available in a variety of formats suitable for 2- and 3-step staining. Choosing these reagents in their purified (unconjugated) or biotin formats offers these advantages:

- **Flexibility** – may be used with a variety of detection reagents, choose the second step reagent to suit your experiment
- **Signal Amplification** – useful for low-abundance antigens



2-Step Immunostaining with alpha Tubulin Biotin-conjugated Antibody

MDCK cells were fixed, permeabilized and stained using Anti-alpha Tubulin Biotin (cat. no. 13-4502) followed by Streptavidin FITC (cat. no. 11-4317).



2-Step Immunostaining with Glial Fibrillary Acid Protein (GFAP) Purified Antibody

C6 glioma cells were fixed, permeabilized and stained using Mouse IgG1 Isotype Control (left) or Anti-GFAP (right; cat. no. 14-9892) followed by Anti-Mouse TRITC. Nuclei are counterstained with DAPI.

Antibodies for IHC and ICC

Name	Clone	Application	Cat. No.
Anti-Actin (muscle) Purified	HHF35	IHC, WB	14-6496
Anti-Human/Mouse Activation-Induced Cytidine Deaminase (AID) Purified	mAID-2	IHC, WB	14-5959
Anti-Mouse AIRE Purified	5H12	FC, IHC, IP, WB	14-5934
Anti-BrdU Purified	BU20A	FC, IHC	14-5071
Anti-Human Bax Purified	2D2	ELISA, IHC, IP, WB	BMS162
Anti-Universal Bax	6A7	ELISA, IHC, IP, WB	BMS163
Anti-Human Bcl-2 Purified	Bcl-2/100	IHC, WB	14-1028
Anti-Human/Mouse Bcl-6 Purified	GI191E	IHC, WB	14-9887
Anti-Human/Mouse Blimp1 Purified	6D3	IHC, WB	14-5963
Anti-Mouse BP-1 Purified	6C3	FC, IHC, IP	14-5891
Anti-Mouse Caspase 12 Purified	14F7	IHC, IP, WB	14-9950
Anti-Human CD1a Purified	HI149	FC, IHC	14-0019
Anti-Human CD1b Purified	SN13 K5-1B8	FC, IHC, IP	14-0018
Anti-Human CD1d Purified	51.1	FC, IHC, IP	14-0016
Anti-Mouse CD1d Purified	1B1	FC, IHC, IP	14-0011
Anti-Human/Non-Human Primate CD2 Purified	RPA-2.10	FC, IHC, WB	14-0029
Anti-Mouse CD2 Purified	RM2-5	FC, IHC	14-0021
Anti-Mouse CD3 Purified	17A2	FC, IHC	14-0032
Anti-Mouse CD3e Purified	500A2	FC, IHC	14-0033
Anti-Human CD4 Purified	RPA-T4	FC, IHC	14-0049
Anti-Human CD5 Purified	UCHT2	FC, IHC, WB	14-0059
Anti-Human CD5 Biotin	UCHT2	FC, IHC	13-0059
Anti-Mouse CD5 Purified	53-7.3	FC, IHC, IP	14-0051
Anti-Mouse CD6 Purified	IM348	FC, IHC, WB	14-0061
Anti-Mouse CD8a Purified	53-6.7	FC, IHC, IP	14-0081
Anti-Rat CD8a Purified	OX8	FC, IHC	14-0084
Anti-Rat CD8b Purified	341	FC, IHC, IP, WB	14-0080
Anti-Human CD10 Biotin	SN5c	FC, IHC	13-0108
Anti-Human CD13 Purified	WM-15 (WM15)	FC, IHC	14-0138
Anti-Human CD14 Purified	61D3	FC, IHC	14-0149
Anti-Human CD15 Biotin	HI98	FC, IHC	13-0159
Anti-Human CD15 Purified	HI98	FC, IHC	14-0159
Anti-Human CD19 Purified	HIB19	FC, IHC	14-0199
Anti-Mouse CD19 Purified	1D3	FC, IHC, IP	14-0193
Anti-Human CD22 Purified	4KB128	FC, IHC	14-0229
Anti-Human CD23 Purified	EBVCS2	FC, IHC	14-0238
Anti-Mouse CD23 Purified	B3B4	FC, IHC	14-0232



New products are launched regularly. **Discover more at** www.eBioscience.com.

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

Antibodies for IHC and ICC (cont.)

Name	Clone	Application	Cat. No.
Anti-Human/Mouse CD27 Purified	LG.3A10	FC, IHC, IP	14-0272
Anti-Human CD28 Purified	CD28.2	FC, IHC, IP	14-0289
Anti-Mouse CD28 Purified	37.51	FC, IHC, IP	14-0281
Anti-Human CD30 Purified	Ber-H2	FC, IHC	14-0309
Anti-Human CD33 Purified	WM-53 (WM53)	FC, IHC, IP	14-0338
Anti-Human CD38 Purified	HIT2	FC, IHC	14-0389
Anti-Mouse CD38 Purified	90	FC, IHC	14-0381
Anti-Human CD39 Purified	A1	FC, IHC	14-0399
Anti-Human CD40 Purified	5C3	FC, IHC	14-0409
Anti-Human CD41a Purified	HIP8	FC, IHC	14-0419
Anti-Human CD42b Purified	HIP1	FC, IHC, WB	14-0429
Anti-Mouse/Rat CD42d Purified	1C2	FC, IHC, IP	14-0421
Anti-Human CD45 Purified	HI30	FC, IHC	14-0459
Anti-Mouse CD45 Purified	30-F11	FC, IHC, IP	14-0451
Anti-Mouse CD45.2 Purified	104	FC, IHC, IP	14-0454
Anti-Mouse CD45.2 Biotin	104	FC, IHC	13-0454
Anti-Rat CD45.2 Purified	HIS41	FC, IHC	14-0450
Anti-Human/Mouse CD45R (B220) Purified	RA3-6B2	FC, IHC, IP	14-0452
Anti-Rat CD45R (B220) Purified	HIS24	FC, IHC, WB	14-0460
Anti-Mouse CD45RB Purified	C363.16A	FC, IHC, IP	14-0455
Anti-Human CD45RO Purified	UCHL1	FC, IHC	14-0457
Anti-Human CD56 (NCAM) Biotin	CMSSB	FC, IHC	13-0567
Anti-Human CD56 (NCAM) Purified	CMSSB	FC, IHC	14-0567
Anti-Human CD64 (Fc gamma Receptor 1) Purified	10.1	FC, IHC	14-0649
Anti-Human CD68 Purified	Y1/82A	FC, IHC	14-0689
Anti-Human CD69 Purified	FN50	FC, IHC	14-0699
Anti-Mouse CD69 Purified	H1.2F3	FC, IHC, IP	14-0691
Anti-Mouse CD73 Purified	TY/11.8	FC, IHC	14-0731
Anti-Human CD74 Purified	VIC-Y1	IHC	14-0747
Anti-Mouse CD79a Purified	24C2.5	IHC, WB	14-0791
Anti-Mouse CD80 (B7-1) Purified	16-10A1	FC, IHC, IP	14-0801
Anti-Mouse CD86 (B7-2) Purified	GL1	FC, IHC, IP	14-0862
Anti-Rat CD86 (B7-2) Purified	24F	FC, IHC, IP	14-0860
Anti-Human CD90 (Thy-1) Purified	5E10	FC, IHC, IP, WB	14-0909
Anti-Mouse CD90 (Thy-1) Purified	G7	FC, IHC	14-0901
Anti-Mouse/Rat CD90.1 (Thy-1.1) Purified	HIS51	FC, IHC	14-0900
Anti-Human CD94 Purified	DX22	FC, IHC	14-0949



New products are launched regularly. **Discover more at** www.eBioscience.com.

Antibodies for IHC and ICC (cont.)

Name	Clone	Application	Cat. No.
Anti-Human CD95 (APO-1/Fas) Purified	DX2	FC, IHC	14-0959
Anti-Mouse CD100 (SEMA4D) Purified	BMA12 (BMA-12)	FC, IHC, IP	14-1001
Anti-Human CD101 Purified	BB27	FC, IHC, IP	14-1019
Anti-Mouse CD107a (LAMP-1) Purified	1D4B	FC, IHC, IP, WB	14-1071
Anti-Human CD107a (LAMP-1) Purified	H4A3	FC, IHC, WB	14-1079
Anti-Mouse CD107b (LAMP-2) Purified	ABL-93	FC, IHC, IP	14-1072
Anti-Mouse CD107b (Mac-3) Purified	M3/84	FC, IHC, IP	14-5989
Anti-Human CD123 Purified	6H6	FC, IHC	14-1239
Anti-Human CD127 Purified	eBioRDR5	FC, IHC	14-1278
Anti-Mouse CD127 Purified	A7R34	FC, IHC, IP	14-1271
Anti-Human CD134 (OX40) Purified	ACT35 (ACT-35)	FC, IHC	14-1347
Anti-Mouse CD134 (OX40) Purified	OX-86	FC, IHC, WB	14-1341
Anti-Human CD138 (Syndecan-1) Purified	DL-101	FC, IHC	14-1389
Anti-CD146 Purified	P1H12	FC, IHC, IP, WB	14-1469
Anti-Human CD147 Purified	8D12	FC, IHC, IP, WB	14-1472
Anti-Human CD150 Purified	A12 (7D4)	FC, IHC	14-1509
Anti-Human CD152 (CTLA-4) Purified	14D3	FC, IHC	14-1529
Anti-Mouse CD153 Purified	RM153	FC, IHC, IP	14-1531
Anti-Mouse CD154 (CD40 Ligand) Purified	MR1	FC, IHC	14-1541
Anti-Human CD157 Purified	SY11B5	FC, IHC, IP, WB	14-1579
Anti-Mouse CD166 (ALCAM) Purified	ALC48	FC, IHC	14-1661
Anti-Human CD171 Biotin	5G3	FC, IHC, WB	13-1719
Anti-Human CD171 Purified	5G3	FC, IHC, IP, WB	14-1719
Anti-Human CD180 (RP105) Purified	MHR73-11	FC, IHC, IP	14-1809
Anti-Human/Mouse CD184 (CXCR4) Purified	Polyclonal	IHC, IP, WB	14-6009
Anti-Mouse CD184 (CXCR4) Purified	2B11	FC, IHC, WB	14-9991
Anti-Human CD200 Purified	OX104	FC, IHC	14-9200
Anti-Mouse CD200 Purified	OX90	FC, IHC	14-5200
Anti-Human CD205 Purified	MG38	FC, IHC, IP	14-2059
Anti-Mouse CD207 (Langerin) Biotin	L31	FC, IHC	13-2075
Anti-Mouse CD207 (Langerin) Purified	L31	FC, IHC, IP, WB	14-2075
Anti-Mouse CD207 (Langerin) Purified	eBioRMUL.2	FC, IHC, WB	14-2073
Anti-Mouse CD209b (SIGN-R1) Purified	22D1	FC, ELISA, IHC, IP	14-2093
Anti-Human CD227 (Mucin 1) Purified	SM3	FC, ICC, IHC, WB	14-9893
Anti-Mouse CD252 (OX40 Ligand) Purified	RM134L	FC, IHC, IP	14-5905
Anti-Human CD257 (BAFF, BLyS) Purified	1D6	FC, IHC, WB	14-9017

 New products are launched regularly. **Discover more at www.eBioscience.com.**

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

Antibodies for IHC and ICC (cont.)

Name	Clone	Application	Cat. No.
Anti-Human CD261 (DR4) Purified	DJR1	FC, IHC	14-6644
Anti-Human CD268 (BAFF Receptor) Purified	8A7	FC, IHC, WB	14-9117
Anti-Human/Mouse CD266 (TWEAK Receptor) Purified	ITEM-4	FC, IHC, WB	14-9018
Anti-Human CD274 (B7-H1) Purified	MIH1	FC, IHC, WB	14-5983
Anti-Mouse CD274 (B7-H1) Purified	MIH5	FC, IHC, WB	14-5982
Anti-Human CD275 (B7-H2) Biotin	MIH12	FC, IHC	13-5889
Anti-Human CD275 (B7-H2) Purified	MIH12	FC, IHC	14-5889
Anti-Human CD279 (PD-1) Purified	J116	IHC, IP, WB	14-9989
Anti-Human CD279 (PD-1) Purified	MIH4	FC, IHC	14-9969
Anti-Human CD281 (TLR1) Purified	GD2.F4	FC, IHC	14-9911
Anti-Mouse CD282 (TLR2) Biotin	6C2	FC, IHC	13-9021
Anti-Human CD283 (TLR3) Purified	TLR3.7	FC, IHC, IP, WB	14-9039
Anti-Human CD284 (TLR4) Purified	HTA125	FC, IHC, IP	14-9917
Anti-Human CD289 (TLR9) Purified	eB72-1665	FC, IHC, IP, WB	14-9099
Anti-Human CD314 (NKG2D) Purified	1D11	FC, IHC, IP	14-5878
Anti-Human CD326 (EpCAM) Biotin	1B7	FC, IHC	13-9326
Anti-Human CD326 (EpCAM) Purified	1B7	FC, IHC, IP, WB	14-9326
Anti-Mouse CD326 (EpCAM) Purified	G8.8	FC, IHC, IP	14-5791
Anti-Human P-Cadherin Purified	12H6	IHC, ICC	14-9873
Anti-Human Chorionic Gonadotrophin (hCG) Purified	FB12	IHC, ICC, ELISA, WB	14-6508
Anti-Human Chorionic Gonadotropin Beta Subunit Purified	FBT11	IHC, ICC	14-9872
Anti-Human Collagen Type IV Purified	1042	IHC	14-9871
Anti-Cyclin E Purified	Polyclonal	IHC, IP, WB	14-6714
Anti-CX3CL1 (Fractalkine) Purified	polyclonal	IHC, IP, WB	14-7986
Anti-Mouse CX3CL1 (Fractalkine) Purified	Polyclonal	IHC, IP, WB	14-7999
Anti-Human/Rat CX3CR1 Purified	Polyclonal	IHC, IP, WB	14-7988
Anti-Mouse/Rat CXCL12 alpha (SDF-1 alpha) Purified	Polyclonal	IHC, IP, WB	14-7992
Anti-Mouse/Rat CXCL12 beta (SDF-1 beta) Purified	Polyclonal	IHC, IP, WB	14-7991
Anti-EGF Receptor Purified	Polyclonal	IHC, IP, WB	14-6747
Anti-Mouse Embigin Purified	G7.43.1	FC, IHC	14-5839
Anti-Mouse F4/80 Antigen Purified	BM8	FC, IHC	14-4801
Anti-Mouse Fc epsilon Receptor I alpha (FceR1) Purified	MAR-1	FC, IHC, IP	14-5898
Anti-Human FCRLA (FREB) Purified	N28.1	FC, IHC	14-5847
Anti-Human FDC Purified	CNA.42	FC, IHC, WB	14-9968
Anti-Human Fibronectin Purified	FN-3	IHC, WB	14-9869



New products are launched regularly. **Discover more at** www.eBioscience.com.

Antibodies for IHC and ICC (cont.)

Name	Clone	Application	Cat. No.
Anti-Human FOXA2 Purified	3C10	IHC	14-4778
Anti-Human/Mouse FOXJ1 Purified	2A5	IHC, WB	14-9965
Anti-Human Foxp1 Purified	JC12 (JC-12)	IHC, WB	14-9962
Anti-Foxp3 Purified	150D/E4	IHC, IP, WB	14-4774
Anti-Human Foxp3 Purified	hFOXY	IHC, WB	14-5779
Anti-Human Foxp3 Purified	236A/E7	FC, IHC, WB	14-4777
Anti-Human Foxp3 Biotin	236A/E7	FC, IHC	13-4777
Anti-Human/Mouse Foxp3 Purified	7979	IHC, IP, WB	14-7979
Anti-Mouse/Rat Foxp3 Purified	FJK-16s	IHC, WB	14-5773
Anti-Mouse/Rat Foxp3 Biotin	FJK-16s	FC, IHC, WB	13-5773
Anti-beta-Galactosidase Fusion Protein Purified	Polyclonal	IHC, WB	14-6773
Anti-Mouse G1TR Ligand Purified	YGL386	FC, IHC	14-5854
Anti-Human/Mouse GL7 (T and B Cell Activation Marker) Purified	GL-7 (GL7)	FC, IHC, IP	14-5902
Anti-Rat Granulocyte Marker Purified	HIS48	FC, IHC	14-0570
Anti-Human Hes1 Purified	4H1HES1	IHC	14-9799
Anti-Human HLA-DR Purified	LN3	FC, IHC	14-9956
Anti-Human HLA-G Purified	87G	FC, IHC	14-9957
Anti-Human IgM Purified	SA-DA4	FC, ELISA, IHC	14-9998
Anti-IkB- α (IKB- α) Purified	Polyclonal	IHC, IP, WB	14-6763
Anti-Human IL-10 Purified	JES3-9D7	ELISA, IHC	14-7108
Anti-Human IL-17A Purified	eBio64CAP17	FC, ELISA, IHC, IP	14-7178
Anti-Human IL-17A Purified	eBio64DEC17	ELISA, IHC	14-7179
Anti-Human Ki-67 Purified	20Raj1	FC, IHC, ICC	14-5699
Anti-Mouse/Rat Ki-67 Purified	SoIA15	FC, IHC, ICC	14-5698
Anti-Human Lactoferrin Purified	B97	IHC, WB	14-6604
Anti-Human LMO2 Purified	1A9-3B11	IHC	14-9899
Anti-Mouse Ly-6G (Gr-1) Purified	RB6-8C5	FC, IHC, IP, WB	14-5931
Anti-Mouse Lyve-1 Biotin	ALY7	FC, IHC	13-0443
Anti-Mouse Lyve-1 Purified	ALY7	FC, IHC	14-0443
Anti-Human MALT1 Purified	50	IHC, WB	14-9961
Anti-Human Mature Macrophage Marker Purified	25F9	FC, IHC, IP, WB	14-0115
Anti-Mouse/Rat MULT1 (NKG2D Ligand) Purified	5D10	FC, IHC	14-5863
Anti-Musashi-1 Purified	14H1	ICC, IHC, WB	14-9896
Anti-Mouse/Rat Nestin Purified	Rat-401 (4D4)	ICC, IHC, WB	14-5843
Anti-NF- κ B p50 and p105 Purified	Polyclonal	IHC, IP, WB	14-6732
Anti-NF- κ B p52 and p100 Purified	Polyclonal	IHC, IP, WB	14-6733
Anti-NF- κ B p65 Purified	Polyclonal	IHC, IP, WB	14-6731



New products are launched regularly. **Discover more at www.eBioscience.com.**

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

Antibodies for IHC and ICC (cont.)

Name	Clone	Application	Cat. No.
Anti-Human MHC Class I free chain (without beta 2 microglobulin) Purified	A4	FC, IHC, IP	14-9958
Anti-Mouse MHC Class II (I-A/I-E) Purified	M5/114.15.2	FC, IHC, IP, WB	14-5321
Anti-Rat MHC Class II Purified	HIS19	FC, IHC, IP	14-0920
Anti-Human MICA/B Purified	6D4	FC, IHC, IP	14-5788
Anti-Human c-Myc p67 Purified	9E10	IHC, IP, WB	14-6784
Anti-c-Myc p67 Purified	9E11	IHC, IP, WB	14-6785
Anti-Human Naf1 Purified	5C4	IHC, IP, WB	14-9903
Anti-Human Nestin Purified	10C2	ICC, IHC, WB	14-9843
Anti-Human Neural/Glial Antigen 2 (NG2) Purified	9.2.27	FC, ICC, IHC, IP	14-6504
Anti-Human NOD2 Purified	2D9	IHC, IP, WB	14-5869
Anti-Mouse OVA257-264 (SIINFEKL) peptide bound to H-2Kb Biotin	25-D1.16	FC, IHC	13-5743
Anti-Mouse OVA257-264 (SIINFEKL) peptide bound to H-2Kb Purified	25-D1.16	FC, IHC	14-5743
Anti-p21 (WAF1, Cip1) Purified		IHC, IP, WB	14-6715
Anti-Rat Pan-Endothelium Marker Purified	HIS52	FC, IHC	14-0360
Anti-PARP Purified	C2-10	ELISA, IHC, IP, WB	14-6666
Anti-Human Perforin Purified	dG9 (delta G9)	IHC, IP	14-9994
Anti-Mouse PIM-2 Purified	1D12	IHC, IP, WB	14-3308
Anti-Human Placental Alkaline Phosphatase Purified	8B6	IHC, ICC	14-9870
Anti-Mouse Plexin-B2 Purified	3E7	FC, IHC, IP	14-5665
Anti-Human Podoplanin Purified	NZ-1.3	IHC, IP, WB	14-9381
Anti-Human Pokemon (LRF) Purified	13E9	IHC, WB	14-3309
Anti-Mouse RAE1 delta Purified	RD-41	FC, ELISA, IHC	14-5756
Anti-Human/Mouse SSEA-1 Purified	MC-480	FC, ICC, IP	14-8813
Anti-Human/Mouse SSEA-3 Purified	MC-631	FC, ICC	14-8833
Anti-Mouse Siglec H Purified	440c	FC, IHC	14-0333
Anti-Human S-Phase Kinase-associated protein 2 (Skp-2) Purified	SJBCH	IHC, ICC	14-5697
Anti-Human TARP Purified	TP1, 1F8	IHC, WB	14-8868
Anti-Human TCL1 Purified	1-21	FC, IHC, IP, WB	14-6699
Anti-Mouse TCR β Purified	H57-597	FC, IHC	14-5961
Anti-Rat γ δ TCR Purified	V65	FC, IHC, IP	14-5810
Anti-Mouse TER-119 Purified	TER-119	FC, IHC, IP, WB	14-5921
Anti-Mouse TLR4/MD-2 Complex Purified	MTS510	FC, IHC, IP	14-9924
Anti-Human Trop2 (EGP-1) Purified	MR54	FC, ELISA, ICC, IHC, IP, WB	14-6024
Anti-alpha Tubulin Biotin	DM1A	IHC, ICC	13-4502
Anti-alpha Tubulin Purified	DM1A	IHC, IP, WB	14-4502
Anti-Ubiquitin Purified	P4D1	IHC, IP, WB	14-6078



New products are launched regularly. **Discover more at** www.eBioscience.com.

Support Reagents for IHC and ICC

- Buffers and Solutions
 - Secondary Reagents and Dyes
-

Buffers and Solutions

Get the best results possible with support reagents optimized for specific staining protocols, including High and Low Protein Blocking Buffers and slide mounting media. We offer QC-validated reagents for immunofluorescent staining of tissues and cells with antibodies conjugated to eFluor Nanocrystals, as well as in all your routine microscopy applications for reducing background staining, minimizing fluorochrome quenching during analysis, and for mounting and long-term storage of slides.

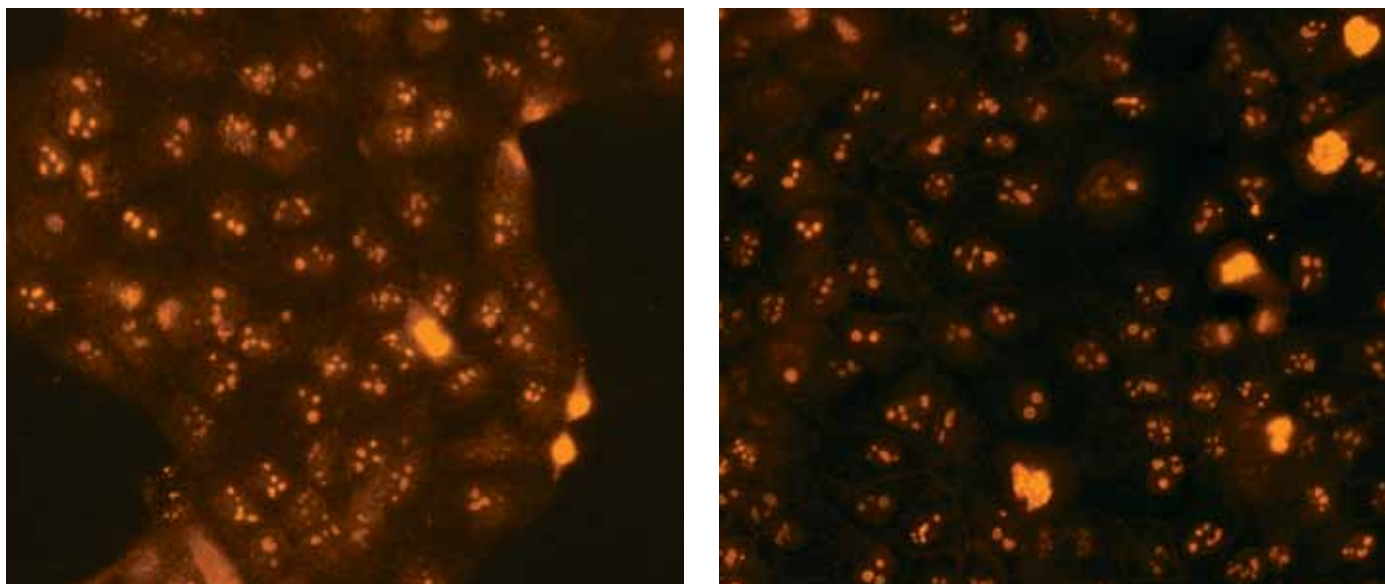
IHC Antigen Retrieval Solutions – designed for use during the heat-induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections.

- Use in combination with heat (microwave, water bath, or pressure cooker) to restore the antigenicity of proteins modified during the formalin fixation of tissue
- Available in either High pH (10X) or Low pH (10X) formulations

IHC/ICC Blocking Buffers – developed for use in immunohistochemistry and immunocytochemistry protocols that require blocking of non-specific binding sites. Blocking buffers are recommended for use when staining cells and tissues to block nonspecific antibody binding. Use in blocking steps as well as a diluent for eFluor® Nanocrystal-conjugated antibodies.

- Two formulations available; compatible with organic dye-conjugated antibodies or unconjugated antibodies for 2- and 3-step staining protocols
- Low Protein formulation is ideal for applications using unconjugated, organic dye-conjugated or eFluor Nanocrystal-conjugated antibodies
- High Protein formulation provides optimal results when staining nuclear antigens, for FFPE tissue sections, or tissues with higher non-specific background

Choose High Protein Blocking Buffer for use with eFluor® Nanocrystal-conjugated antibodies directed at nuclear targets for optimal signal to noise.



Comparison of Ki-67 eFluor® 605 Nanocrystal Staining using IHC/ICC Blocking Buffers

MDCK cells were fixed, permeabilized and blocked with IHC/ICC Blocking Buffers (left, IHC/ICC Blocking Buffer - Low Protein, cat. no. 00-4953; right, IHC/ICC Blocking Buffer - High Protein, cat. no. 00-4952). Blocking step followed by staining with Anti-Human Ki-67 eFluor 605NC.

Fluoromount-G™ is a clear liquid medium designed for use in mounting slides following immunofluorescent staining. This water-soluble medium is used to mount slides in which the final step of staining is aqueous. It forms a semi-permanent seal for prolonged storage of slides at 2-8°C.

- Does not fluoresce and may reduce the amount of fluorochrome quenching during fluorescence microscopy
- Compatible with eFluor® Nanocrystal and organic dye-conjugated antibodies, as well as other dyes
- Provided in convenient, ready-to-use 1X solution

Buffers and Solutions for IHC and ICC

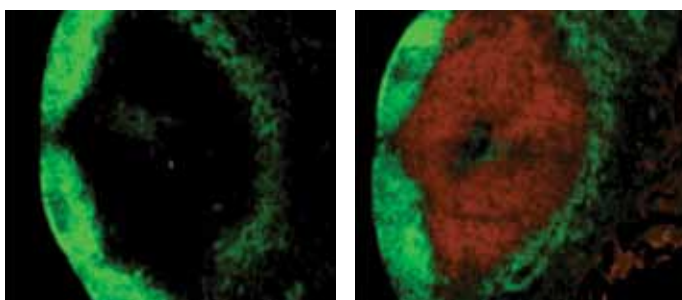
Product Description	Application	Cat. No.
Fluoromount-G™	IHC, ICC	00-4958
IHC Antigen Retrieval Solution – High pH (10X)	IHC	00-4956
IHC Antigen Retrieval Solution – Low pH (10X)	IHC	00-4955
IHC/ICC Blocking Buffer – High Protein	IHC, ICC	00-4952
IHC /ICC Blocking Buffer – Low Protein	IHC, ICC	00-4953
20X TBS Wash Buffer for IHC/ICC	IHC, ICC	00-4954

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

Secondary Reagents and Dyes

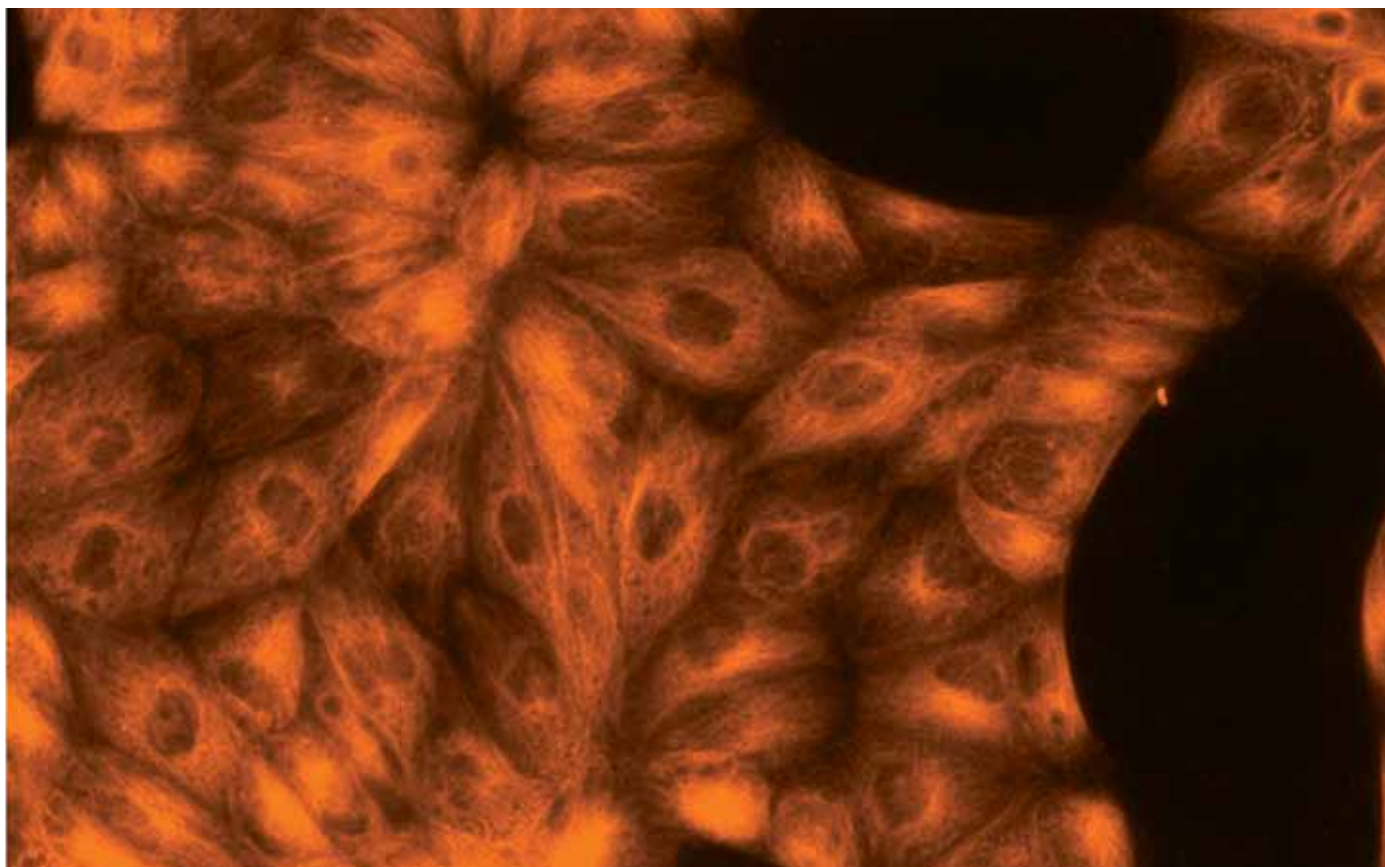
Many options exist for 2- and 3-step staining, from fluorophore-conjugated antibodies to biotinylated secondaries, to Avidin and Streptavidin (SAV) reagents. For 2-step staining it is common to use a purified primary antibody followed by a directly conjugated secondary antibody which recognizes the host species of the primary antibody. This secondary antibody may be polyclonal and react with all IgG or IgM, or can be specific to the isotype of the primary antibody. For the utmost sensitivity (signal amplification), a 3-step protocol may be optimal, e.g. first staining using a target-specific primary antibody, followed by a biotinylated secondary and subsequently a SAV-conjugate.

Choose eFluor® Nanocrystal-conjugated Streptavidin for Optimal Photostability



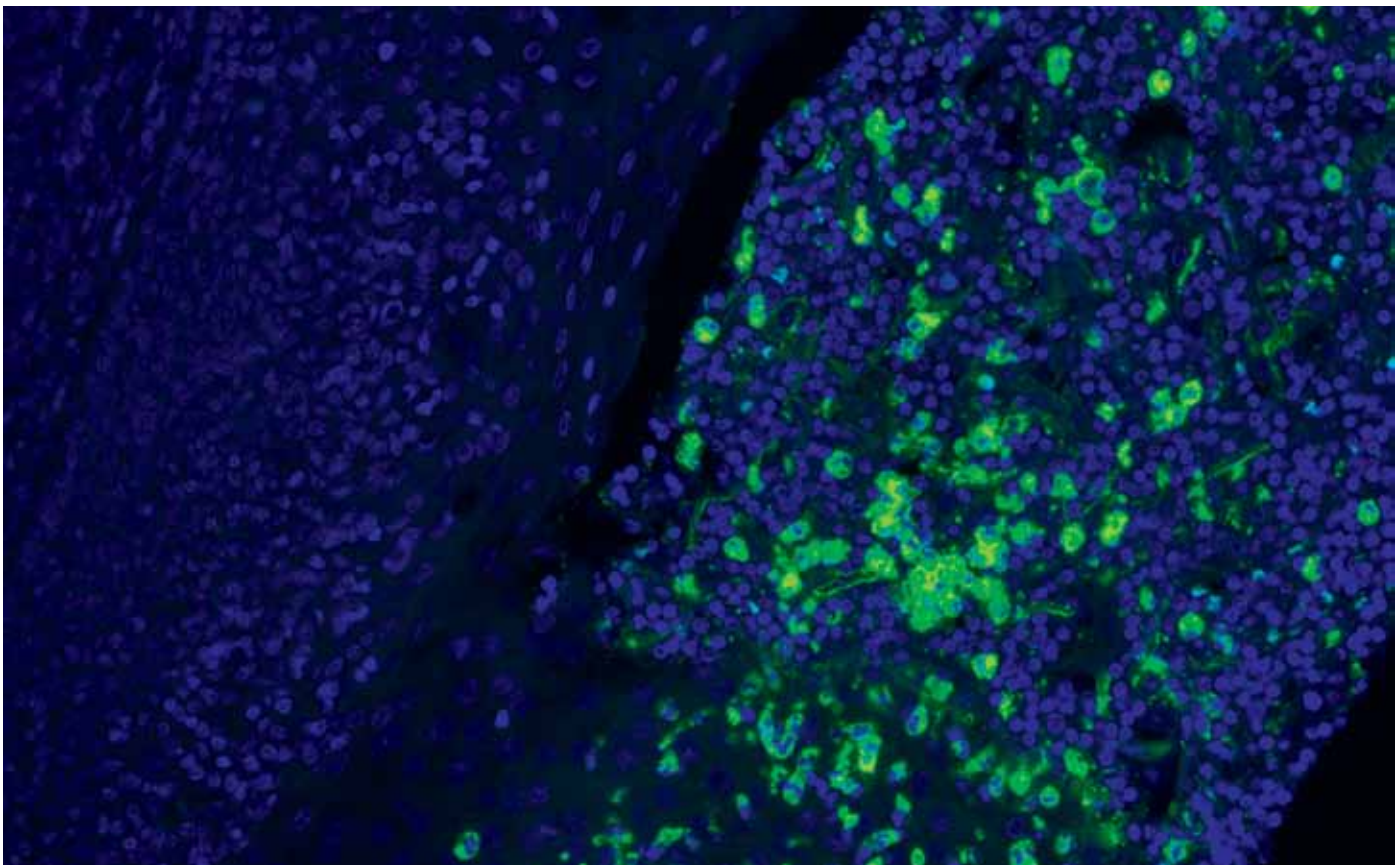
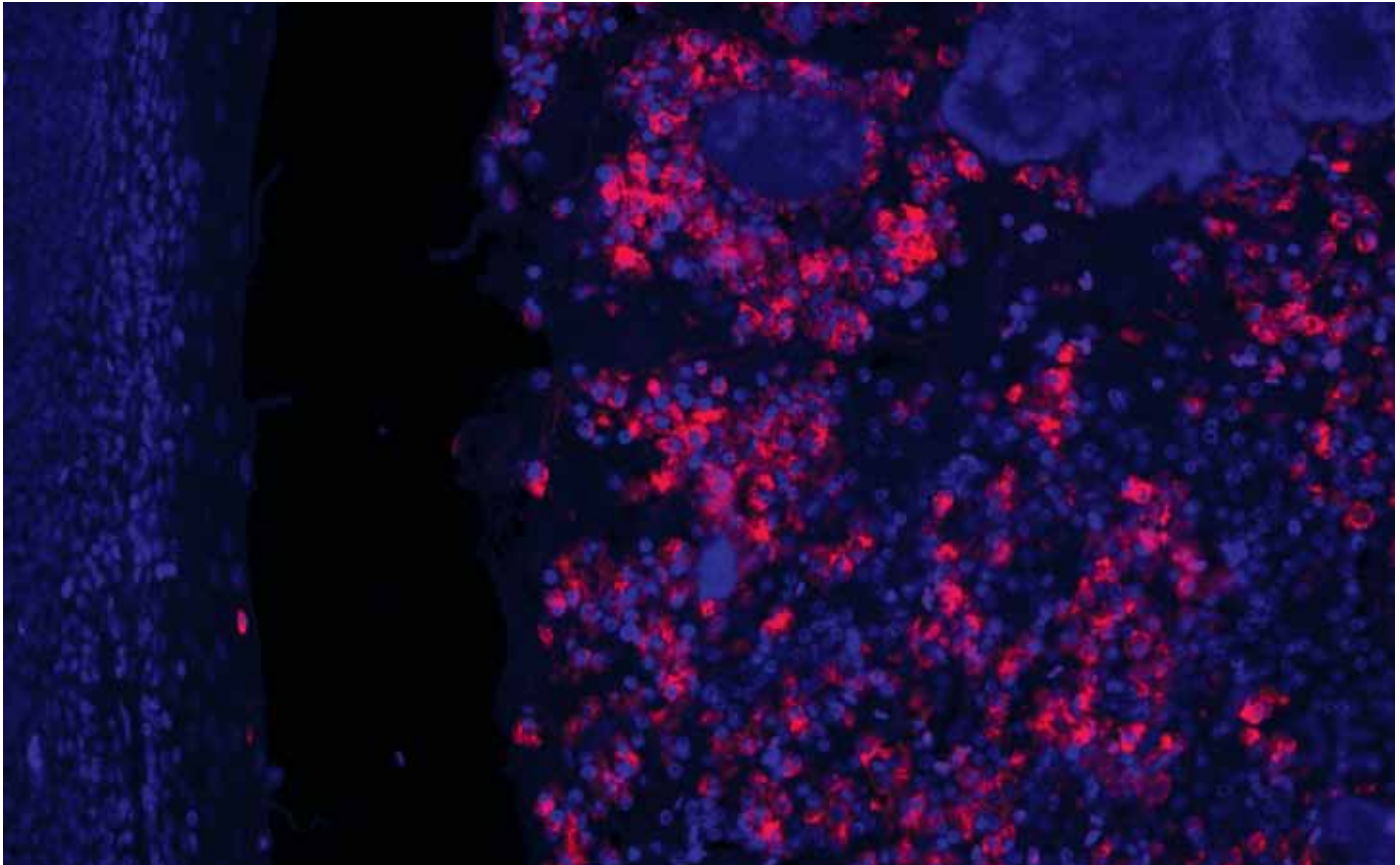
Frozen Tissue Sections stained with Streptavidin eFluor® 605NC

Frozen tissue sections from mouse lymph node stained with either no primary antibody (left) or Anti-Mouse CD3 Biotin (right, cat. no. 13-0031), and subsequently detected using Streptavidin eFluor 605NC (red; cat. no. 93-2317) to visualize the T cell zone. Anti-Mouse CD45R (B220) FITC (cat. no. 11-0452) was used to identify B cell follicles (green).



ICC using Streptavidin eFluor® 605NC

Fixed, permeabilized MDCK cells were stained using Anti-alpha Tubulin (cat. no. 14-4502) followed by Anti-Mouse IgG Biotin (cat. no. 13-4013) and Streptavidin eFluor 605NC (cat. no. 93-2317).



IHC Using eFluor® 615 and FITC-conjugated Secondary Antibodies

FFPE human tonsil tissue stained with Anti-Human CD15 Purified (cat. no. 14-0159), followed by Anti-Mouse IgM eFluor 615 (top, cat. no. 42-5790) or Anti-Mouse IgM FITC (bottom, cat. no. 11-5790) to visualize granulocytes. Nuclei are counter stained with DAPI.

CyTRAK Orange™

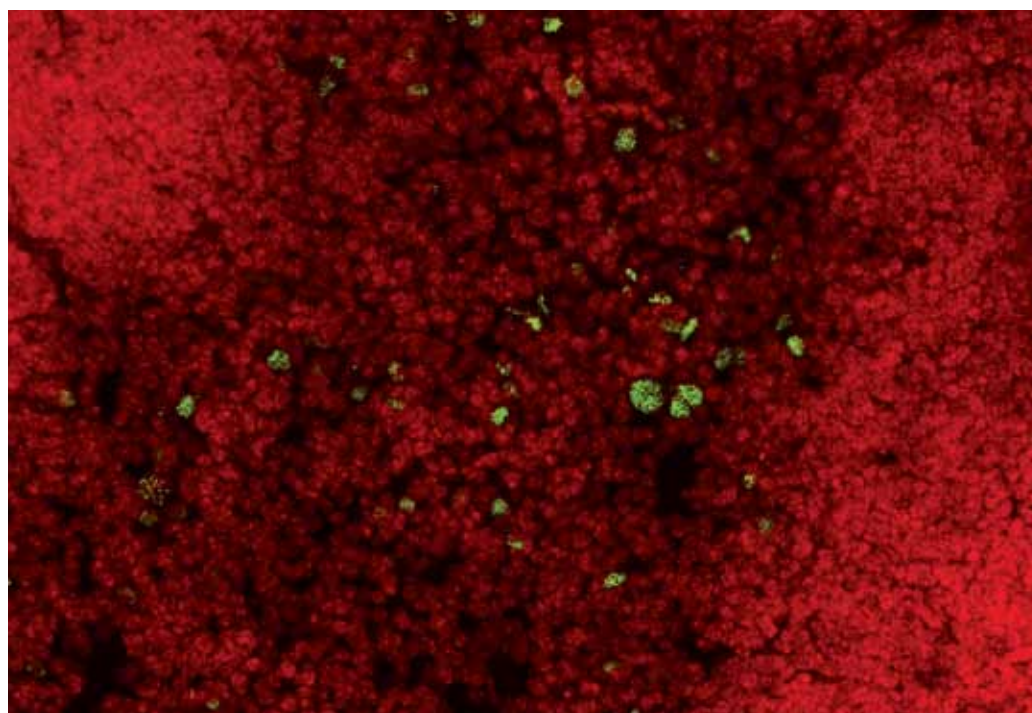
CyTRAK is an anthraquinone dye with high affinity for double-stranded DNA. As it is membrane-permeable, it may be used for labeling live or fixed/dead cells. In flow cytometry, it can be used to distinguish nucleated and non-nucleated cells. In fluorescent microscopy, it can be used to identify and discriminate the nucleus and cytoplasm, without the need for a second dye, due to its high intensity staining of the nucleus and low intensity staining of the cytoplasm.

CyTRAK Orange can be excited with a standard mercury arc lamp and detected using an Ex 560/40 (595LP), Em 630/60 filter set. It is compatible with Alexa Fluor 488, FITC, GFP, Alexa Fluor 647 or eFluor 660 using optimal filter sets. For confocal microscopy, this dye may be excited using the 488 or 534 laser and imaged using a 598/40 emission filter.

DRAQ5™

DRAQ5 is an anthraquinone dye with high affinity for double-stranded DNA. As it is membrane-permeable, it may be used for labeling live or fixed/dead cells. In flow cytometry, this dye can be used to distinguish nucleated and non-nucleated cells. DRAQ5 can also be used to report nuclear DNA content for ploidy and cell cycle analysis as it binds DNA stoichiometrically. In fluorescent microscopy, this dye can be used as a nuclear counterstain.

DRAQ5 can be excited with a standard mercury arc lamp and detected using an Ex 620/60 (660LP), Em 700/75 filter set. It is compatible with Alexa Fluor 488, FITC, and GFP using optimal filter sets. For confocal microscopy, this dye may be optimally excited using the 647 laser and imaged using either a 715LP or 780LP emission filter.



Mouse AIRE Alexa Fluor® 488 and DRAQ5™

Frozen young mouse thymus stained with Anti-Mouse AIRE Alexa Fluor® 488 (cat. no. 53-5934) identifies medullary thymic epithelial cells (mTECs) (green). 10nM DRAQ5 used as a nuclear stain (red; cat. no. 65-0880).

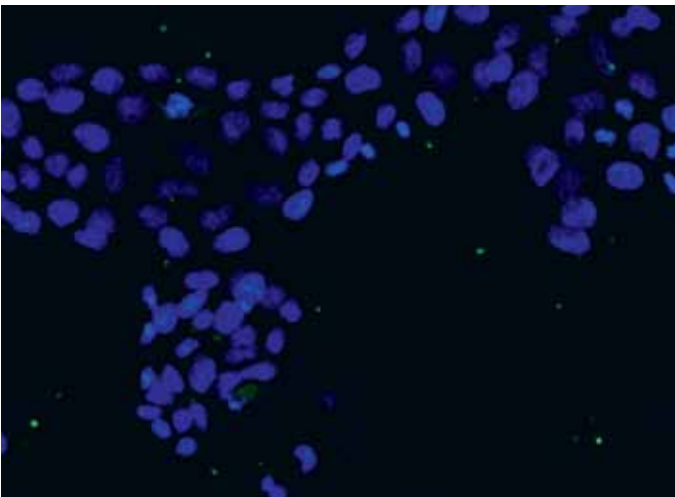
Second Step Reagents and Dyes for IHC and ICC

Product Description	Format	Application	Cat. No.
Anti-Armenian Hamster IgG	Biotin	FC, ELISA, IHC, WB, ICC	13-4113
Anti-Armenian Hamster IgG	FITC	FC	11-4111
Anti-Golden Syrian Hamster IgG	Biotin	FC, ELISA, IHC, WB, ICC	13-4213
Anti-Human Ig λ Light Chain	Biotin	FC, ELISA, IHC	13-9996
Anti-Mouse IgG	Biotin	FC, ELISA, IHC, WB, ICC	13-4013
Anti-Mouse IgG	eFluor® 660	FC, IHC	50-4010
Anti-Mouse IgM	Purified	FC, ELISA, IHC	14-5790
Anti-Mouse IgM	eFluor® 615	IHC, ICC	42-5790
Anti-Rat IgM	HIS40	FC, IHC	14-0990
Anti-Rat IgG	TRITC	FC, IHC	26-4826
Anti-Rat IgG	Biotin	FC, ELISA, IHC, WB	13-4813
Golden Syrian Hamster IgG Isotype Control	Purified	FC, IHC, IP, WB, ICC	14-4914
Golden Syrian Hamster IgG Isotype Control	Biotin	FC, IHC, ICC	13-4914
Mouse IgG1 κ Isotype Control	eFluor® 660	FC, IHC, ICC	50-4714
Mouse IgG1 κ Isotype Control	eFluor® 615	IHC, ICC	42-4714
Mouse IgM Isotype Control	eFluor® 660	FC, IHC, ICC	50-4752
Rat IgG1 κ Isotype Control	eFluor® 660	FC, IHC, ICC	50-4301
Rat IgG2a κ Isotype Control	eFluor® 660	FC, IHC, ICC	50-4321
Rat IgG2a Isotype Control	eFluor® 615	ICC, IHC, ICC	42-4321
Rat IgG2b Isotype Control	eFluor® 660	FC, IHC, ICC	50-4031
Streptavidin eFluor® 605NC (for IHC/ICC)	eFluor® 605NC	ICC, IHC	93-2317
Streptavidin eFluor® 650NC (for IHC/ICC)	eFluor® 650NC	ICC, IHC	95-2317
DRAQ5™		FC, ICC, IHC, FA	65-0880
CyTRAK Orange™		FC, ICC, IHC, FA	65-0881

FC = Flow Cytometry, Intracellular Staining/Flow Cytometry; ICC = Immunocytochemistry; IHC = Immunohistochemistry; WB = Western Blotting

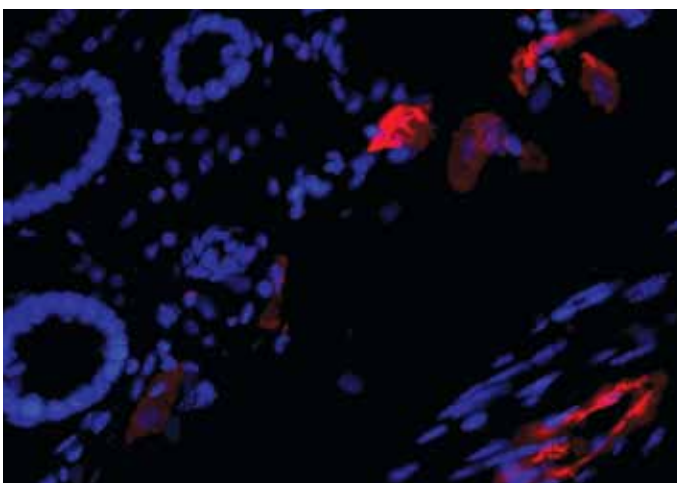
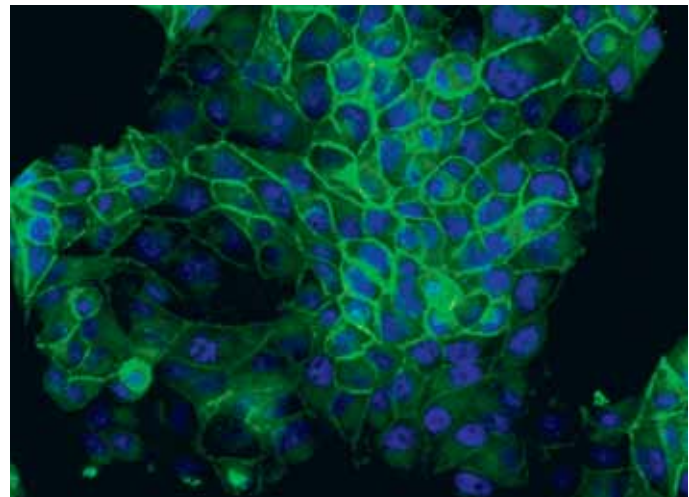
Direct Conjugates and Multicolor Imaging for Stem Cell and Cancer Research

The field of Cancer Biology has seen an increasing focus on the interdependence of immune cells and the development and progression of tumors. The association and densities of cytotoxic T cells (CTL), regulatory T cells (Tregs) and Th17 cells within the tumor and its microenvironment are studied as potential indicators of tumor stage-progression. It is also important to evaluate development of basic structural elements of cells and tissues, for example during angiogenesis, as well as the activation and proliferation state of cells using critical markers such as Ki-67. eBioscience is actively developing quality IHC and ICC tools to support this key research area. We present featured new reagents here, and invite you to visit www.eBioscience.com for additional offering.



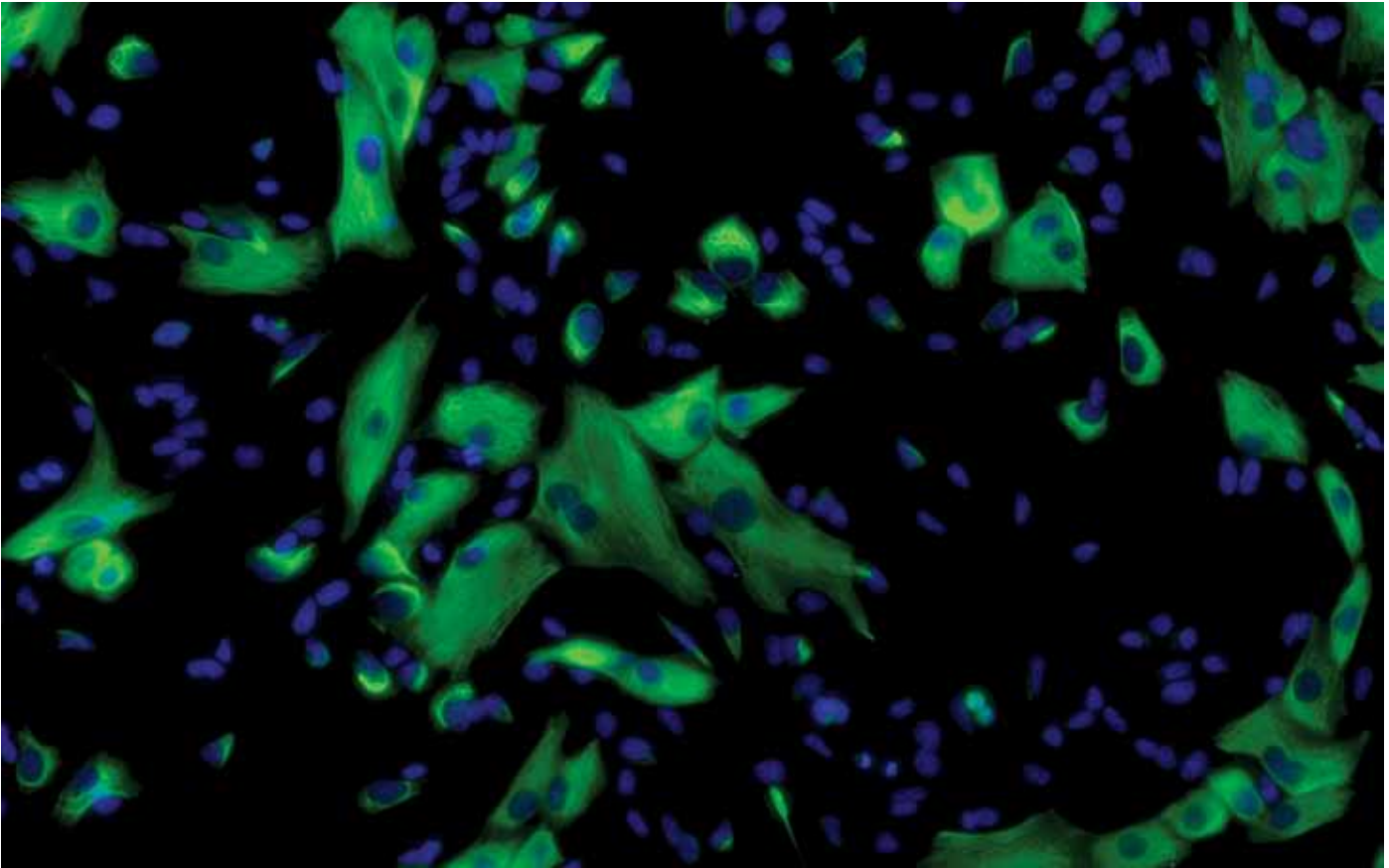
E-Cadherin (CD324) Alexa Fluor® 488

E-Cadherin, an adhesion molecule that can display multiple functions in stem cell and cancer / EMT biology, is visualized in fixed, permeabilized MDCK cells stained using Rat IgG1 Isotype Control Alexa Fluor 488 (left, cat. no. 53-4301) or Anti-E-Cadherin Alexa Fluor 488 (right, cat. no. 53-3249). Nuclei are counterstained with DAPI.



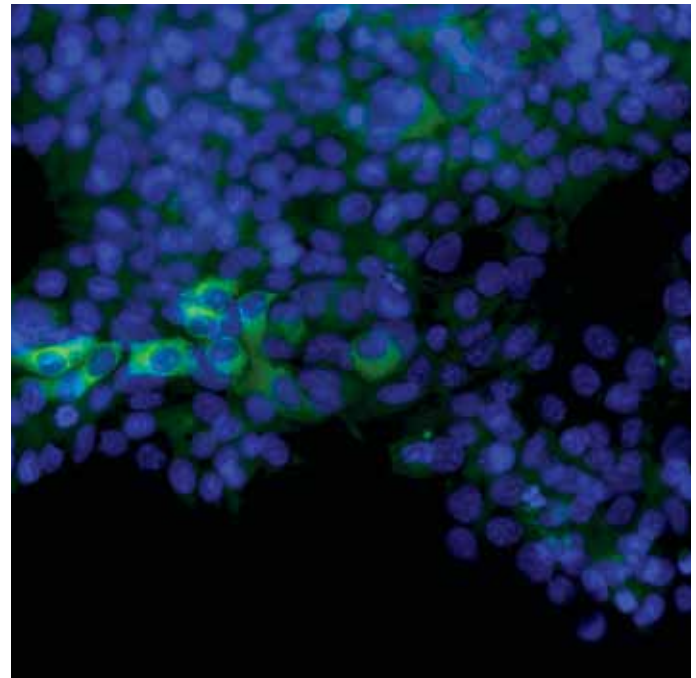
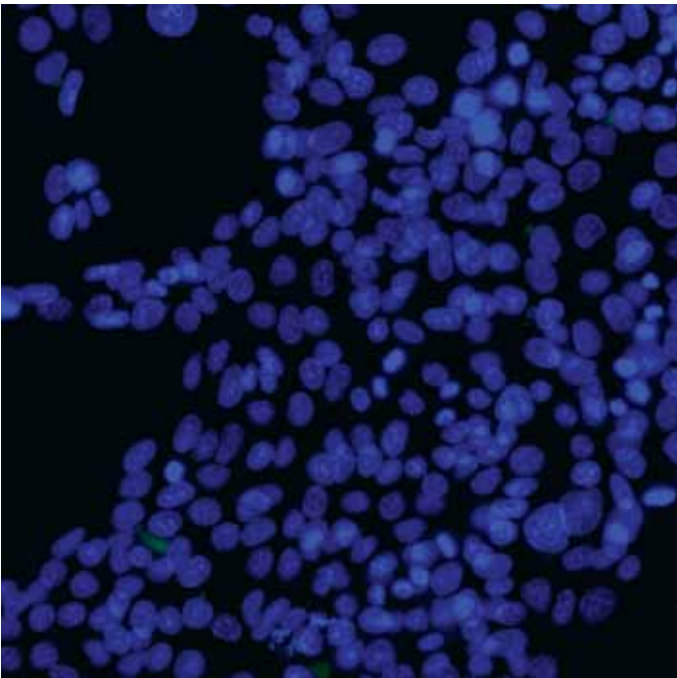
LYVE-1 eFluor® 660

LYVE-1, a receptor for PDGF-B and VEGF-A, visualized by ICC staining of mouse intestine using Anti-Mouse LYVE-1 eFluor 660 (cat. no. 50-0443) and DAPI.



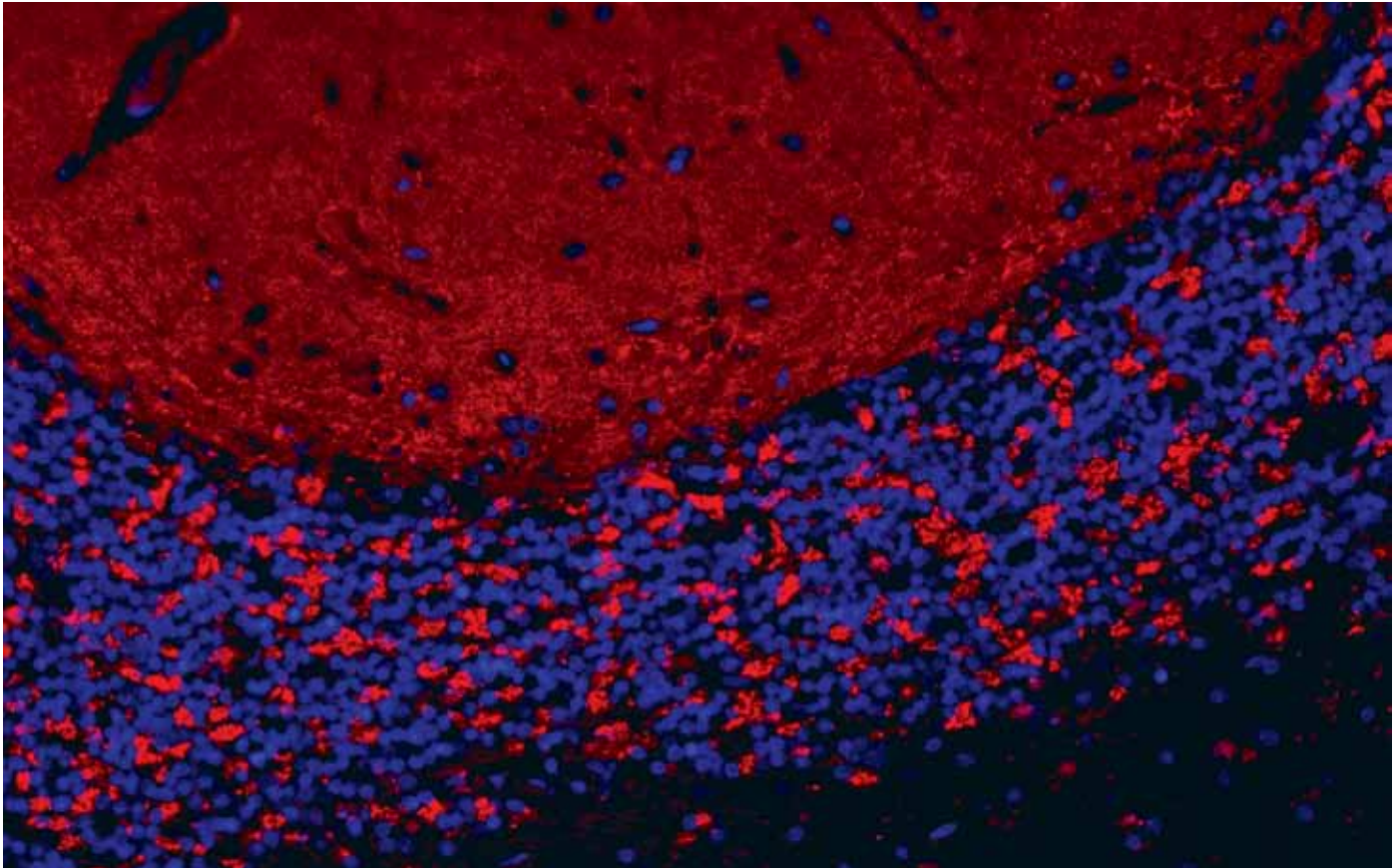
Vimentin FITC

Vimentin, an intermediate filament expressed in some progenitor cells, visualized by immunocytochemical staining of fixed, permeabilized SK-N-SH human neuroblastoma cells using Anti-Vimentin FITC (cat. no. 11-9897). Nuclei are counterstained with DAPI.



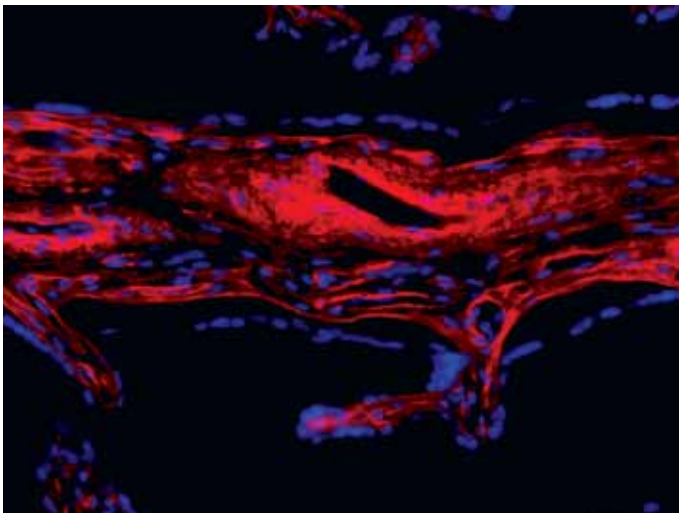
Human Chorionic Gonadotropin Alexa Fluor® 488

Chorionic Gonadotropin (hCG), an important regulator of angiogenesis and activator of the PI3K/mTOR pathway, visualized in fixed, permeabilized BeWo cells stained using Anti-Human Chorionic Gonadotropin (hCG) Alexa Fluor 488 (right, cat. no. 53-6508) or Mouse IgG1 Isotype Control Alexa Fluor 488 (left, cat no. 53-4714). Nuclei are counterstained with DAPI.



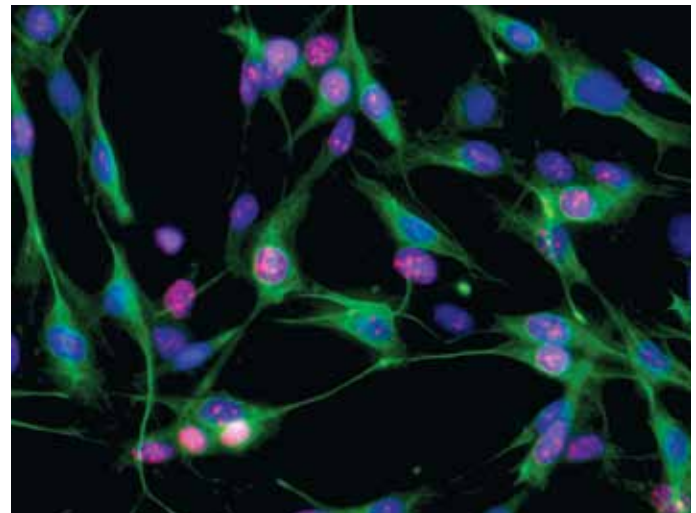
Synaptophysin eFluor® 615

Synaptophysin, also known as Major Synaptic Vesicle Protein p38, is expressed in neuroendocrine tumors and neuroblastomas. It is visualized here by immunostaining of formalin-fixed, paraffin embedded human cerebellum using Anti-Human Synaptophysin eFluor 615 (cat. no. 42-6525). Nuclei are counterstained with DAPI (blue).



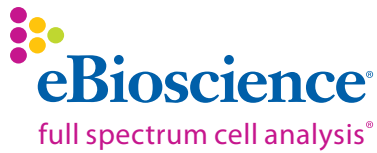
Human Collagen Type IV Alexa Fluor® 647

Collagen Type IV plays an important structural role in basement membrane formation and maintenance. Disruption of basement membranes is a significant marker of pathology during angiogenesis, tumor growth and metastasis. Basement membrane in FFPE human placenta tissue is visualized with Anti-Human Collagen Type IV Alexa Fluor 647 (red; cat. no. 51-9871). Nuclei are counterstained with DAPI (blue).



Mouse/Rat Ki-67 Alexa Fluor® 647 and Vimentin FITC

Ki-67, a marker of actively dividing cells, is often used to determine the fraction of proliferating cells within a given population of tumor cells. Dividing cells are visualized here by ICC staining of fixed, permeabilized C6 rat glioma cells using Anti-Mouse/Rat Ki-67 Alexa Fluor 647 (red; cat. no. 51-5698). Intermediate filaments are stained with Anti-Vimentin FITC (green; cat. no. 11-9897). Nuclei are counterstained with DAPI (blue). Nuclei of dividing cells co-express Ki-67 and DAPI and appear pink.



Headquarters

eBioscience, Inc.
10255 Science Center Drive
San Diego, CA 92121
USA

SERVICE AND SUPPORT FOR DIRECT SALES

North America

Technical Support:
For Research Products:
888.810.6168
858.642.2058
tech@eBioscience.com
For Clinical Products:
877.726.8559
858.642.2058
tech@eBioscience.com
Customer Service:
888.999.1371
858.642.2058
info@eBioscience.com
Fax:
858.642.2046

Austria

Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 305
Austria@eBioscience.com
Fax:
+43 1 796 40 40 400

Belgium

Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 308
Belgium@eBioscience.com
Fax:
+43 1 796 40 40 400

France

Technical Support:
tech@eBioscience.com
Customer Service:
0 800 800 417
France@eBioscience.com
Fax:
0 800 800 418

Germany

Technical Support:
tech@eBioscience.com
Customer Service:
+49 69 33 29 64 56
Germany@eBioscience.com
Fax:
+49 69 255 77 335

Ireland

Technical Support:
tech@eBioscience.com
Customer Service:
+44 208 951 4482
Ireland@eBioscience.com
Fax:
+44 207 900 1559

Netherlands

Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 40 40 308
Netherlands@eBioscience.com
Fax:
+43 1 796 40 40 400

Poland

Technical Support:
tech@eBioscience.com
Customer Service:
+43 1 796 4040 305
Poland@eBioscience.com
Fax:
+43 1 796 4040 400

Switzerland

Technical Support:
tech@eBioscience.com
Customer Service:
+41 21 510 1214
Switzerland@eBioscience.com
Fax:
+41 21 510 1216

United Kingdom

Technical Support:
tech@eBioscience.com
Customer Service:
+44 208 951 4482
UK@eBioscience.com
Fax:
+44 207 900 1559

Customers in countries not listed above may order from an eBioscience distributor listed on our web site at www.eBioscience.com/distributors.

www.eBioscience.com

