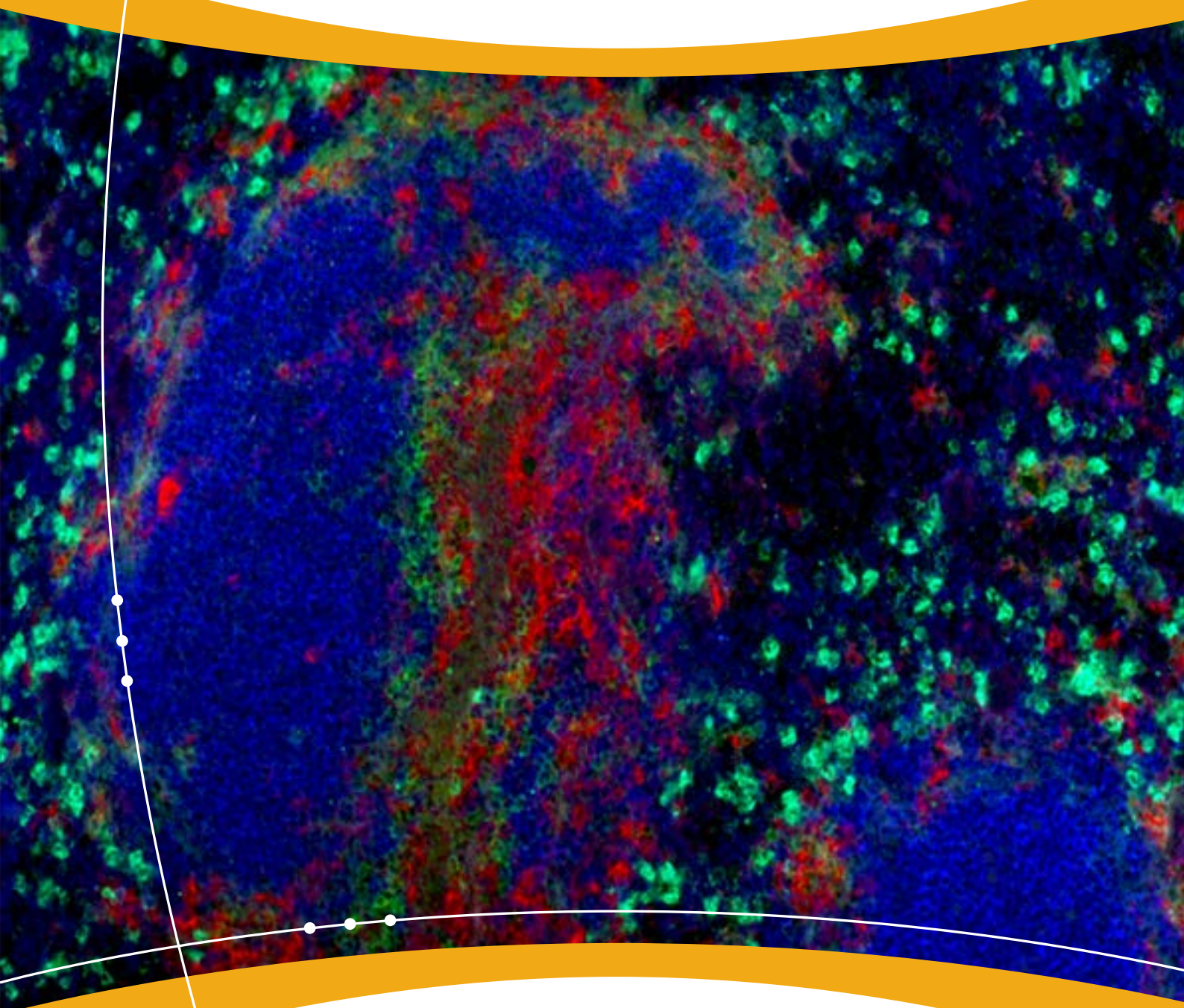
affymetrix
eBioscience

Multicolor Immunofluorescent Imaging

Product Guide



eBioscience, an Affymetrix company, is committed to developing and manufacturing high-quality, innovative reagents using an ISO certified process. As a provider of more than 11,000 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

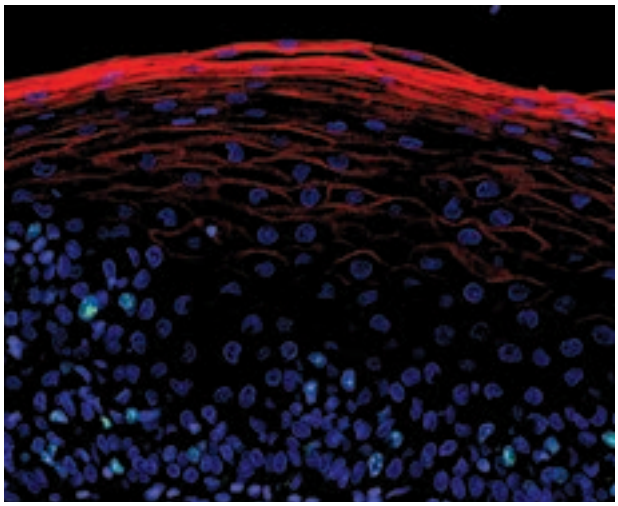
Multicolor Fluorescence Imaging

1

- Overview
- Advantages of Direct Conjugates
- Advantages of Indirect Staining
- Advantages of Multicolor Imaging
- Advantages of Multispectral Imaging
- eFluor® Nanocrystals & Organic Dyes for Fluorescent Imaging
- Choosing Fluorophores for Multicolor Experiments

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 immunocytochemistry (ICC), the localization of proteins within cells and immunohistochemistry (IHC), which reveals the abundance, distribution and localization of biomarkers within a tissue, can be viewed directly. These techniques provide insight into cellular structure and mechanisms and are applicable for basic research, in addition to 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.

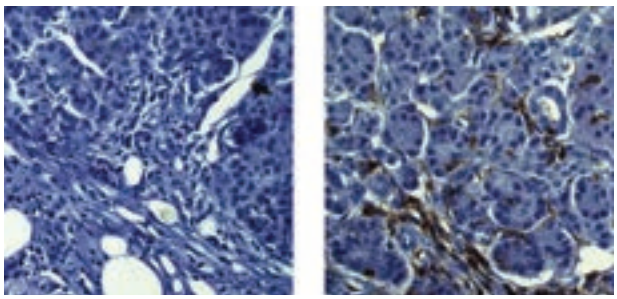


Multicolor Fluorescence imaging using a one step method of staining

Human Formalin Fixed Paraffin Embedded (FFPE) tonsil section stained using Anti-Human/Mouse Cutaneous Lymphocyte Antigen (CLA) eFluor® 660 (red, cat. no. 50-9857), Anti-Human Ki-67 eFluor® 570 (green, cat. no. 41-5699) and DAPI (blue). Within the stratified squamous epithelium of the tonsil, CLA-positive epithelial cells localize to the surface of the tonsil and Ki-67-positive (appear aqua when co-staining with DAPI), dividing epithelial cells are found near the base of the epithelium, bordering the lymph tissue.

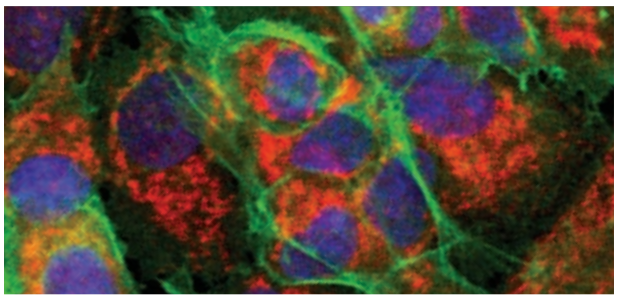
Detection Methods – Colorimetric or Multicolor

Conventional colorimetric staining (left images) is usually limited to two colors and two antigens while multicolor staining (right image) with fluorescent-labeled antibodies (Organic dyes/Nanocrystals) allows for the detection of multiple target antigens in the same tissue at the same time.



Colorimetric staining using a 3-step detection method

Infiltrating lymphocytes are visualized within human breast cancer tissue, using Mouse IgG1 K Isotype Control (left) or Anti-Human CD45 Purified (right) followed by Anti-Mouse IgG Biotin, Streptavidin-HRP and DAB visualization. Nuclei are counterstained with hematoxylin.



Multicolor Staining using a 3-step detection method

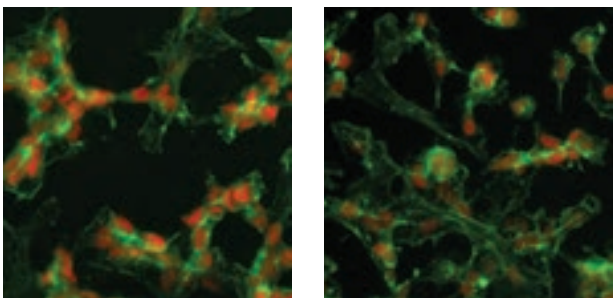
MCF7 breast adenocarcinoma cells are visualized by ICC staining with Anti-Human Mcl-1 Purified (cat. no. 14-6701) followed by Anti-Mouse IgG1 Biotin and Streptavidin eFluor® 570 (red, cat. no. 41-4317). Actin filaments are stained with Phalloidin eFluor® 520 (green, cat. no. 59-6559) and nuclei are counterstained with DAPI.

Detection Protocols – Direct or Indirect

Direct and indirect are the two main immunofluorescence detection protocols. The most common method used is indirect which involves two to three steps and provides greater signal amplification when the antigen is of low abundance, however there is potential for cross-reactivity. Additionally multiplexing capability is limited as there is a need to locate suitable primary antibodies raised in different species with different isotypes. Benefits of direct immunofluorescence include shorter sample staining times and the use of multiple antibodies raised in the same species.

Direct Detection

3-Step Detection

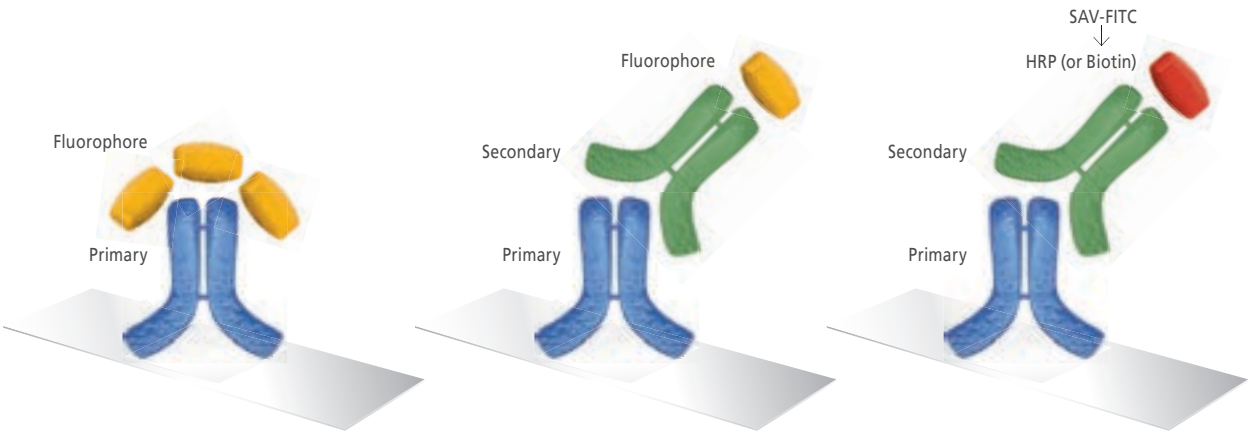


Anti-Human/Mouse Sox2 eFluor® 570 (left, red, cat. no. 41-9811) and Anti-Human/Mouse Sox2 Purified, (cat. no. 14-9811) followed by Anti-Rat IgG2a Biotin and Streptavidin eFluor® 570 (right, red, cat. no. 41-4317). Actin filaments are stained with Phalloidin eFluor® 520 (green, cat. no. 59-6559).

Advantages of Direct Conjugates

eBioscience is known for innovative product designs and novel research tools. We therefore provide a broad offering of antibodies directly conjugated to fluorophores ideal for fluorescence imaging. With our commitment to high quality and performance, all products are QC-validated in their intended application(s). Therefore our direct conjugates enable you to confidently and easily perform multicolor immunostaining with the following advantages:

- **Simple and fast** – evaluate multiple antigens in just one antibody staining step
- **Cost effective** – no need for additional secondary antibodies or detection reagents
- **Best for multiplexing**



Direct Protocol | Indirect 2-Step Protocol | Indirect 3-Step Protocol

Advantages of Indirect Staining

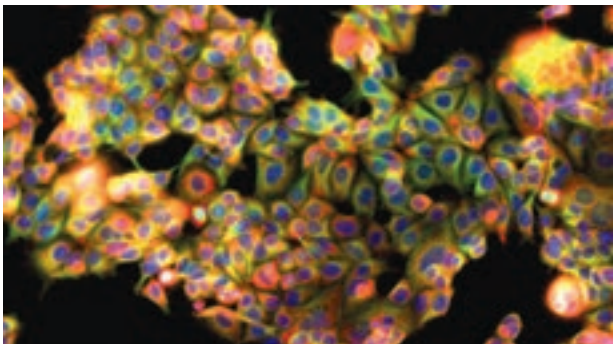
Indirect staining involves multiple steps and is ideal for signal amplification when the antigen of interest is of low abundance. Purified (unconjugated) or biotin antibodies validated for use in microscopy are suitable for 2- and 3-step staining. Choosing these reagents in this format offers the following advantages:

- **Increased signal amplification** – Good for low abundance antigens
- **Flexibility** – Use with a variety of detection reagents

Advantages of Multicolor Imaging

Multicolor imaging is ideal for simultaneous evaluation of multiple antigens within a complex tissue, where it is equally critical 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 multicolor imaging offers advantages including:

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



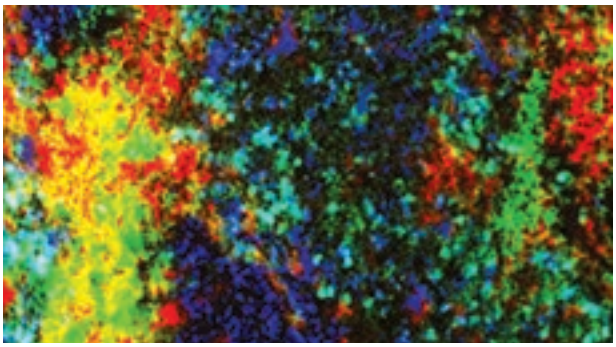
Multicolor Staining with eFluor® Organic Dyes

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. 42-9898) and DAPI (blue).

Advantages of Multispectral Imaging

Multispectral imaging is a sophisticated detection method, ideal for the advanced user looking to evaluate multiple antigens within a complex tissue, while maintaining the ability to distinguish each antigen clearly and accurately. Advantages include:

- **Multiplexing capability** – combine fluorophore-conjugated antibodies with overlapping emission spectra



Multispectral imaging using a one-step direct method of staining.

Immune cell markers are highlighted to show the structural and functional relationship within splenic tissue. Mouse spleen stained using Anti-Mouse CD4 eFluor® 625NC (green, cat. no. IH94-0042), Anti-Mouse CD11b eFluor® 605NC (aqua), Anti- Mouse CD11c eFluor® 650NC (red, cat. no. IH95-0114) and Anti-Mouse CD45R (B220) eFluor® 525NC (blue). Nuance multispectral imaging systems (Caliper Life Sciences, Woburn, MA).

eFluor® Nanocrystals & Organic Dyes for Fluorescent Imaging

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.

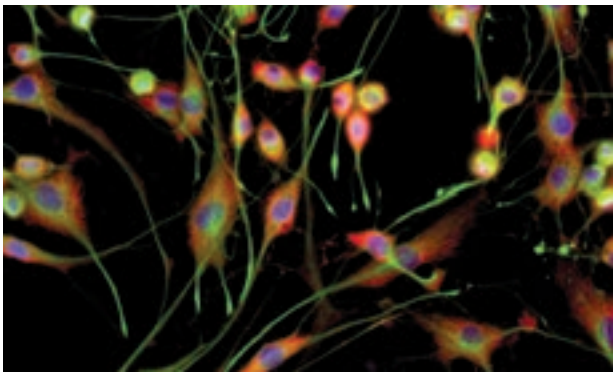
With the introduction of our eFluor® brand of fluorophores, including eFluor® Nanocrystals and eFluor® Organic Dyes, eBioscience offers the widest selection of dyes and fluorometric reagents available.

eFluor® Organic Dyes

- Direct conjugates and secondary reagents for multiple applications
- Robust performance for all work flow scenarios
- Compatible with nanocrystals
- Named according to peak emission

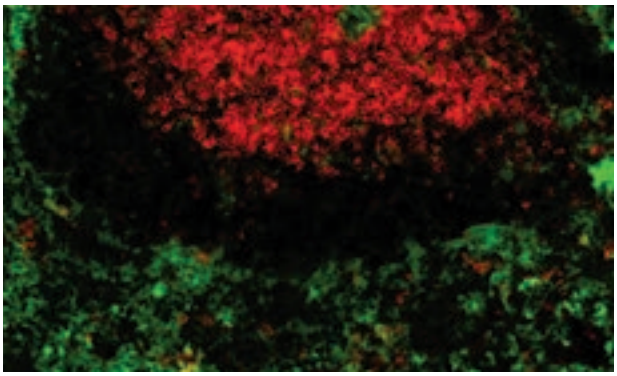
eFluor® Nanocrystals (NC)

- Direct conjugates for multiple applications
- Narrow emission spectra and excellent photostability
- Unique spectral characteristics
- Minimal impact on normal cell function



eFluor® Organic Dye conjugated antibodies

Anti-Oligodendrocyte marker O1 eFluor® 660 and Vimentin eFluor® 570. O1, a marker of more mature oligodendrocyte precursor cells is often used to determine differentiation stages of oligodendrocyte cells. Differentiated rat oligodendroglioma cells are visualized by ICC staining with Anti-Oligodendrocyte marker O1 (red, cat. no. 50-6506) eFluor® 660). Intermediate filaments are stained with Anti-Vimentin eFluor® 570 (green, cat. no. 41-9897). Nuclei are counterstained with DAPI.



eFluor® Nanocrystal-conjugated antibodies

eFluor Nanocrystal-conjugated Antibodies for IHC on Frozen Tissue. Frozen mouse spleen stained with Anti-Mouse CD106 (VCAM-1) eFluor® 605NC (green, cat no. IH93-1061) and Anti-Mouse CD8a eFluor® 650NC (red, cat. IH95-0081).

Choosing Fluorophores for Multicolor Experiments

Fluorophore Compatibility Table for Multicolor Experiments

	DAPI	FITC GFP Alexa Fluor® 488 eFluor® 520	eFluor® 570 Alexa Fluor® 555 TRITC	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
eFluor® 520 FITC GFP Alexa Fluor® 488	Yes		Yes	Yes	Yes	Yes	Yes	Yes
eFluor® 570 Alexa Fluor® 555 TRITC	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

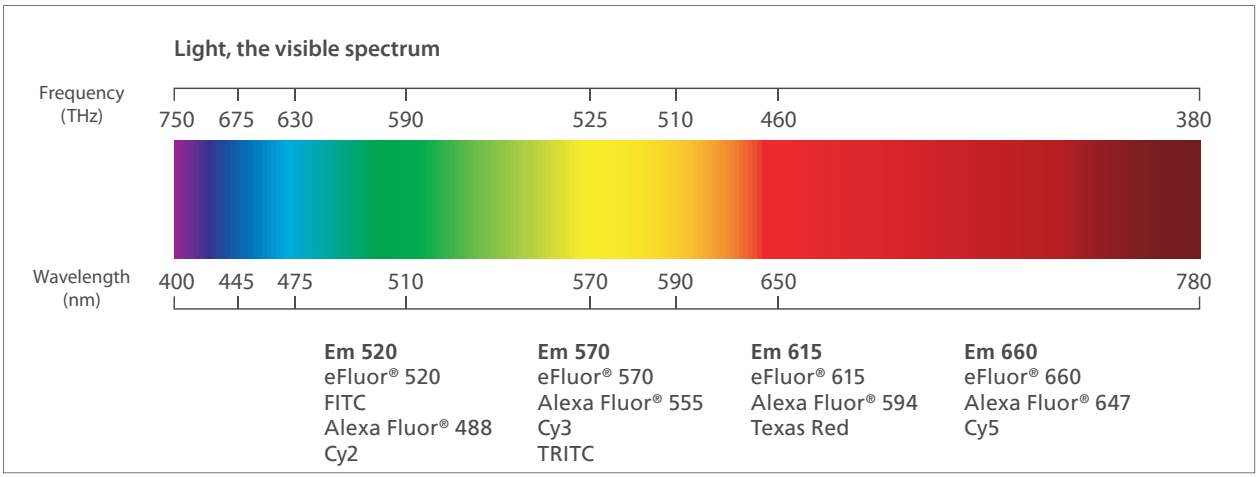
Dye	Excitation (nm)	Dichroic	Emission (nm)
DAPI	365/50	400LP	450/65
eFluor® 520, FITC, GFP, Alexa Fluor® 488	475/40	510LP	535/45
eFluor® 570, TRITC, Alexa Fluor® 555	546/12	570LP	585/40
eFluor® 605NC	425/45	475LP	600/20
eFluor® 615, Texas Red, Alexa Fluor® 594	560/55	585LP	645/75
eFluor® 625NC	425/45	475LP	620/20
eFluor® 650NC	425/45	475LP	655/20
eFluor® 660, Alexa Fluor® 647, Cy5	620/60	660LP	700/75

Direct Conjugates for IHC and ICC

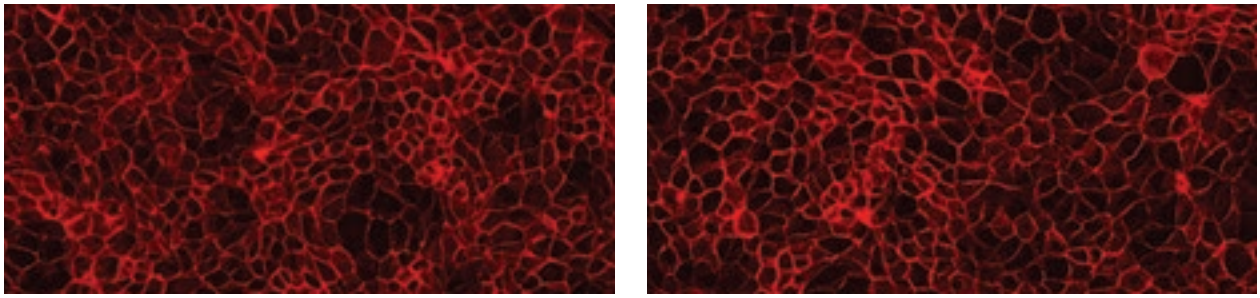
- eFluor® Organic Dyes
- Organic Dyes
- Multicolor Imaging for Stem Cell and Cancer Research

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 multicolor staining protocols.



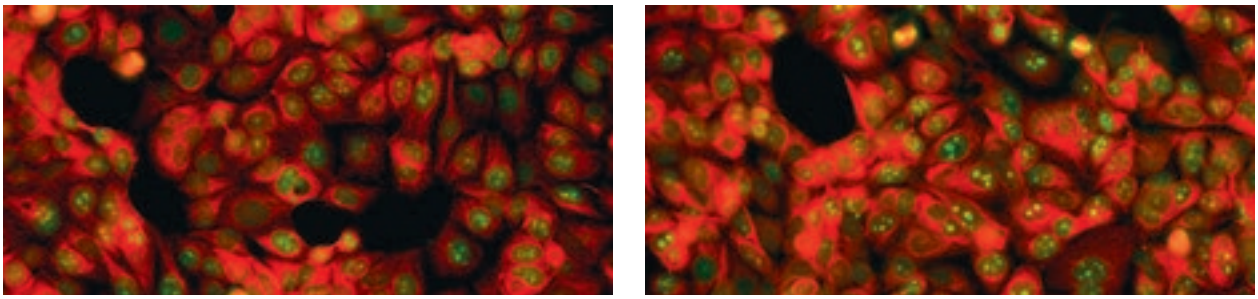
eFluor® 570 – An alternative for Alexa Fluor® 555



Comparison of Anti-CD324 (E-Cadherin) eFluor® 570 and Anti-CD324 (E-Cadherin) Alexa Fluor® 555

MDCK cells fixed, permeabilized and stained with Anti-CD324 eFluor® 570 (left, 408ms; cat. no. 41-3249) or Anti-CD324 Alexa Fluor® 555 (right, 587ms). Nuclei are stained with DAPI. When using eFluor® 570 antibody conjugates, we recommend a filter set that will capture the 570 emission wavelength (for example, Excitation 545/25, 565LP, Emission 605/70). A standard Alexa Fluor® 555 or TRITC filter set is acceptable.

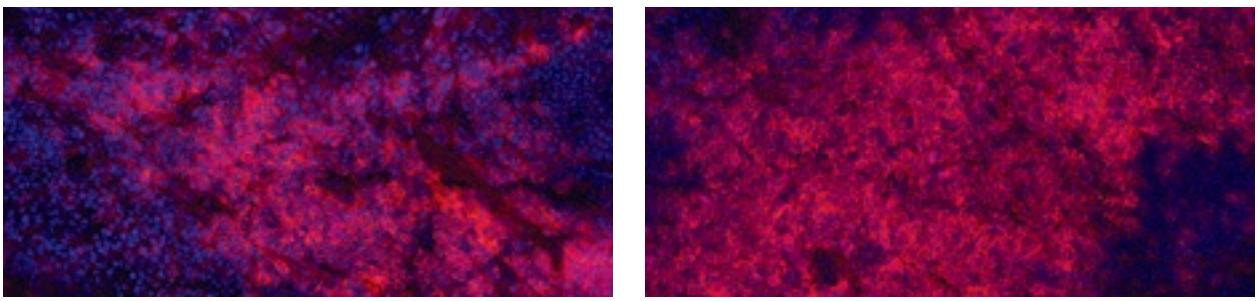
eFluor® 615 – Designed for fluorescence imaging; offering excellent resolution and photostability



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) 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 set that will capture the 615 emission wavelength (for example, Excitation 560/55, 585LP, Emission 645/75). A standard Alexa Fluor® 594 filter set is acceptable.

eFluor® 660 – Excellent specificity and photostability; an alternative for Alexa Fluor® 647

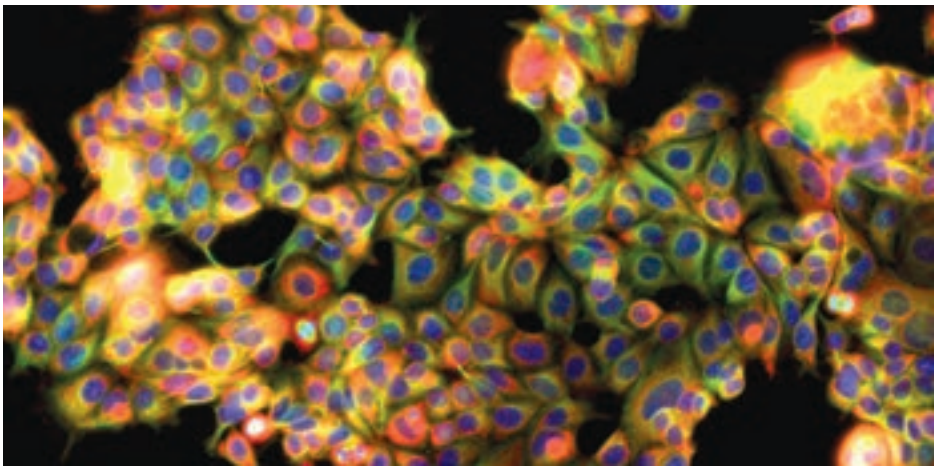


Comparison of Anti-Mouse CD4 eFluor® 660 and Anti-Mouse CD4 Alexa Fluor® 647

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). Nuclei were stained with DAPI.

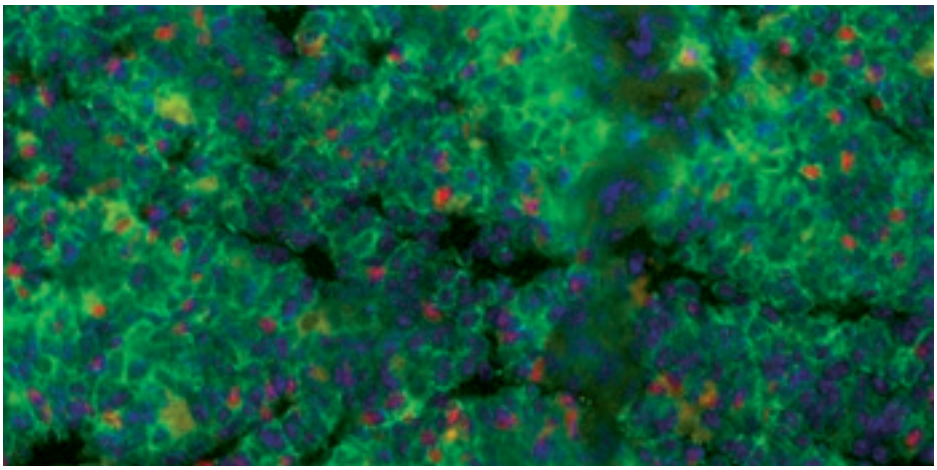
Organic Dyes

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).

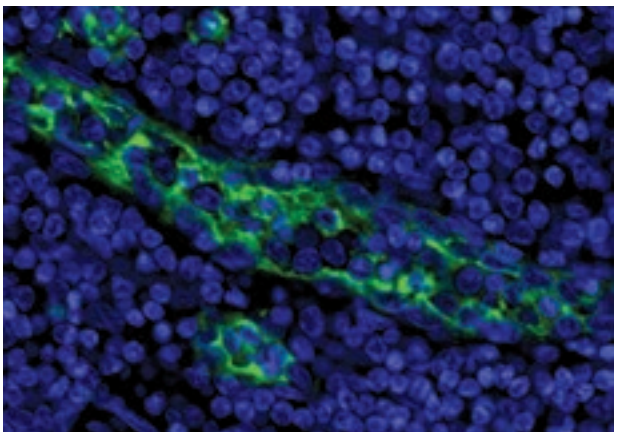


CD4 FITC and Foxp3 eFluor® 615

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).

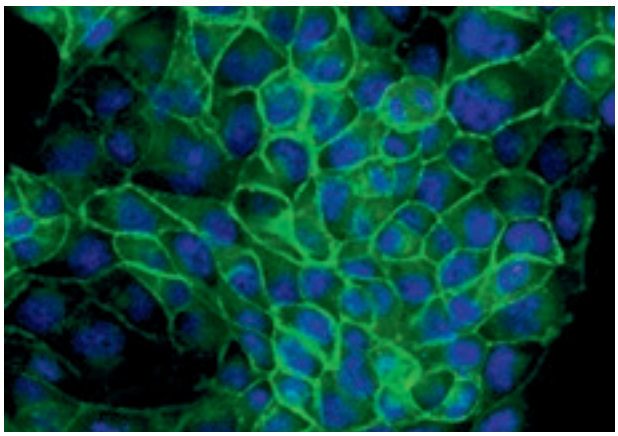
Multicolor Imaging for Stem Cell and Cancer Research

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 regularly present featured new reagents on our website, and invite you to visit eBioscience.com for additional offerings.



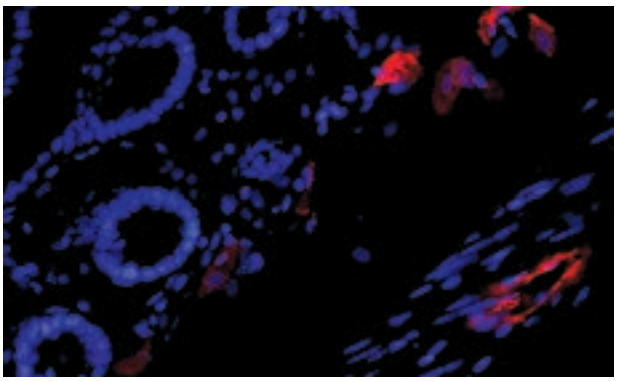
High Endothelial Venule Marker Alexa Fluor® 488

Anti-Human/Mouse High Endothelial Venule Marker Alexa Fluor® 488 (cat. no. 53-6036). Meca79 detects a glycoprotein expressed on the luminal surface and in the cytoplasm of high endothelial venules (HEV), localized sites of lymphocyte infiltration and adhesion. Expression is visualized in FFPE human tonsil and nuclei are stained with DAPI.



E-Cadherin (CD324) Alexa Fluor® 488

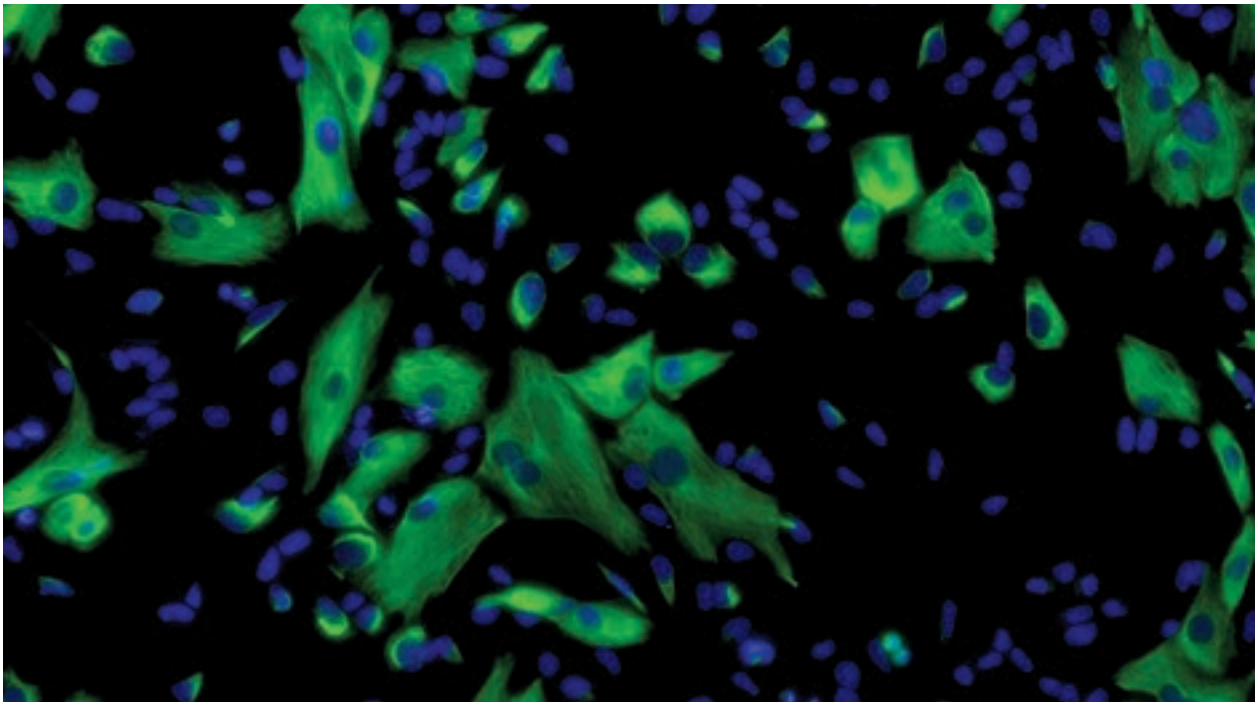
E-Cadherin, an adhesion molecule that can display multiple functions in stem cell and cancer / EMT biology, is visualized in fixed, permeabilized MDCK cells stained using Anti-E-Cadherin Alexa Fluor® 488 (cat. no. 53-3249). Nuclei are counterstained with DAPI.



LYVE-1 eFluor® 660

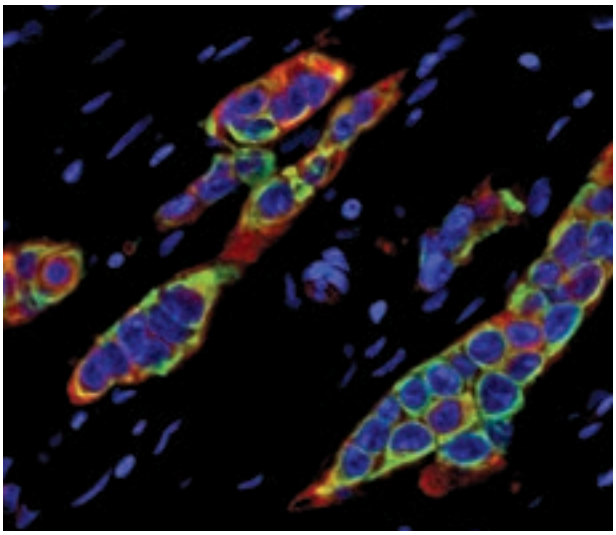
LYVE-1, a receptor for PDGF-B and VEGF-A, visualized by immunohistochemical staining of mouse intestine using Anti-Mouse LYVE-1 eFluor® 660 (cat. no. 50-0443) and DAPI.

Directly conjugated antibodies are simple and fast to use



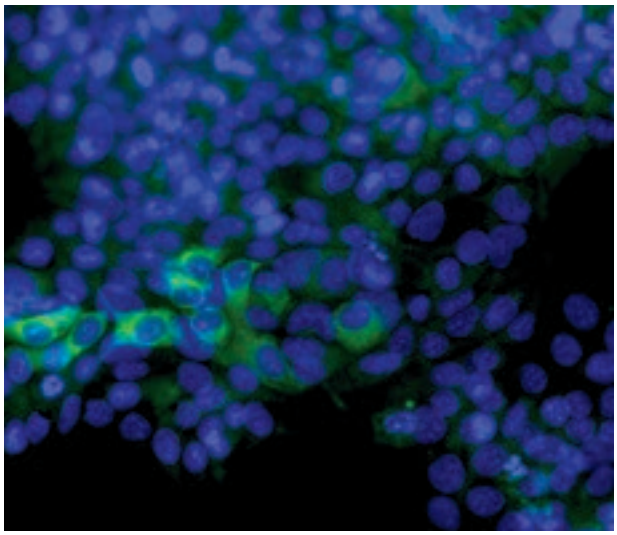
Vimentin FITC

Vimentin, an intermediate filament expressed in subsets of 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 Heat Shock Protein 27 eFluor® 660 and Pan-Cytokeratin (AE1/AE3) Alexa Fluor® 488

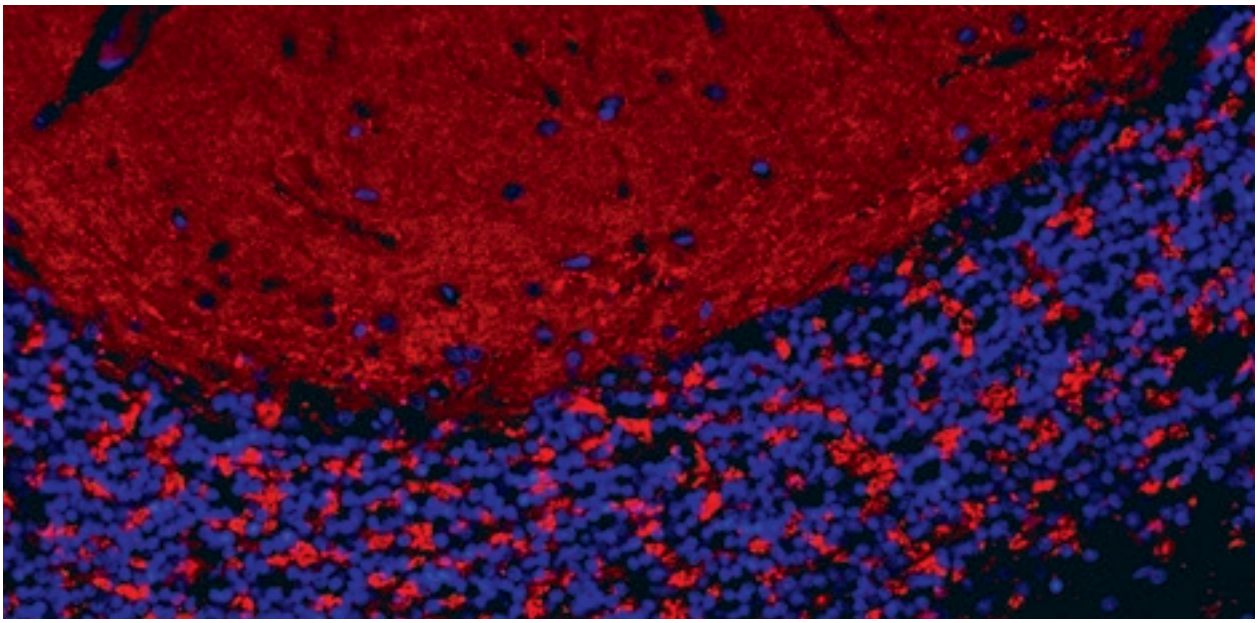
Anti-Human Heat Shock Protein 27 eFluor® 660 (red, cat. no. 50-9112), known to be upregulated in breast cancer is co-expressed with the cytoskeletal marker Anti-Pan-Cytokeratin Alexa Fluor® 488 (green, cat. no. 53-9003) in the cytoplasm of ductal epithelial cells in formalin-fixed paraffin embedded human infiltrating ductal carcinoma. Nuclei are counterstained with DAPI.



Human Chorionic Gonadotropin Alexa Fluor® 488

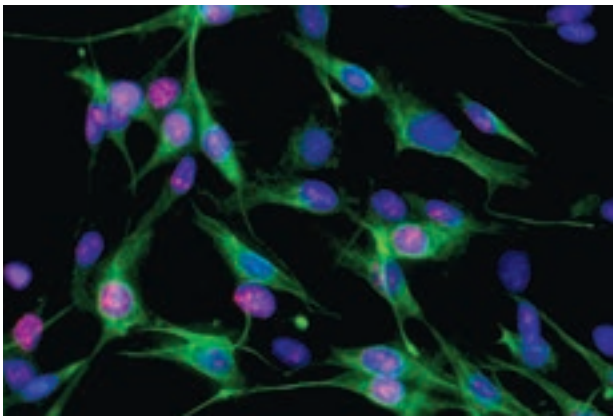
Chorionic Gonadotropin (hCG), an important regulator of angiogenesis and activator of the PI3K/mTOR pathway, visualized in fixed, permeabilized BeWo cells stained using Anti-Human Chorionic Gonadotropin (hCG) Alexa Fluor® 488 (cat. no. 53-6508). Nuclei are counterstained with DAPI.

Direct conjugates work best for muticolor imaging



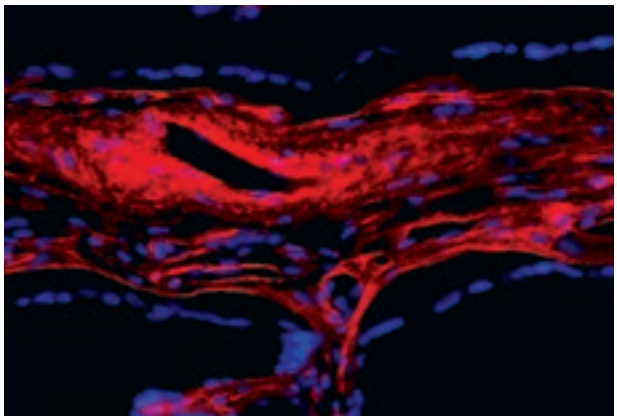
Synaptophysin eFluor® 615

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).



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.



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).

eFluor® & Organic Dyes

Antigen Name	Clone	Species	FITC	Alexa Fluor® 488	eFluor® 570	eFluor® 615	Alexa Fluor® 647	eFluor® 660
Actin (muscle)	HHF35	Bovine, Canine, Guinea Pig, Horse, Human, Mouse, Pig, Rat		53-6496				
AIRE*	5H12	Mouse		53-5934				50-5934
alpha Tubulin*	DM1A	Human, Mouse		53-4502		42-4502		
alpha-Fetoprotein	AFP3	Human		53-6583				
Blood Group Antigen H (O) Type 1	17-206	Human		53-9810				
CD1c	L161	Human	11-0015					
CD4*	RM4-5	Mouse				42-0042		
CD8a	53-6.7	Mouse				42-0081		50-0081
CD11c	N418	Mouse				42-0114		
CD15	HI98	Human				42-0159		
CD20	L26	Human		53-0202		42-0202		50-0202
CD23	EBVCS2	Human	11-0238					
CD45R	RA3-6B2	Human, Mouse				42-0452		
CD45RB	PD7/26	Human						50-9458
CD74	VIC-Y1	Human						50-0747
CD102 (ICAM-2)	3C4 (mIC2/4)	Mouse		53-1021				
CD104 (Integrin beta 4)	439-9B	Human						50-1049
CD134 (OX40)	ACT35	Human	11-1347					
CD144 (VE-Cadherin)	BV13	Mouse		53-1441				
CD144 (VE-Cadherin)	16B1	Human		53-1449				
CD148 (DEP-1, HPTP-eta, & PTP receptor type J, PTPRJ)	A3	Human	11-1489					
CD227 (Mucin 1)	SM3	Human		53-9893		42-9893		
CD324 (E-cadherin)*	DECMA-1	Human		53-3249			51-3249	50-3249
Chorionic Gonadotrophin*	FB12	Human		53-6508				
Collagen Type IV*	1042	Human					51-9871	
Cutaneous Lymphocyte Antigen (CLA)* (pge 1)	Heca-452	Human, Mouse						50-9857
Cytokeratin 7	LP5K	Human				42-9005		
Cytokeratin 8*	LP3K	Human	11-9938			42-9938		
Cytokeratin 19	BA17	Human	11-9998		41-9998	42-9898		
Pan-Cytokeratin	AE1/AE3			53-9003	42-9003	41-9003		
ErbB4 (Her4)	HFR1	Human, Mouse				41-9687		
Fibronectin	FN-3	Human		53-9869				
Foxp3*	FJK-16s	Mouse, Rat	11-5773		41-5773	42-5773		
Foxp3	236A/E7	Human		53-4777				
Foxp3	PCH101	Human	11-7776					
Glial Fibrillary Acidic Protein (GFAP)	GA5	Chicken, Human, Mouse, Pig, Rabbit, Rat		53-9892		42-9892		

*Representative data can be viewed in this brochure

eFluor® & Organic Dyes

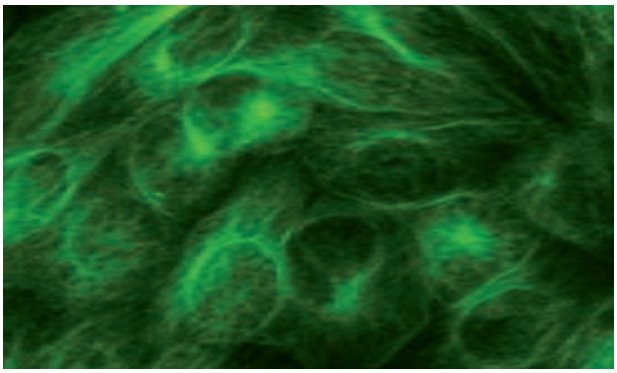
Antigen Name	Clone	Species	FITC	Alexa Fluor® 488	eFluor® 570	eFluor® 615	Alexa Fluor® 647	eFluor® 660
Granzyme B	496B	Human				42-8889		
Grim-19	1A8	Human, Mouse, Rat	11-9937					
Heat Shock Protein 27*	STRSN	Human						50-9112
High Endothelial Venule Marker*	MECA-79	Human, Mouse		53-6036				
HMGB1	Polyclonal	Canine, Human, Mouse				42-9900		
Ki-67*	20Raj1	Human	11-5699		41-5699	42-5699	51-5699	50-5699
Ki-67	SolA15	Mouse, Rat	11-5698		41-5698	42-5698	51-5698	50-5698
Lyve-1*	ALY7	Mouse		53-0443	41-0443	42-0443		50-0443
Myogenin	F5D	Canine, Human, Mouse, Rat		53-5643				
Myosin Heavy Chain	MF20	Bovine, Canine, Chicken, Chimpanzee, Guinea Pig, Human, Mouse, Rabbit, Rat		53-6503				50-6503
Nestin	10C2	Human		53-9843				
Neural/Glial Antigen 2 (NG2)	9.2.27	Human		53-6504				
OCT3/4	EM92	Human, Mouse		53-5841	41-5841			50-5841
Oligodendrocyte Marker O1*	O1	Human, Mouse, Rat					51-6506	50-6506
Pan-Cytokeratin*	AE1/AE3	Human, Mouse, Rat		53-9003		42-9003		
PCNA	PC10 (a.k.a. 3F81)	Human				42-9910		
PDX1	2A12	Human					51-6500	
Perforin	dG9 (delta G9)	Human	11-9994					
Placental Alkaline Phosphatase	8B6	Human					51-9870	50-9870
Pokemon (LRF)	13E9	Human					51-3309	50-3309
Runx3	R3-5G4	Human						50-9817
Smooth Muscle Myosin	SMMS-1	Bovine, Canine, Rat					51-6400	
Snail1	20C8	Human		53-9859				
Sox2*	Btjce	Human, Mouse		53-9811	41-9811			50-9811
SSEA-1	MC-480	Human, Mouse		53-8813				
SSEA-3	MC-631	Human, Mouse		53-8833				
SSEA-4	MC-813-70	Human		53-8843	41-8843			50-8843
Synaptophysin*	EP10	Human				42-6525	51-6525	50-6525
Trop-2	MR54	Human		53-6024				
Vimentin*	V9	Chicken, Human, Rat	11-9897		41-9897	42-9897		

*Representative data can be viewed in this brochure

Purified Antibodies & Biotin Conjugates for IHC and ICC

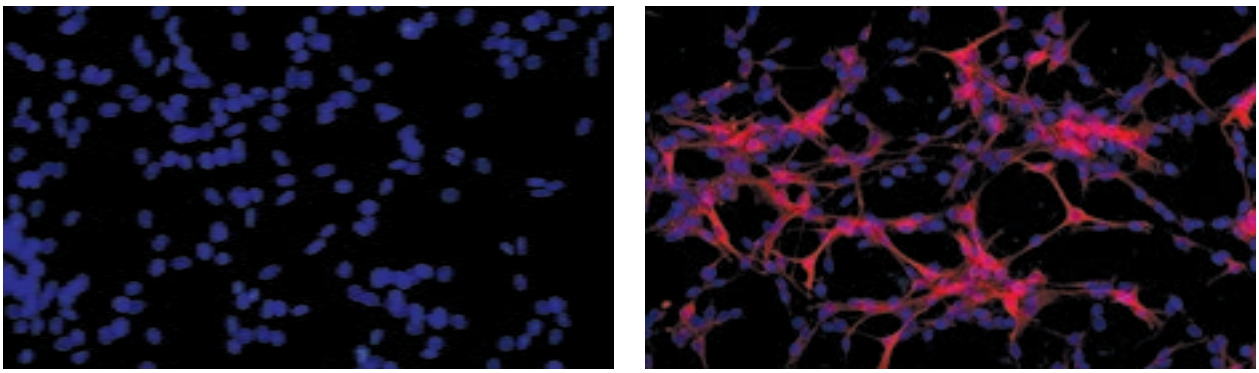
eBioscience specializes in quality antibodies against human, mouse and rat targets for immunology, cancer biology and stem cell research. Antibodies published and tested for use in microscopy are available in a variety of formats suitable for 2- and 3-step staining. Choosing these reagents in their purified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



Indirect (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).



Indirect (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.

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
Acidic Cytokeratin	AE1	Canine, Chicken, Human, Mouse, Rat, Rhesus	14-9001	
Actin (muscle)	HHF35	Bovine,Canine,Guinea Pig, Horse, Human, Mouse, Pig, Rat	14-6496	
Activation-Induced Cytidine Deaminase (AID)	mAID-2	Human, Mouse	14-5959	
AIRE	TM-724	Human	14-9534	
AIRE	5H12	Mouse	14-5934	
alpha Tubulin*	DM1A	Human, Mouse	14-4502	13-4502
alpha-Fetoprotein	AFP3	Human	14-6583	
alpha-Fetoprotein	1.00E+08	Human	14-9499	
Aminopeptidase P	JG12	Rat	BMS1104	
APO-1/Fas (APO 1-1)	APO-1-1	Human	BMS151	
Apoptosis Inducing Factor (AIF)	Polyclonal	Human, Mouse, Rat	14-6050	
Asialo-GM1 Functional Grade	Polyclonal	Bovine, Hamster, Human, Mouse, Rat	16-6507	
Basic Cytokeratin	AE3	Canine, Chicken, Human, Mouse, Rabbit, Rhesus	14-9000	
Bax	2D2	Human	BMS162	
Bax	6A7	Human, Mouse, Rat	BMS163	
Bcl-2	Bcl-2/100	Human	14-1028	
Bcl-6	GI191E	Human, Mouse	14-9887	
beta-Catenin	Polyclonal	Human, Mouse, Rat	14-6765	
beta-Galactosidase Fusion Protein	Polyclonal		14-6773	
Blimp1	6D3	Human, Mouse	14-5963	
Blood Group Antigen H (O) Type 1	17-206	Human	14-9810	13-9810
BP-1	6C3	Mouse	14-5891	
BrdU	BU20A		14-5071	
P-Cadherin	12H6	Human	14-9873	
Caspase 12	14F7	Mouse	14-9950	
Cathespin L	33-2	Human	BMS1032	
CCL2 (MCP-1)	2H5	Human, Mouse, Rat	14-7096	
CCL2 (MCP-1)	5D3-F7	Human	14-7099	
CD1a (Leu-6, T6, R4)	HI149	Human	14-0019	
CD1b (R1)	SN13	Human	14-0018	
CD1d (R3, R3G1)	51.1	Human	14-0016	
CD1d (R3, R3G1)	1B1	Mouse	14-0011	
CD2 (LFA-2, Ly-37)	RPA-2.10	Human, Non-Human Primate	14-0029	
CD2 (LFA-2, Ly-37)	RM2-5	Mouse	14-0021	
CD3	17A2	Mouse	14-0032	
CD3	G4.18	Rat	14-0030	
CD3	17A2	Mouse	14-0032	
CD3	UCHT1	Human	14-0038	
CD3e (CD3 eplison)	145-2C11	Mouse	14-0031	
CD3e (CD3 eplison)	500A2	Mouse	14-0031	
CD4 (L3T4, Ly-4)	OX35	Rat	14-0040	
CD4 (L3T4, Ly-4)	GK1.5	Mouse	14-0041	
CD4 (L3T4, Ly-4)	RM4-5	Mouse	14-0042	
CD4 (L3T4, Ly-4)	RPA-T4	Human	14-0049	
CD4 (L3T4, Ly-4)	CRRY77	Human	14-0045	
CD5 (Ly-1, Ly-12, Ly-A, Lyt-1)	53-7.3	Mouse	14-0051	
CD5 (Ly-1, Ly-12, Ly-A, Lyt-1)	UCHT2	Human	14-0059	13-0059
CD8a (CD8 alpha, Ly-2, Ly-35, Ly-B, Lyt-2)	53-6.7	Mouse	14-0081	13-0081
CD8a (CD8 alpha, Ly-2, Ly-35, Ly-B, Lyt-2)	OX8	Rat	14-0084	
CD8a (CD8 alpha, Ly-2, Ly-35, Ly-B, Lyt-2)	RPA-T8	Human	14-0088	
CD8a (CD8 alpha, Ly-2, Ly-35, Ly-B, Lyt-2)	HIT8a	Human	14-0089	

*Representative data can be viewed in this brochure

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
CD8a (CD8 alpha, Ly-2, Ly-35, Ly-B, Lyt-2)	C8/144B	Human	14-0085	
CD8b (CD8 beta, Ly-3)	341 (341)	Rat	14-0080	
CD8b (CD8 beta, Ly-3)	H35-17.2	Mouse	14-0083	
CD9 (MIC3, MRP-1)	SN4 (SN4 C3-3A2)	Human	14-0098	
CD10 Common Acute Lymphocytic Leukemia antigen (CALLA), Neprilysin	SN5c	Human		13-0108
CD11a (Integrin alpha L, ITGAL, Lymphocyte Function-Associated Antigen, Type 1 alpha (LFA-1 alpha), LFA1A)	HI111	Human	14-0119	
CD11a (Integrin alpha L, ITGAL, Lymphocyte Function-Associated Antigen, Type 1 alpha (LFA-1 alpha), LFA1A)	M17/4	Mouse	14-0111	
CD11a (LFA-1alpha)	R7.1	Human	BMS102	BMS102BT
CD11b (Integrin alpha M, Mac-1 alpha, Complement Receptor 3 alpha)	ICRF44	Human	14-0118	
CD11b (Integrin alpha M, Mac-1 alpha, Complement Receptor 3 alpha)	M1/70	Mouse	14-0112	36-0112
CD11b (Mac-1alpha)	LM2/1	Human	BMS104	
CD11c (Integrin alpha X, Integrin aX, ITGAX, p150/95, leu M5 alpha)	N418	Mouse	14-0114	
CD11c (Integrin alpha X, Integrin aX, ITGAX, p150/95, leu M5 alpha)	3.9	Human	14-0116	
CD13 (Alanyl Aminopeptidase (ANPEP), Aminopeptidase N (PEPN))	WM-15	Human	14-0138	
CD14	61D3	Human	14-0149	
CD15 (Fucosyl Transferase 4 (FUT4), Alpha-3-Fucosyltransferase (FCT3A))	HI98	Human	14-0159	13-0159
CD18 (Integrin beta 2, ITGB2)	M18/2	Mouse	14-0181	
CD18 (LFA-1beta)	R3.3	Human	BMS103	
CD19 (Integrin beta 2, ITGB2)	LC1	Human	14-0190	
CD19 (Integrin beta 2, ITGB2)	1D3	Mouse	14-0193	
CD19 (Integrin beta 2, ITGB2)	HIB19	Human	14-0199	
CD20 (B1, Leu-16)	2H7	Human	14-0209	13-0209
CD20 (B1, Leu-16)	L26	Human	14-0202	
CD20 (B1, Leu-16)	2H7	Human	14-0209	13-0209
CD22 (Sialic Acid-Binding Immunoglobulin-Like Lectin 2, SIGLEC2)	4KB128	Human	14-0229	
CD23 (Low Affinity IgE Receptor, FceRII)	B3B4	Mouse	14-0232	
CD23 (Low Affinity IgE Receptor, FceRII)	EBVCS2	Human	14-0238	
CD24 (Heat Stable Antigen, HAS)	M1/69	Mouse	14-0242	
CD25 (Interleukin-2 Receptor alpha, IL-2Ra, p55)	OX39	Rat	14-0390	13-0390
CD25 (Interleukin-2 Receptor alpha, IL-2Ra, p55)	7D4	Mouse	14-1509	
CD26 (Dipeptidyl peptidase IV, ADCP 2, ADABP, TP 103)	4H3	Human	BMS1023	
CD26 (Dipeptidyl peptidase IV, ADCP 2, ADABP, TP 103)	M-A261	Human	BMS143	
CD26	VU-1D9	Human	BMS171	
CD27 (TNFRSF7)	LG.3A10	Human, Mouse	14-0272	
CD28	37.51	Mouse	14-0281	
CD28	CD28.2	Human	14-0289	
CD29 (Integrin Beta 1, ITGB1, Fibronectin Receptor Beta, VLA-Beta)	HMb1-1	Mouse,Rat		13-0291
CD29 (Integrin Beta 1, ITGB1, Fibronectin Receptor Beta, VLA-Beta)	KMI6	Mouse	14-0292	

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
CD29 (Integrin Beta 1, ITGB1, Fibronectin Receptor Beta, VLA-Beta)	TS2/16	Human	14-0299	
CD30 (TNFRSF8, Ki-1)	Ber-H2	Human	14-0309	
CD31 (PECAM-1)	390	Mouse	14-0311	
CD31 (PECAM-1)	Gi18	Human	BMS137	
CD31 (PECAM-1)	WM-59	Human	14-0319	
CD33 (Sialic Acid-Binding Immunoglobulin-Like Lectin 3, SIGLEC3)	WM-53	Human	14-0338	
CD34	RAM34	Mouse	14-0341	
CD38 (ADP-Ribosyl Cyclase, Cyclic ADP-Ribose Hydrolase)	90	Mouse	14-0381	
CD38 (ADP-Ribosyl Cyclase, Cyclic ADP-Ribose Hydrolase)	HIT2	Human	14-0389	
CD39 (Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1)	A1	Human	14-0399	
CD40 (TNFRSF5)	3B2	Human	BMS197	
CD40 (TNFRSF5)	5C3	Human	14-0409	
CD40 (TNFRSF5)	HM40-3	Mouse, Rat	14-0402	
CD41a (Integrin alpha IIb, platelet GPIIb)	HIP8	Human	14-0419	
CD42b	HIP1	Human	14-0429	
CD42d	1C2	Mouse, Rat	14-0421	
CD44 (Pgp-1, MDU3, Hermes, Hyaluronate receptor)	IM7	Human, Mouse	14-0441	
CD45 (LCA)	30-F11	Mouse	14-0451	
CD45 (LCA)	CD45-2B11	Human	14-9457	13-9457
CD45 (LCA)	HI30	Human	14-0459	
CD45.2 (C57BL/6, Balb/c, Ly5.2)	104	Mouse	14-0454	13-0454
CD45R (B220, Ly-5, Lyt-4, T200)	RA3-6B2	Mouse	14-0452	
CD45R (B220, Ly-5, Lyt-4, T200)	HIS24	Rat	14-0460	
CD45RA	HI100	Human	14-0458	
CD45RB	C363.16A	Mouse	14-0455	
CD45RB	PD7/26	Human	14-9458	
CD45RO	UCHL1	Human	14-0457	
CD47 (integrin-associated protein IAP neurophilin)	miap301	Mouse	14-0471	
CD49b (Integrin alpha 2)	HMa2	Mouse	14-0491	
CD49d (Integrin alpha 4)	R1-2	Mouse	14-0492	
CD49d (Integrin alpha 4)	9F10	Human	14-0499	
CD49e (Integrin alpha 5)	SAM-1	Human	14-0496	
CD49f (Integrin alpha 6)	GoH3	Human, Mouse	14-0495	13-0495
CD50 (ICAM-3)	CBR-IC3/1	Human	BMS111	
CD51/CD61 (Integrin alpha v/beta 3)	23C6	Human	14-0519	
CD54 (ICAM-1)	YN1/1.7.4	Mouse	14-0541	
CD54 (ICAM-1)	KAT-1	Mouse	14-0541	
CD54 (ICAM-1)	HA58	Human	14-0549	
CD54 (ICAM-1)	RR1/1	Human	BMS108	
CD56 (NCAM)	CMSSB	Human	14-0567	13-0567
CD57 (Leu7, NK1, NK-1)	TBO1	Human	16-0577	
CD61 (Integrin beta 3)	2C9.G3	Mouse, Rat	14-0619	
CD62E (E-selectin)	CL2	Human	BMS110	
CD62E (E-selectin)	CL-37	Human	BMS1014	
CD62E (E-Selectin)	P2H3	Human	14-0627	
CD62L (L-Selectin)	DREG-55	Human	BMS121	BMS121BT
CD62L (L-Selectin)	DREG-56	Human	14-0629	
CD62L (L-Selectin)	MEL-14	Mouse	14-0621	
CD62P (P-Selectin)	AK-4	Human	14-0628	

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
CD64 (Fc gamma Receptor 1)	10.1	Human	14-0649	
CD66a (CEACAM1)	CC1	Mouse	14-0661	13-0661
CD66e (CEA)	CB30	Human	14-0669	
CD68 (macrosialin)	Y1/82A	Human	14-0689	
CD68 (macrosialin)	KP1	Human	14-0688	
CD69 (Very Early Activation Antigen, VEA)	H1.2F3	Mouse	14-0691	
CD73 (Ecto-5'-nucleotidase, NT5E)	TY/11.8	Mouse	14-0731	
CD74 (Invariant chain, MHC Class II-associated, Ia-gamma, Receptor for Macrophage Migration Inhibitory Factor)	LN2	Human		13-0749
CD74 (Invariant chain, MHC Class II-associated, Ia-gamma, Receptor for Macrophage Migration Inhibitory Factor)	VIC-Y1	Human	14-0747	
CD79a (Ig-alpha, mb-1, Ly-54)	24C2.5	Mouse	14-0791	
CD80 (B7-1)	16-10A1	Mouse	14-0801	
CD84 (SLAM Family)	2G7	Human		13-0849
CD86 (B7-2)	24F	Rat	14-0860	
CD86 (B7-2)	GL1	Mouse	14-0862	
CD90 (Thy-1)	G7	Mouse	14-0901	
CD90 (Thy-1)	5.00E+10	Human	14-0909	
CD90.1 (Thy-1.1)	HIS51	Mouse, Rat	14-0900	
CD90.2 (Thy-1.2)	53-2.1	Mouse	14-0902	
CD90.2 (Thy-1.2)	30-H12	Mouse	14-0903	
CD93 (AA4.1)	AA4.1	Mouse	14-5892	
CD94 (KLRD1, KP43)	DX22	Human	14-0949	
CD95 (APO-1/Fas)	APO-1-1	Human	BMS151	
CD95 (APO-1/Fas)	DX2	Human	14-0959	
CD100 (SEMA4D)	BMA12	Mouse	14-1001	
CD101 (V7 antigen, IGSF 2, IGSF-2)	BB27	Human	14-1019	
CD102 (ICAM-2)	CBR-IC2/2	Human	BMS109	
CD102 (ICAM-2)	CBRIC2/2	Human	14-1029	
CD102 (ICAM-2)	3C4 (mIC2/4)	Mouse	14-1021	
CD103 (Integrin alpha E)	2.00E+07	Mouse	14-1031	
CD103 (Integrin alpha E)	B-Ly7	Human	14-1038	
CD104 (Integrin beta 4)	439-9B	Human	14-1049	13-1049
CD105 (Endoglin)	MJ7/18	Mouse	14-1051	
CD106 (VCAM-1)	B-N8	Human	BMS141	BMS141BT
CD106 (VCAM-1)	MR106	Rat	14-1060	
CD106 (VCAM-1)	429	Mouse	14-1061	
CD106 (VCAM-1)	STA	Human	14-1069	
CD107a (LAMP-1)	H4A3	Human	14-1079	
CD107a (LAMP-1)	1D4B	Mouse	14-1071	
CD107b (Mac-3, LAMP2, lysosomal-associated membrane protein 2)	ABL-93	Mouse	14-1072	
CD107b (Mac-3, LAMP2, lysosomal-associated membrane protein 2)	M3/84	Mouse	14-5989	
CD115 (c-fms)	AFS98	Mouse	14-1152	
CD115 (c-fms)	12-3A3-1B10	Human	14-1159	
CD117 (c-Kit)	ACK2	Mouse	14-1172	
CD117 (c-Kit)	YB5.B8	Human	14-1179	
CD123 (Interleukin-3 Receptor alpha, IL-3Ra)	6H6	Human	14-1239	
CD127 (Interleukin-7 Receptor alpha, IL-7Ra)	A7R34	Mouse	14-1271	
CD127 (Interleukin-7 Receptor alpha, IL-7Ra)	RDR5	Mouse	14-1278	
CD133 (Prominin-1)	13A4	Mouse	14-1331	
CD134 (OX40)	OX-86	Mouse	14-1341	
CD134 (OX40)	ACT35	Human	14-1347	

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
CD138 (Syndecan-1)	DL-101	Human	14-1389	
CD140a (PDGF Receptor a)	APA5	Mouse	14-1401	
CD140b (PDGF Receptor b)	APB5	Mouse	14-1402	
CD144 (VE-Cadherin)	16B1	Human	14-1449	13-1449
CD144 (VE-Cadherin)	BV13	Mouse	14-1441	13-1441
CD144 (VE-Cadherin)	BV14	Mouse	14-1442	
CD146 (Melanoma Cell Adhesion Molecule, MUC18, Mel-CAM, EndoCAM)	P1H12	Canine, Human, Mouse, Rabbit	14-1469	
CD147 (Basigin, EMMPRIN)	8D12	Human	14-1472	
CD147 (Basigin, EMMPRIN) Functional Grade	RL73	Mouse	16-1441	
CD150 (SLAM, IPO-3, IPO3, SLAMF1)	A12 (7D4)	Human	14-1509	
CD151 (PETA-3, PETA3)	50-6	Human	16-1519	
CD152 (CTLA-4)	14D3	Human	14-1529	
CD153 (CD30 Ligand, CD30L, TNFSF8)	RM153	Mouse	14-1531	
CD154 (CD40 Ligand)	MR1	Mouse	14-1541	
CD157 (BST-1, BP-3/IF-7)	SY11B5	Human	14-1579	
CD162 (PSGL-1)	PL-1	Human	BMS164	
CD166 (ALCAM)	ALC48	Mouse	14-1661	
CD107a (LAMP-1)	H4A3	Human	14-1079	
CD171 (Neural Cell Adhesion Molecule, L1, NCAM L1)	5G3	Human	14-1719	13-1719
CD180 (RP105)	MHR73-11	Human	14-1809	
CD181 (CXCR1)	8F1-1-4	Human	14-1819	
CD182 (CXCR2)	5E8-C7-F10	Human	14-1829	
CD184 (CXCR4)	2B11	Mouse	14-9991	
CD184 (CXCR4)	Polyclonal	Human, Mouse	14-6009	
CD195 (CCR5)	T21/8	Human	14-1957	13-1957
CD197 (CCR7)	3D12	Human	14-1979	
CD182 (CXCR2)	5E8-C7-F10	Human	14-1829	
CD200 (OX2, OX-2)	OX90	Mouse	14-5200	
CD200 (OX2, OX-2)	OX104	Human	14-9200	
CD201 (EPCR, endothelial protein C receptor)	mRCR-16	Mouse	16-2011	
CD201 (EPCR)	1560	Mouse	14-2012	13-2012
CD202b (TIE2)	TEK4	Mouse	14-5987	
CD205 (DEC-205, DEC205, Ly75)	MG38	Human	14-2059	
CD207 (Langerin)	RMUL.2	Mouse	14-2073	
CD207 (Langerin)	L31	Mouse	14-2075	13-2075
CD209 (DC-SIGN)	5H10	Mouse	14-2091	
CD209b (SIGN-R1)	22D1	Mouse	14-2096	
CD227 (Mucin 1)	SM3	Human	14-9893	
CD230 (PrP)	4D5	Human	BMS1105	
CD252 (OX40 Ligand)	RM134L	Mouse	14-5905	
CD257 (BAFF, BLyS)	1D6	Human	14-9017	
CD261 (DR4)	DJR1	Human	14-6644	
CD266 (TWEAK Receptor)	ITEM-4	Human, Mouse	14-9018	
CD266 (TWEAK Receptor)	ITEM-1	Human	14-9019	
CD268 (BAFF Receptor)	8A7	Human	14-9117	
CD273 (B7-DC)	TY25	Mouse	14-5986	
CD274 (B7-H1)	MIH5	Mouse	14-5982	
CD274 (B7-H1)	MIH1	Human	14-5983	
CD275 (B7-H2)	MIH12	Human	14-5889	13-5889
CD278 (ICOS)	ISA-3	Human	14-9948	
CD278 (ICOS)	C398.4A	Mouse, Rat	14-9949	
CD279 (PD-1)	J105	Human	14-2799	
CD279 (PD-1)	MIH4	Human	14-9969	

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
CD279 (PD-1)	J43	Mouse	14-9985	
CD279 (PD-1)	J116	Human	14-9989	
CD281 (TLR1)	GD2.F4	Human	14-9911	
CD282 (TLR2)	6C2	Mouse	14-9021	13-9021
CD282 (TLR2)	mT2.7	Mouse	14-9022	
CD282 (TLR2)	T2.5	Human, Mouse	14-9024	
CD282 (TLR2)	TL2.3	Human	14-9029	
CD282 (TLR2)	TL2.1	Human	14-9922	
CD283 (TLR3)	TLR3.7	Human	14-9039	
CD284 (TLR4)	HTA125	Human	14-9917	
CD289 (TLR9)	eB72-1665	Human	14-9099	
CD309 (FLK1)	Avas12a1	Mouse	14-5821	
CD314 (NKG2D)	1D11	Human	14-5878	
CD314 (NKG2D)	5C6	Human	14-5879	
CD324 (E-cadherin)	DECMA-1	Human	14-3249	13-3249
CD325 (N-Cadherin)	8C11	Human	14-3259	
CD326 (EpCAM)	G8.8	Mouse	14-5791	
CD326 (EpCAM)	1B7	Human	14-9326	13-9326
CD340 (HER2/neu)	2G11	Human	BMS120	
Cep55	EMRC10-11-55	Human	14-9809	
Chorionic Gonadotropin	FB12	Human	14-6508	
Chorionic Gonadotropin Beta Subunit	FBT11	Human	14-9872	
c-Myc p67	9.00E+11	Human, Mouse	14-6785	
Collagen Type IV	1042	Human	14-9871	
Cutaneous Lymphocyte Antigen (CLA)	Heca-452	Human, Mouse	14-9857	
CX3CL1 (Fractalkine)	Polyclonal	Mouse	14-7986	
CX3CR1	Polyclonal	Human, Rat	14-7999	
CXCL12 alpha (SDF-1 alpha)	Polyclonal	Mouse, Rat	17-7992	
CXCL12 beta (SDF-1 beta)	Polyclonal	Mouse, Rat	14-7991	
Cyclin E	Polyclonal	Human, Mouse, Rat	14-6714	
Cytokeratin 7	LP5K	Human	14-9005	
Cytokeratin 8	LP3K	Human	14-9938	
Cytokeratin 19	BA17	Human	14-9998	
DLL1 (delta-like 1)	HMD1-5	Mouse	14-5767	
Dendritic Cell Marker (33D1)	33D1	Mouse	14-5884	
EGF Receptor	Polyclonal	Human, Mouse, Rat	14-6747	
Embigin	G7.43.1	Mouse	14-5839	
Endomucin	V.7C7	Mouse	14-5851	
Pan-Endothelium Marker	HIS52	Rat	14-0360	
EpCAM1	VU-1D9	Human	BMS171	
Ephrin B1	25H11	Mouse	14-5300	
ErbB4 (Her4)	HFR1	Human, Mouse	14-9687	
ESAM	1G8	Mouse	14-5852	
E-selectin	CL-37	Human	BMS1014	
E-selectin	CL2	Human	BMS110	
F4/80 Antigen	BM8	Mouse	14-5852	
FAP	F11-24	Human	BMS168	
FAS-L	H-11	Mouse	BMS1106	
Fc epsilon Receptor I alpha (FceR1)	1-Mar	Mouse	14-5898	
FCRLA (FREB)	N28.1	Human	14-5847	
FDC	CNA.42	Human	14-9968	13-9968
Fibronectin	FN-3	Human	14-9869	
FOXA2	3C10	Mouse	14-4778	
FOXJ1	2A5	Human, Mouse	14-9965	

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
Foxp1	JC12	Human	14-9962	
Foxp3	FJK-16s	Mouse, Rat	14-5773	13-5773
Foxp3	236A/E7	Human	14-4777	13-4777
Foxp3	PCH101	Human	14-7776	13-7776
Foxp3	150D/E4	Human, Mouse, Rat	14-4774	
Foxp3	7979	Human, Mouse	14-7979	
Foxp3	NRRF-30	Mouse	14-4771	
Foxp3	hFOXY	Human	14-5779	
FREB (FCRLA, FcRX)	N28.1	Human	14-5847	
Galectin-3	M3/38	Human, Mouse	14-5301	
Gamma delta TCR	V65	Rat	14-5810	
Gata-3	TWAJ	Human, Mouse	14-9966	
Gata-4	Evan	Human, Mouse	14-9980	
GILZ	CFMKG15	Human, Mouse	14-4033	
GITR Ligand	YGL386	Mouse	14-5854	
GL7 (T and B Cell Activation Marker)	GL-7	Human, Mouse	14-5902	
Glial Fibrillary Acidic Protein (GFAP)*	GA5	Chicken, Human, Mouse, Pig, Rabbit, Rat	14-0496	
GM-CSF	MP1-22E9	Mouse	BMS183	
Granulocyte Marker	HIS48	Rat	14-0570	
Granzyme B	496B	Human	14-8889	
Grim-19	1A8	Human, Mouse, Rat	14-9937	
HAI-1	9B10	Human	14-9960	
Heat Shock Protein 27	STRSN	Human	14-9112	
HER-2 (C-neu)	2G11	Human	BMS120	
Hes1	4H1HES1	Human	14-9799	
HIF-1 alpha	ESEE122	Human, Mouse, Rat	14-9100	
HLA-ABC	W6/32	Human	14-9983	
HLA-DR	LN3	Human	14-9956	
HLA-G	87G	Human	14-9957	
HMGB1	Polyclonal	Canine, Human, Mouse	14-9900	
ICAM-1	RR1/1	Human	BMS108	
ICAM-2	CBR-IC2/2	Human	BMS109	
ICAM-3	CBR-IC3/1	Human	BMS111	
IFN gamma	MD-1	Human, Non-Human Primate	14-7317	
IFN gamma	DB-1	Rat	BMS176	
I kappa B alpha (IKB-a)	Polyclonal	Human, Mouse, Rat	14-6763	
IL-2	JES6-5H4	Mouse	BMS180	
IL-5 Functional Grade	TRFK5	Human, Mouse	16-7052	
IL-8	NAP II	Human	BMS136	
IL-10	JES3-9D7	Human	14-7108	
IL-17A	64CAP17	Human	14-7178	
IL-20 Receptor 2 (IL-20Rb)	20RNTC	Human, Mouse	14-1206	
Ki-67	20Raj1	Human	14-5699	
Ki-67	SolA15	Mouse, Rat	14-5698	
L-Selectin	DREG.55	Human	BMS121	BMS121BT
Lactoferrin	B97	Human	14-6604	
LAP Functional Grade	VB3A9	Human	16-9823	
LFA-1 alpha	R7.1	Human	BMS102	
LFA-1 beta	R3.3	Human	BMS103	
LMO2	1A9-3B11	Human	14-9889	
Ly-6G (Gr-1)	RB6-8C5	Mouse	14-5931	
Lyve-1	ALY7	Mouse	14-0443	13-0443
Mac-1 alpha	LM2/1	Human	BMS104	
90K/Mac-2BP	Sp-2	Human	BMS146	

*Representative data can be viewed in this brochure

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
Mature Macrophage Marker	25F9	Human	14-0115	
MALT1	50	Human	14-9961	
MASH1	24B72D11	Mouse, Rat	14-5794	
Mcl-1*	Ab22	Human	14-6701	
MCPT-1 (mMCP-1)	RF6.1	Mouse	14-5503	
MHC Class I free chain without beta 2 microglobulin	A4	Human	14-9958	
MHC Class II	HIS19	Rat	14-0920	
MHC Class II (I-A/I-E)	M5/114.15.2	Mouse	14-5321	36-5321
MICA/B Functional Grade	6D4	Human	14-5788	
MnSOD	MnS-1	Human	BMS122	
mTOR	F11	Human, Mouse	14-2190	
MULT1 (NKG2D Ligand)	5D10	Mouse, Rat	14-5863	
Musashi-1	14H1	Human, Mouse, Rat	14-9896	
Musashi-2	C1	Human, Mouse	14-9677	
Myogenin	F5D	Canine, Human, Mouse, Rat	14-5643	
Myosin Heavy Chain	MF20	Bovine, Canine, Chicken, Chimpanzee, Guinea Pig, Human, Mouse, Rabbit, Rat	14-6503	
Naf1	5C4	Human	14-9903	
Nanog	hNanog.1	Human	14-5769	
Nestin	Rat-401 (Rat401 (4D4))	Mouse, Rat	14-5843	
Nestin	10C2	Human	14-9843	
Neural/Glial Antigen 2 (NG2)	9.2.27	Human	14-6504	
NF kappa B p50 and p105	Polyclonal	Human, Mouse, Rat	14-6732	
NF kappa B p52 and p100	Polyclonal	Human, Mouse, Rat	14-6733	
NF kappa B p65	Polyclonal	Human, Mouse, Rat	14-6733	
NOD2	2D9	Human	14-5869	
Notch1	mN1A	Human, Mouse	14-5785	
2-Oct	9A2	Human, Mouse	14-5840	
OCT3/4	EM92	Human, Mouse	14-5841	
Oligodendrocyte Marker O1	O1	Human, Mouse, Rat	14-6506	
OVA257-264 (SIINFEKL) peptide bound to H-2Kb	25-D1.16	Mouse	14-5743	13-5743
P-Cadherin	12H6	Human	14-9873	
p21 (WAF1, Cip1)	Polyclonal	Human, Mouse, Rat	14-6715	
Pan-Endothelium Marker	HIS52	Rat	14-0360	
PARP	C2-10	Human, Mouse, Rat	14-6666	
Pax5	1H9	Human, Mouse	14-9918	
Pax6	AD2.38	Chicken, Human, Mouse, Rat	14-9914	
PCNA	PC10 (a.k.a. 3F81)	Human	14-9910	13-9910
PDX1	2A12	Human	14-6500	
PECAM-1	Gi18	Human	BMS137	
Perforin	dG9 (delta G9)	Human	14-9994	
PIM-2	1D12	Mouse	14-3308	
Placental Alkaline Phosphatase	8B6	Human	14-9870	13-9870
Plectin	10F6	Human	BMS165	
Plexin-B2	3.00E+07	Mouse	14-5665	
Podoplanin	NZ-1.3	Human	14-9381	
Podoplanin	8.1.1	Mouse	14-5381	13-5381
Pokemon (LRF)	1.30E+10	Human	14-3309	
PSGL-1	PL-1	Human	BMS164	
PU.1	phpu13	Human, Mouse	14-9819	
RAE1 delta	RD-41	Mouse	14-5756	

*Representative data can be viewed in this brochure

Purified Antibodies & Biotin Conjugates

Antigen Name	Clone	Species	Purified	Biotin
Receptor Interacting Protein 3 (RIP3)	Polyclonal	Mouse, Rat	14-6048	
Runx3	R3-5G4	Human	14-9817	13-9817
SAP (SLAM-Associated Protein)	10C4.2	Human	14-9888	
Smooth Muscle Myosin	SMMS-1	Bovine, Canine, Rat	14-6400	
Snail1	20C8	Human	14-9859	
Sox2*	Btjce	Human, Mouse	14-9811	
S-Phase Kinase-associated protein 2 (Skp-2)	SJBCH	Human	14-5697	
Siglec H	440c	Mouse	14-0333	
SSEA-1	MC-480	Human, Mouse	14-8813	13-8813
SSEA-3	MC-631	Human, Mouse	14-8833	13-8833
SSEA-4	MC-813-70	Human	14-8843	13-8843
SSEA-5	8E11-SSEA5	Human	14-8857	
Stro-1 (stromal cell surface marker)	STRO-1	Bovine, Human, Rat	14-6688	
Synaptophysin	EP10	Human	14-6525	
TARP	1F8	Human, Mouse, Rat	14-8868	
TARP	TP1 (a.k.a 1F8)	Human	14-8868	
T-bet	4B10	Human, Mouse	14-5825	
TCL1	21-Jan	Human	14-6699	
TCR beta	H57-597	Mouse	14-5961	36-5961
Gamma delta TCR	V65	Rat	14-5810	
TER-119	TER-119	Mouse	14-5921	
TLR4/MD-2 Complex	MTS510	Mouse	14-9924	
TNF alpha	MP6-XT22	Mouse	14-7321	
TRA-1-60 (podocalyxin)	TRA-1-60	Human	14-8863	
TRA-1-81 (podocalyxin)	TRA-1-81	Human	14-8883	
Trop-2	MR54	Human	14-6024	
Ubiquitin	P4D1		14-6078	
UTF1	MFCDA84	Human, Mouse	14-9849	
VAP-1	TK8-14	Human	BMS1033	
VCAM-1	B-N8	Human	BMS141	BMS141BT
VEGF-R1/FLT-1 (VEGF Receptor 1)	Flt-19	Human	BMS196	
VEGF Receptor 3	AFL4	Mouse	14-5988	
Vimentin	V9	Chicken, Human, Rat	14-9897	
XIAP	polyclonal	Human, Mouse	14-6047	

*Representative data can be viewed in this brochure

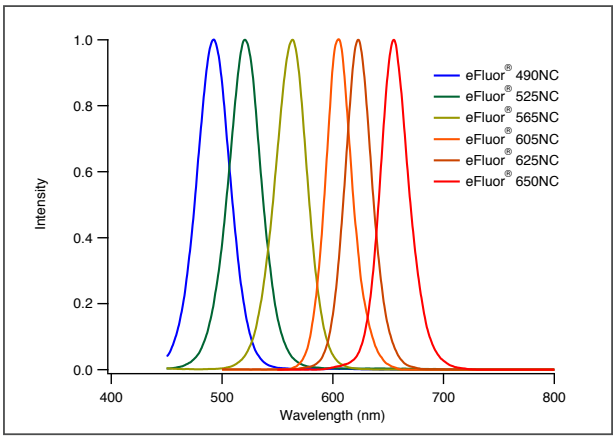
Nanocrystal-conjugated Antibodies for IHC and ICC

- eFluor® Nanocrystals

eFluor® Nanocrystals

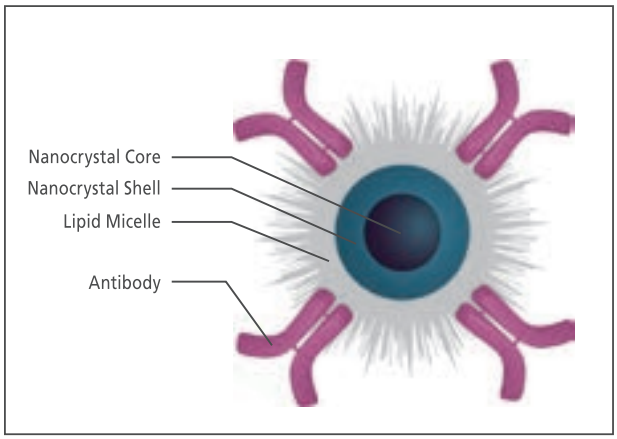
These high quantum yield nanocrystals are composed of a core particle surrounded by a unique surface coating which reduces background staining and artifacts. eFluor® Nanocrystals possess intrinsic spectral properties which allow them to emit light individual wavelengths when excited by a single wavelength light source in the ultraviolet. 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 obtained from a single sample
- **Minimal background** – unique outer coating reduces non-specific binding or background
- **Flexible** – stain cultured cells as well as frozen or paraffin-embedded tissue samples



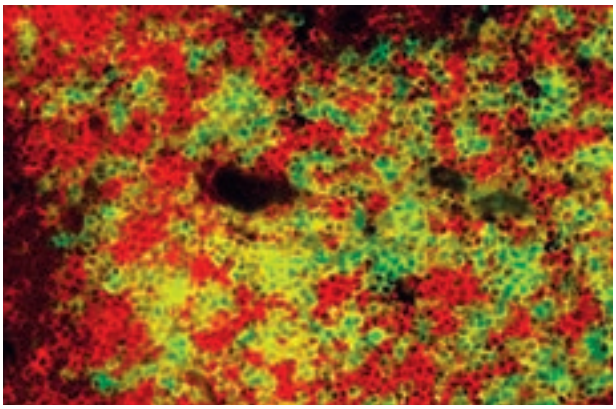
Nanocrystal Excitation and Emission Spectra

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.



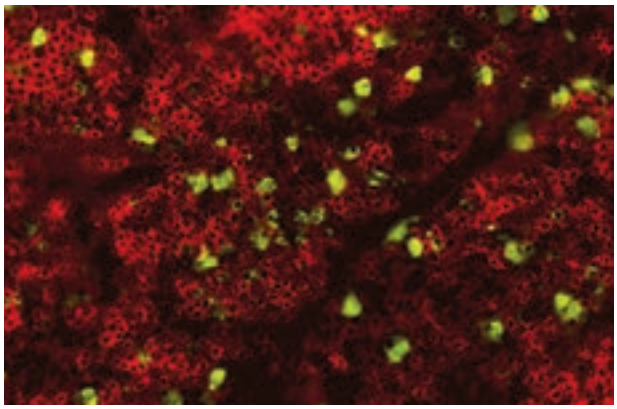
Representation of eFluor® Nanocrystal Antibody

Select eFluor® Nanocrystal-conjugated antibodies for immune cell phenotyping



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

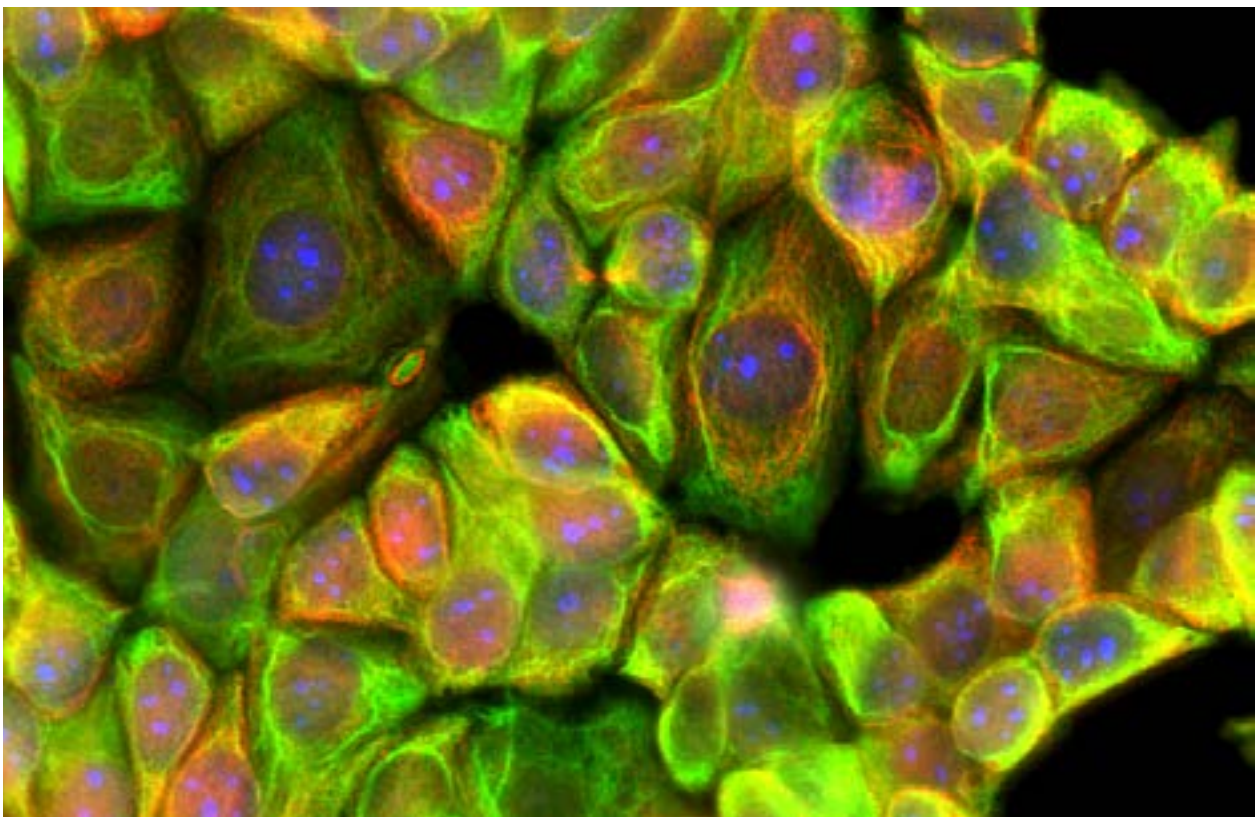
T cell subsets are identified in frozen mouse spleen stained using Anti-Mouse CD4 eFluor® 625NC (red; cat. no. IH94-0042) and Anti-Mouse CD8a eFluor® 565NC (green; cat. no. IH92-0081).



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).

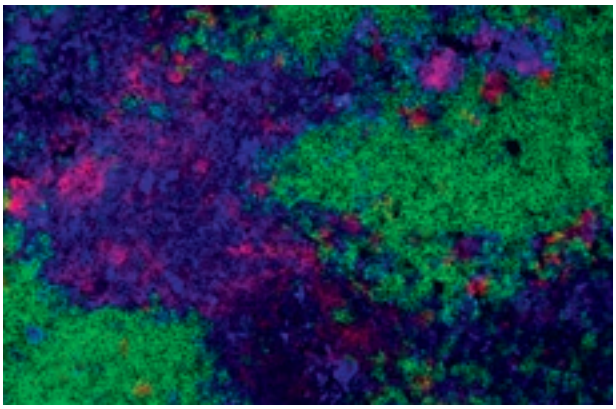
eFluor® Nanocrystals are Fully Compatible with Organic Dyes



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

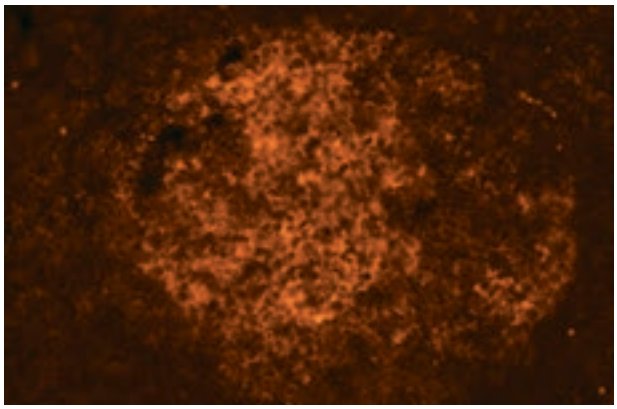
Fixed and permeabilized MCF-7 cells stained using Anti-Human Cytokeratin eFluor® 605NC (green), Anti-alpha Tubulin eFluor® 650NC (red; cat. no. IH95-4502) and Anti-Human-Ki-67 Alexa Fluor® 647 (blue; cat. no. 51-5699).

Nanocrystal conjugated antibodies for frozen tissue and formalin-fixed paraffin-embedded tissue (FFPE)



eFluor® Nanocrystal-conjugated Antibodies for IHC on Frozen Tissue

Frozen mouse spleen stained with Anti-Mouse CD4 eFluor® 605NC (blue, cat. no. 93-0041) and Anti-Mouse CD11c eFluor® 650NC (red, cat. no. IH95-0114) antibodies conjugated using the eFluor® Nanocrystal Conjugation Kit - Amine Reactive. Anti-Human/Mouse CD45R (B220) Alexa Fluor® 488 (cat. no. 53-0452) staining is shown in green.



eFluor® Nanocrystal-conjugated Antibodies for IHC on FFPE Tissue

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.

eFluor® Nanocrystal Direct Conjugates

Antigen Name	Clone	Species	eFluor® 565NC	eFluor® 605NC	eFluor® 625NC	eFluor® 650NC
alpha Tubulin	DM1A	Human, Mouse, Rat		IH93-4502	IH94-4502	IH95-4502
CD4*	RM4-5	Mouse		IH93-0042	IH94-0042	IH95-0042
CD8a*	53-6.7	Mouse	IH92-0081	IH93-0081	IH94-0081	IH95-0081
CD11b*	M1/70	Mouse		IH93-0112		IH95-0112
CD11c*	N418	Mouse			IH94-0114	IH95-0114
CD31 (PECAM-1)	390	Mouse		IH93-0311		IH95-0311
CD45R (B220)*	RA3-6B2	Human, Mouse		IH93-0452		IH95-0452
CD106 (VCAM-1)*	429	Mouse		IH93-1061		
Foxp3	FJK-16s	Mouse, Rat		IH93-5773		IH95-5773
Ly-6G (Gr-1)	RB6-8C5	Mouse			IH94-5931	
Streptavidin				IH93-4317		IH95-4317

*Representative data can be viewed in this brochure

5 Support Reagents for IHC and ICC

- Buffers and Solutions
- Secondary Reagents and Dyes
- Support Reagents
- Isotype Controls

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, in addition to all your routine microscopy applications for reducing background staining, minimizing fluorochrome quenching during analysis, and for mounting and long-term storage of slides.

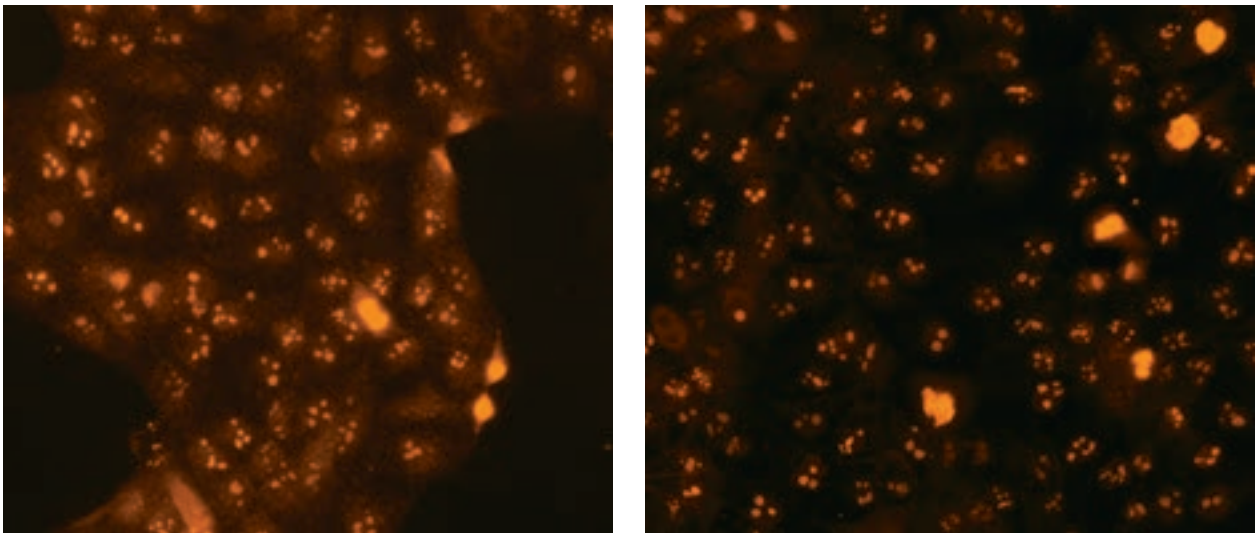
IHC Antigen Retrieval Solutions – designed for use during the heat-induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections.

- 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

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



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.

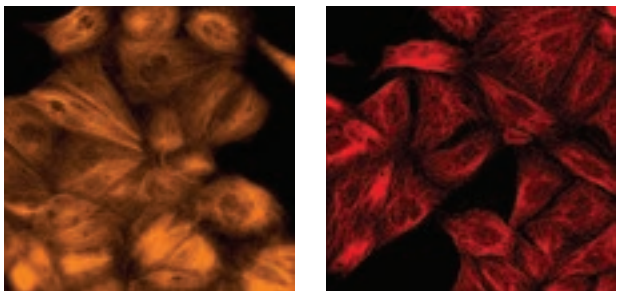
Fluoromount-G™ and Fluoromount-G™ with DAPI is a clear liquid medium designed for use in mounting slides following immunofluorescent staining. This water-soluble medium is used to mount slides in which the final step of staining is aqueous. It forms a semi-permanent seal for prolonged storage of slides 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
- Convenient, ready-to-use 1X solution
- Available with DAPI for nuclear visualization

Secondary Reagents and Dyes

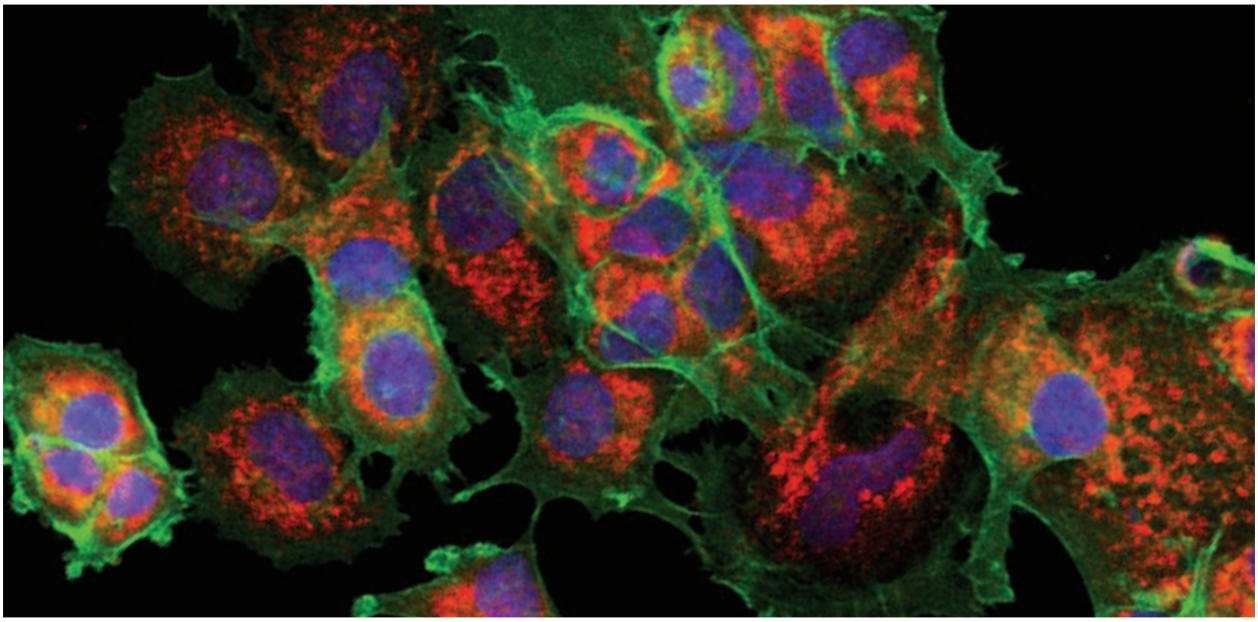
Many options exist for 2- and 3-step staining, from fluorophore-conjugated antibodies to biotinylated secondaries, in addition to Avidin and Streptavidin (SAV) reagents. For 2-step staining it is common to use a purified primary antibody followed by a directly conjugated secondary antibody which recognizes 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 stain using a target-specific primary antibody, followed by a biotinylated secondary and subsequent SAV-conjugate.

Choose eFluor® Nanocrystal-conjugated Streptavidin for Optimal Photostability



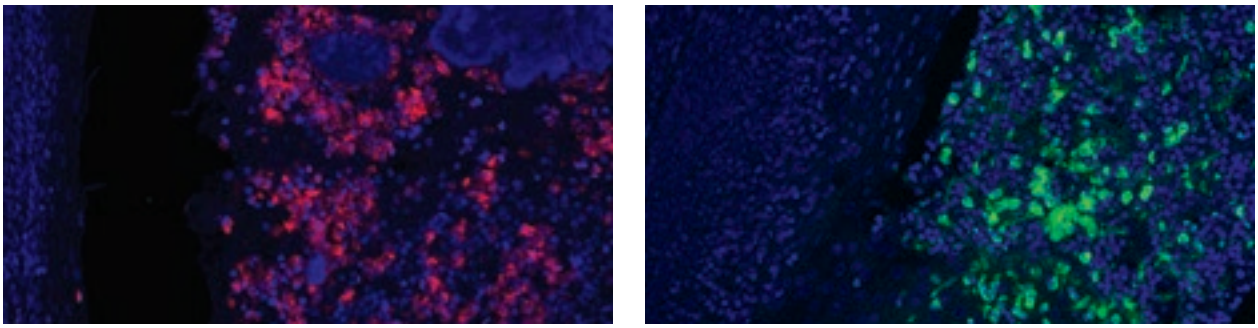
ICC using Streptavidin eFluor® 605NC and Streptavidin eFluor® 650NC

Fixed, permeabilized MDCK cells were stained with Anti-alpha Tubulin Biotin followed by Streptavidin eFluor® 605NC (left, cat. no. IH93-4317) or Streptavidin eFluor® 650NC (right, cat. no. IH95-4317).



Anti-Human Mcl-1 purified and Phalloidin eFluor® 520

Mcl-1, recognizes myeloid cell leukemia-1 protein, involved in cell proliferation and survival through regulation of bcl-2 proteins. MCF7 breast adenocarcinoma cells are visualized by ICC staining with Anti-Human Mcl-1 Purified followed by Anti-Mouse IgG1 Biotin and Streptavidin eFluor® 570 (red, cat. no. 41-4317). Actin filaments are stained with Phalloidin eFluor® 520 (green, cat. no. 59-6559) and nuclei are counterstained with DAPI.



IHC using eFluor® 615 and FITC-conjuguated secondary antibodies

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

Secondary Reagents & Dyes

Description	Clone	Host	Purified	Biotin	HRP	FITC	TRITC
Anti-Mouse IgG	Polyclonal	Rat		13-4013			
F(ab')2 Anti-Mouse IgG	Polyclonal	Goat				11-4010	
Anti-Armenian Hamster IgG	Polyclonal	Goat		13-4113			
Anti-Golden Syrian Hamster IgG	Polyclonal	Goat		13-4213			
Anti-Rat IgG	Polyclonal	Goat		13-4813			
Anti-Rat IgG	Polyclonal	Goat			18-4818		
Anti-Rat IgG	Polyclonal	Goat					26-4826
Anti-Human IgM	SA-DA4	Mouse	14-9998	13-9998			
Anti-Rat IgG1	R1-3G1	Mouse				11-4814	
Anti-Rat IgG2a	R2a-21B2	Rat		13-4817		11-4817	
Anti-mouse IgG1	M1-14D12	Rat		13-4015	18-4015	11-4015	
Anti-Mouse IgG2a	m2a-15F8	Rat		13-4210		11-4210	
Anti-Mouse IgM	II/41	Rat	14-5790	13-5790		11-5790	
Avidin					18-4100		
Streptavidin*						11-4317	

Secondary Reagents & Dyes

Description	Clone	Host	eFluor® 520	eFluor® 570	eFluor® 615	eFluor® 660
F(ab')2 Anti-Mouse IgG	Polyclonal	Goat		41-4010		50-4010
Anti-Rat IgG1	R1-3G1	Mouse			42-4814	
Anti-Rat IgG2a	R2a-21B2	Rat		41-4817	42-4817	
Anti-Rat IgG2b	R2b-7C3	Mouse		41-4815	42-4815	
Anti-mouse IgG1	M1-14D12	Rat		41-4015	42-4015	
Anti-Mouse IgG2a	m2a-15F8	Rat		41-4210	42-4210	
Anti-Mouse IgM	II/41	Rat		41-5790	42-5790	
Streptavidin*				41-4317	42-4317	50-4317
Phalloidin*			59-6559	41-6559		50-6559

*Representative data can be viewed in this brochure

CyTRAK Orange™

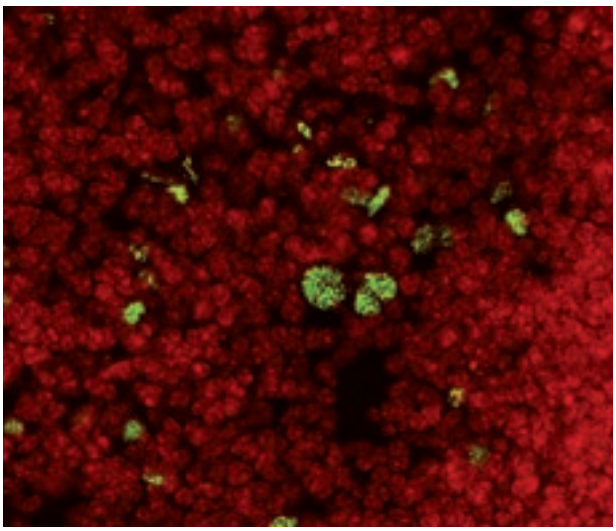
CyTRAK is an anthraquinone dye with high affinity for double-stranded DNA. As it is membrane-permeable, it may be used for labeling live or fixed/dead cells. In flow cytometry, it can be used to distinguish nucleated and non-nucleated cells. In fluorescent microscopy, it can be used to identify and discriminate 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™

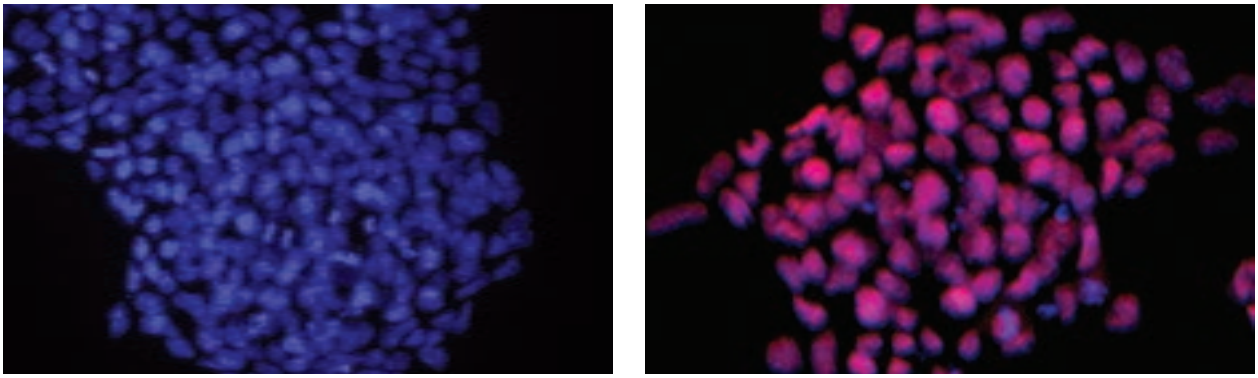
Frozen young mouse thymus stained with Anti-Mouse AIRE Alexa Fluor® 488 (cat. no. 53-5934) identifies medullary thymic epithelial cells (mTECs) (green). 10nM DRAQ5 is used as a nuclear stain (red, cat. no. 65-0880).

Support Reagents

Description	Product	Cat. No.
Calcein AM Viability Dye (UltraPure Grade)	Dye	65-0853
Calcein Blue AM Viability Dye	Dye	65-0853
CalceinViolet 450 AM Viability Dye	Dye	65-0854
Calcium Sensor Dye eFluor® 514	Dye	65-0840
Indo-1 AM Calcium Sensor Dye	Dye	65-0856
Indo-1 AM Calcium Sensor Dye (UltraPure Grade)	Dye	65-0857
CellVue® Burgundy Cell Labeling Kit	Dye	88-0872
CellVue® Lavender Cell Labeling Kit	Dye	88-0873
CellVue® Maroon Cell Labeling Kit	Dye	88-0870
CellVue® Plum Cell Labeling Kit	Dye	88-0871
CellVue® NIR815 Cell Labeling Kit	Dye	88-0874
CellVue® NIR780 Cell Labeling Kit	Dye	88-0875
CellVue® Jade Cell Labeling Kit	Dye	88-0876
DRAQ5™*	Dye	65-0880
CyTRAK Orange™	Dye	65-0881
Ammine Functionalized eFluor® 700NC	Dye	96-6366
Carboxyl-Functionalized eFluor® 700NC	Dye	96-6364
Cell Proliferation Dye eFluor® 670	Dye	65-0840
CFSE	Dye	65-0850
Fura-2 AM Dye	Dye	65-0858
JC-1 Mitochondrial Membrane Potential Dye	Dye	65-0851
IHC/ICC Blocking Buffer - High Protein	Buffer/Solution	00-4952
IHC /ICC Blocking Buffer - Low Protein	Buffer/Solution	00-4953
20X TBS Wash Buffer for IHC/ICC	Buffer/Solution	00-4954
CellVue Diluent C	Buffer/Solution	00-4501
IHC Antigen Retrieval Solution – Low pH (10X)*	Buffer/Solution	00-4955
IHC Antigen Retrieval Solution – High pH (10X)*	Buffer/Solution	00-4956
Fluoromount-G™	Buffer/Solution	00-4958
Fluoromount G™ with DAPI	Buffer/Solution	00-4959
Apo-Direct Apoptosis Detection	Kit	88-6671
Apo-BrdU Apoptosis Detection	Kit	88-6671

*Representative data can be viewed in this brochure

Isotype Controls



ICC using eFluor® 570 conjugated isotype-specific secondary antibodies

Fixed and permeabilized F9 murine teratocarcinoma cells stained with Rat IgG2a Isotype Control (left, cat. no. 14-4321) or Anti- Human/ Mouse Sox2 purified (right, cat. no. 14-9811), a transcription factor involved in self renewal and pluripotency, followed by Anti-Rat IgG2a eFluor® 570 (red). Nuclei are stained with DAPI (blue). Co-expression of Sox2 with DAPI.

Isotype Controls - Purified & Biotin

Isotype Control	Clone	Species	Purified	Biotin
Mouse IgG1 K Isotype Control	P3.6.2.8.1	Mouse	14-4714	13-4714
Mouse IgG2a K Isotype Control	eBM2a	Mouse	14-4724	13-4724
Mouse IgG2b K Isotype Control	eBMG2b	Mouse	14-4732	13-4732
Mouse IgG3 Isotype Control		Mouse	14-4742	
Mouse IgM Isotype Control	11E10	Mouse	14-4752	
Armenian Hamster IgG Isotype Control	299Arm	Armenian Hamster	14-4888	13-4888
Golden Syrian Hamster IgG Isotype Control		Golden Syrian Hanster	14-4914	13-4914
Rat IgG1 K Isotype Control	eBRG1	Rat	14-4301	13-4301
Rat IgG2a K Isotype Control*	eBR2a	Rat	14-4321	13-4321
Rat IgG2b K Isotype Control	eB149/10H5	Rat	14-4031	13-4031

Isotype Controls - eFluor® & Organic Dyes

Isotype Control	Clone	Species	FITC	Alexa Fluor® 488	eFluor® 570	eFluor® 615	Alexa Fluor® 647	eFluor® 660
Mouse IgG1 K Isotype Control	P3.6.2.8.1	Mouse	11-4714	53-4714	41-4714	42-4714	51-4714	50-4714
Mouse IgG2a, K Isotype Control	eBM2a	Mouse	11-4724	53-4724		42-4724	51-4724	50-4724
Mouse IgG2b K Isotype Control	eBMG2b	Mouse	11-4732	53-4732	41-4732	42-4732	51-4732	50-4732
Mouse IgM Isotype Control	11E10	Mouse	11-4752					50-4752
Armenian Hamster IgG Isotype Control	299Arm	Armenian Hamster	11-4888	53-4888		42-4888	51-4888	50-4888
Golden Syrian Hamster IgG Isotype Control		Golden Syrian Hanster	11-4914	53-4914				
Rat IgG1 K Isotype Control	eBRG1	Rat	11-4301	53-4301	41-4301	42-4301	51-4301	50-4301
Rat IgG2a K Isotype Control	eBR2a	Rat	11-4321	53-4321	41-4321	42-4321	51-4321	50-4321
Rat IgG2b K Isotype Control	eB149/10H5	Rat	11-4031	53-4031	41-4031		51-4031	50-4031

*Representative data can be viewed in this brochure

Notes:

Next Steps

1. Contact your Regional Account Manager or visit our website to submit an order
2. View our website for new products added weekly
3. eBioscience provides the answer to your research needs

www.eBioscience.com

affymetrix
eBioscience

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, Luxembourg, Iceland
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:
+31 84 721 1733

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 where direct sales are not available may contact their eBioscience distributor listed at **www.eBioscience.com/distributors**

Visit eBioscience.com

Q412008_Multicolor-IF-IHC_0213