

NEW All-in-One Kits for Fixed-Cell Imaging

The new Image-iT FX Kits provide all of the tools you need for optimal imaging of fixed cells and tissue sections.

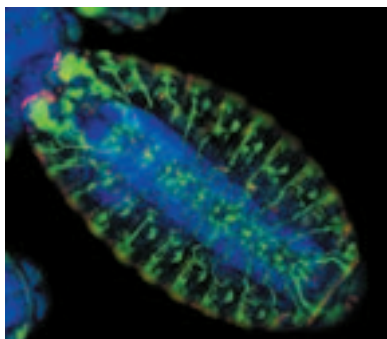


Figure 1. The peripheral nervous system of a wild-type (Canton-S) *Drosophila melanogaster* embryo, labeled with the monoclonal 22c10 antibody (which detects a microtubule-associated protein) and subsequently visualized using green-fluorescent Alexa Fluor 488 rabbit anti-mouse IgG antibody. The actively dividing cells of the developing denticle bands were labeled with a rabbit anti-histone-H3 antibody and visualized using red-fluorescent Alexa Fluor 594 goat anti-rabbit IgG antibody. Finally, the nuclei, which are concentrated in the central nervous system, were stained with blue-fluorescent DAPI. Image contributed by Neville Cobbe, University of Edinburgh.

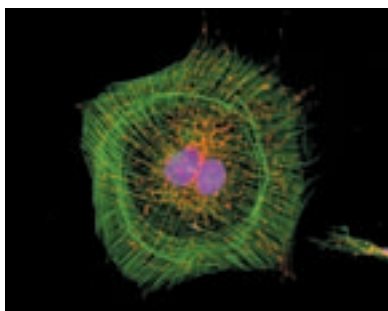


Figure 2. A fixed and permeabilized muntjac skin fibroblast. Mitochondria were labeled with anti-OxPhos Complex V inhibitor protein mouse IgG, and visualized using orange-fluorescent Alexa Fluor 555 goat anti-mouse IgG. F-actin was labeled with green-fluorescent Alexa Fluor 488 phalloidin, and the nucleus was stained with TO-PRO-3 iodide (pseudocolored magenta).

The **Image-iT FX Kits** (Table 1) make high-quality, information-packed images easy to obtain. These new kits provide the best secondary detection reagents and tools for optimal fluorescence signals:

- ◆ **Alexa Fluor conjugates** for superior photostability and brightness
- ◆ **ProLong Gold antifade reagent** for reduced photobleaching
- ◆ **Image-iT FX signal enhancer** for improved signal-to-noise ratio

Table 1. Image-iT Kits.

Alexa Fluor Dye	Goat Anti-Mouse IgG	Goat Anti-Rabbit IgG	Streptavidin
Alexa Fluor 350	I37150 (Kit #1)	I37155 (Kit #6)	I37160 (Kit #11)
Alexa Fluor 488	I37151 (Kit #2)	I37156 (Kit #7)	I37161 (Kit #12)
Alexa Fluor 555	I37152 (Kit #3)	I37157 (Kit #8)	I37162 (Kit #13)
Alexa Fluor 594	I37153 (Kit #4)	I37158 (Kit #9)	I37163 (Kit #14)
Alexa Fluor 647	I37154 (Kit #5)	I37159 (Kit #10)	I37164 (Kit #15)
* Each kit is \$323. New products are bold .			

A sample pack of two **CultureWell chambered coverglasses** is also included for convenient sample processing. Each Image-iT FX Kit provides sufficient materials to perform 50–100 assays.

Alexa Fluor Conjugates – Bright and Photostable Labeling Reagents

The Alexa Fluor conjugates are, without exception, the best conjugates we have ever tested. With excellent brightness and photostability, the fluorescent conjugates of streptavidin, goat anti-mouse IgG, and goat anti-rabbit IgG are superior secondary reagents for imaging (Figures 1 and 2).

ProLong Gold Reagent – Ready-to-Use Antifade Reagent

ProLong Gold antifade reagent is a new and improved version of the very effective ProLong antifade reagent. ProLong Gold reagent is premixed and ready to use – just add a drop to your preparation and mount. ProLong Gold reagent outperforms most other commercially available antifade reagents, significantly reducing fluorophore photobleaching while causing little or no quenching of the fluorescence signal (Figure 3). This reagent offers excellent compatibility with a multitude of dyes and dye complexes, making it an especially valuable tool for multicolor applications. ProLong Gold reagent cures within 24 hours, and the sample can be saved for months after mounting.

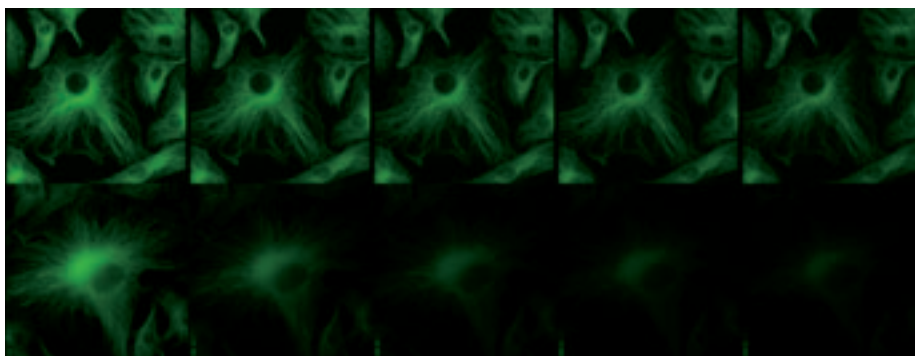


Figure 3. 20-second time series showing enhanced resistance to photobleaching provided by ProLong Gold antifade reagent. Fixed bovine pulmonary artery endothelial cells were labeled with anti- α -tubulin and visualized using fluorescein goat anti-mouse IgG. The samples were mounted in ProLong Gold antifade reagent (top) or PBS (bottom). Images were acquired at 5-second intervals.

Image-iT FX Signal Enhancer – Eliminate Background Staining

Image-iT FX signal enhancer dramatically improves the signal-to-noise ratio of immunolabeled cells and tissues, allowing you to clearly visualize targets that would normally be indistinguishable due to background fluorescence. Background staining typically seen with fluorescent dyes is largely eliminated when Image-iT FX signal enhancer is applied to fixed and permeabilized cells before staining (Table 2, Figures 4 and 5).

Table 2. Fluorescent dyes successfully tested with the Image-iT FX signal enhancer.

Dyes That Exhibit Strong Background Fluorescence * †		
Fluorescein	Atto 610	Alexa Fluor 594
Oregon Green 488	Cascade Blue	Alexa Fluor 610
Oregon Green 514	Alexa Fluor 405	Alexa Fluor 633
Tetramethylrhodamine	Alexa Fluor 430	Alexa Fluor 635
Texas Red	Alexa Fluor 488	Alexa Fluor 647
Cascade Yellow	Alexa Fluor 500	Alexa Fluor 660
Dy 565	Alexa Fluor 514	Alexa Fluor 680
Dy 630	Alexa Fluor 555	Alexa Fluor 700
Atto 590	Alexa Fluor 568	Alexa Fluor 750
Dyes That Exhibit Weak Background Fluorescence * †		
Cy5	Alexa Fluor 546	DyeMer 488/605
Dy 635	Allophycocyanin	DyeMer 488/615
Marina Blue	R-phycoerythrin	DyeMer 488/630
Alexa Fluor 532		
Dyes That Exhibit No Dye-Based Background Fluorescence * ‡		
Alexa Fluor 350	Pacific Blue	Texas Red-X
IRTM 790	Rhodamine B	Dy 550
Cy3	Rhodamine Red-X	Dy 610

* All dyes were conjugated to streptavidin and tested at 10 μ g/mL. † Background staining was blocked by the Image-iT FX signal enhancer. ‡ Staining was unaffected by the Image-iT FX signal enhancer.

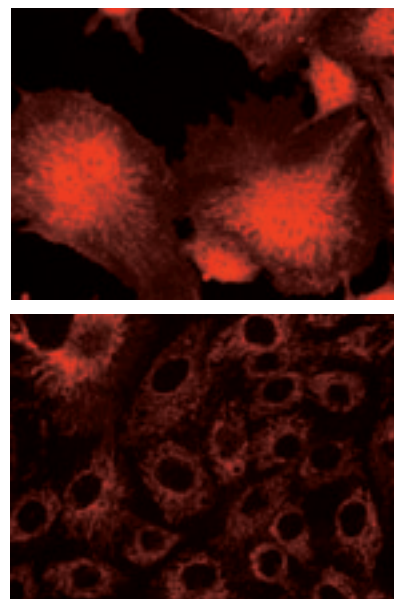


Figure 4. Increased label specificity and resolution provided by Image-iT FX signal enhancer. Fixed and permeabilized bovine pulmonary artery endothelial cells were treated with Image-iT FX signal enhancer (bottom) or left untreated (top) and then labeled with tetramethylrhodamine streptavidin.

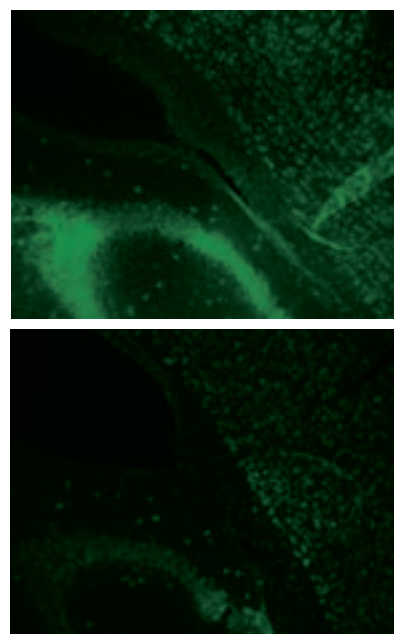
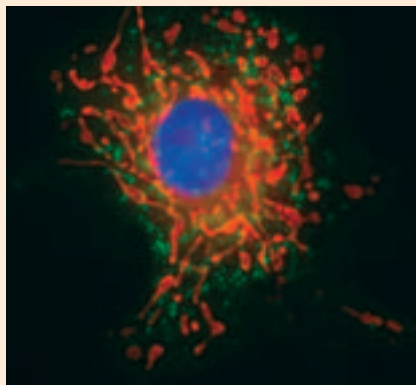


Figure 5. Reduction of nonspecific binding provided by Image-iT FX signal enhancer. Mouse brain cryosections were treated for 30 minutes with Image-iT FX signal enhancer (bottom) or left untreated (top). Sections were labeled with the neural cell body selective antibody anti-Hu C/D and visualized using TSA Kit #2. Sections were mounted using the reagents in the ProLong Antifade Kit.

Label Structures in Fixed Cells



Peroxisome labeling in a fixed and permeabilized bovine pulmonary artery endothelial cell. Peroxisomes were labeled using an antibody directed at peroxisomal membrane protein 70 (PMP-70) and detected with Alexa Fluor 488 goat anti-mouse IgG (components of the SelectFX Peroxisome Labeling Kit). Oxidatively stressed mitochondria were stained with MitoTracker Red CMXRos prior to fixation; the nucleus was stained with blue-fluorescent DAPI.

We offer a variety of probes and stains for labeling specific structures in fixed cells. For convenience, we also have new **SelectFX Labeling Kits**, which provide all of the reagents you need to selectively label the endoplasmic reticulum or peroxisomes in fixed cells. Each kit includes a primary antibody, a secondary antibody labeled with our bright and photostable Alexa Fluor 488 dye, and cell-fixative and permeabilization reagents and protocols.

Probes and kits for labeling structures in fixed cells.

Reagent	Target	Catalog Number	Unit Size	Price (\$)
Alexa Fluor 488 phalloidin	F-actin	A12379	300 U	297
Alexa Fluor 594 phalloidin	F-actin	A12381	300 U	297
Rhodamine phalloidin	F-actin	R415	300 U	276
Anti-human golgin-97 *	Golgi	A21270	100 µg	144
Anti-OxPhos Complex V subunit β, mouse IgG ₁ *	Mitochondria	A21351	100 µg	273
DAPI	Nucleus	D1306	10 mg	64
		D21490	10 mg	98
Propidium iodide	Nucleus	P1304MP	100 mg	83
		P3566	10 mL	45
		P21493	100 mg	110
SelectFX Alexa Fluor 488 Endoplasmic Reticulum Labeling Kit	Endoplasmic reticulum	S34200	1 kit	395
SelectFX Alexa Fluor 488 Peroxisome Labeling Kit	Peroxisomes	S34201	1 kit	395
SYTOX Green nucleic acid stain	Nucleus	S7020	250 µL	151
SYTOX Orange nucleic acid stain	Nucleus	S11368	250 µL	151
TOTO-3 iodide (642/660)	Nucleus	T3604	200 µL	322
FM 1-43FX	Plasma membrane	F35355	10 × 100 µg	273

* These primary antibodies require fluorescent secondary antibodies to visualize labeling. New products are **bold**.

ORDERING INFORMATION

Cat #	Product Name	Unit Size	Price (\$)
NEW C37000	CultureWell™ chambered coverglass for cell culture *sixteen wells per coverglass* *set of 8*	1 set	98.00
NEW I36933	Image-iT™ FX signal enhancer	10 mL	45.00
NEW P36930	ProLong® Gold antifade reagent	10 mL	98.00
NEW P36931	ProLong® Gold antifade reagent with DAPI	10 mL	108.00