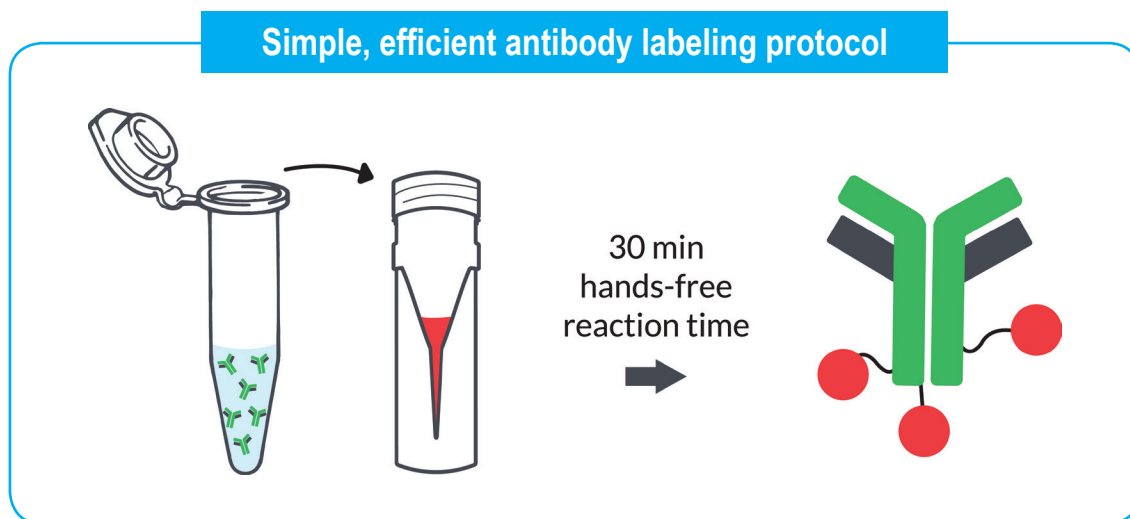


Rapid Antibody Labeling Kits

and Small Ligand Labeling

Fast and easy kits for labeling antibodies, proteins, and small ligands



Mix-n-Stain™ Antibody Labeling Kits

Revolutionary labeling technology:

- As fast as 30 minutes, with minimal hands-on time
- 100% yield, post-labeling purification not needed
- Labeling tolerates BSA, gelatin, ascites fluid, and Tris

Large selection of labels and kit sizes for greater flexibility:

- Choice of ~30 fluorescent CF® dyes, fluorescent proteins, biotin, enzymes, & haptens
- Multiple sizes for labeling ≤5 ug to 1 mg antibody

Mix-n-Stain™

Antibody Labeling Kits

Mix-n-Stain™ Antibody Labeling Kits dramatically simplify the process of preparing fluorescently labeled antibodies, particularly primary antibodies. Simply mix your antibody with the dye or protein of your choice. After 30 minutes and without a separation step, you will have a covalently labeled antibody conjugate that is as good as a commercial pre-labeled fluorescent antibody (Figure 1). The simple labeling protocol is optimized so there's no need to calculate how much dye to use. Moreover, unlike other antibody labeling kits, the Mix-n-Stain™ labeling reaction can tolerate the presence of common stabilizers, such as sodium azide, Tris, low levels of glycerol, BSA, gelatin, and even ascites fluid.

Mix-n-Stain™ Antibody Labeling Kits are superior to Lightning-Link® labeling kits (Figure 2). Mix-n-Stain™ kits feature CF® dyes, with superior brightness and photostability compared to the Lightning-Link® labeling (Figure 2). In addition, Mix-n-Stain CF® dye kits are compatible with labeling in the presence of excess stabilizer protein or ascites, unlike Lightning-Link®.

Mix-n-Stain™ labeled antibodies perform better than Lightning-Link® labeled antibodies

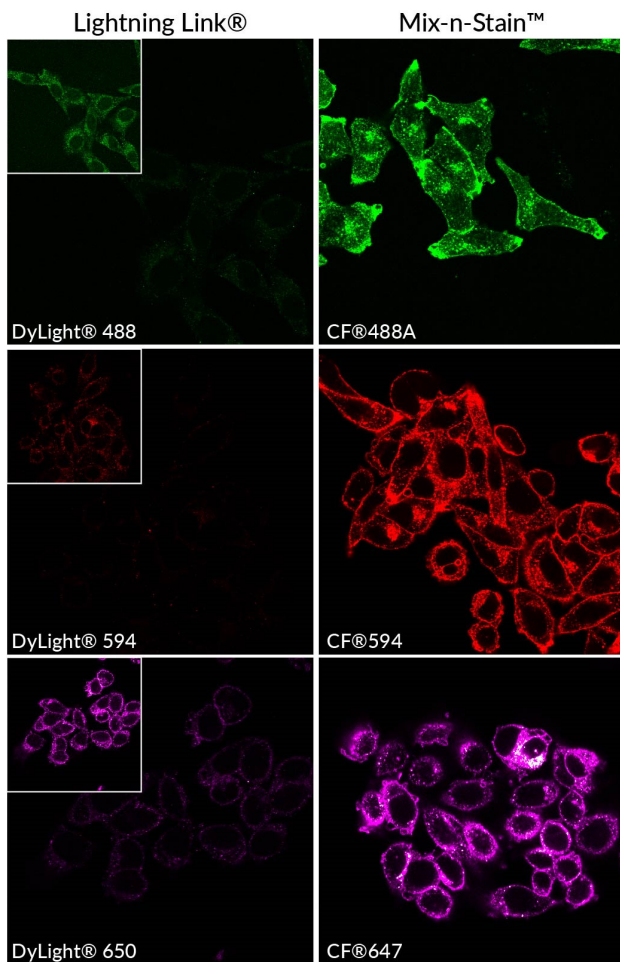


Figure 1. Mouse anti-transferrin receptor antibody was labeled using Lightning-Link® DyLight® Conjugation Kits (left) or Mix-n-Stain™ CF® Dye Antibody Labeling Kits (right) according to manufacturers' instructions.

The CF® dye conjugates show much higher signal compared to the DyLight® dye conjugates when imaged using the same instrument settings. The insets show the same field of view imaged at a higher gain setting to confirm the presence of DyLight® conjugated antibodies.

Large selection of labels:

- Choice of ~30 bright fluorescent CF® Dye colors
- Fluorescent proteins and tandem dyes: R-PE, APC, PerCP, RPE-CF®647T, & APC-CF®750T
- Enzymes: horseradish peroxidase (HRP), alkaline phosphatase (AP), glucose oxidase (GOx)
- Biotin, dinitrophenol (DNP), digoxigenin (DIG)

Mix-n-Stain™ labeled antibodies perform comparably to purified antibody conjugates

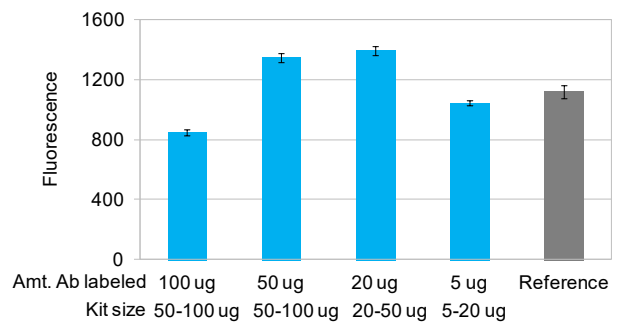


Figure 2. Flow cytometry analysis of Jurkat cells stained with CF®633 Mix-n-Stain™ labeled mouse anti-human CD3 antibodies (BD). Reference (gray bar): Purified Alexa Fluor® 647 mouse anti-human CD3 (BD).

Mix-n-Stain™ conjugates prepared using different kit sizes perform similarly to the commercially available purified conjugate of the same primary antibody.

Mix-n-Stain™

Small Ligand Labeling Kits

Mix-n-Stain™ CF® Dye Small Ligand Labeling Kits are designed for rapid, covalent labeling of low molecular weight (MW ~150 to 5,000), high affinity biological ligands or substrates without a purification step. Simply mix your ligand with the CF® dye of your choice and after a 30 minute incubation and a brief quenching step, you will have a covalently labeled dye-ligand conjugate for protein labeling that performs as well as synthetic fluorescent ligands from leading suppliers (Figure 3), at a fraction of the cost. Even without column purification, the CF® dye-ligand does not show non-specific staining. Ligands that have an aliphatic amine, such as SNAP-tag®, CLIP-tag™, HaloTag® and TMP-tag are compatible with the Mix-n-Stain™ CF® Dye Small Ligand Labeling Kit.

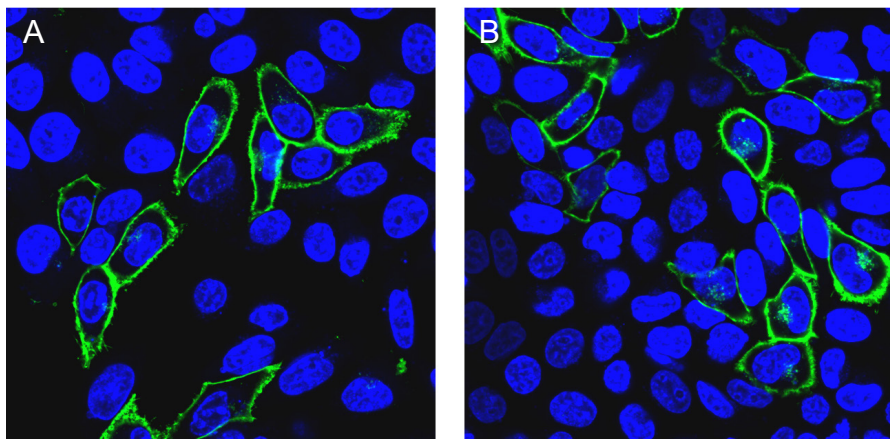


Figure 3. Live cell imaging of HeLa cells expressing CLIP-NK1R labeled with (A) CLIP-amine conjugated to CF®488A using Mix-n-Stain™; and (B) CLIP-surface 488 from New England Biolabs. Cell nuclei were stained with Hoechst 33342 (see related products). Green: FITC channel; Blue: DAPI channel.

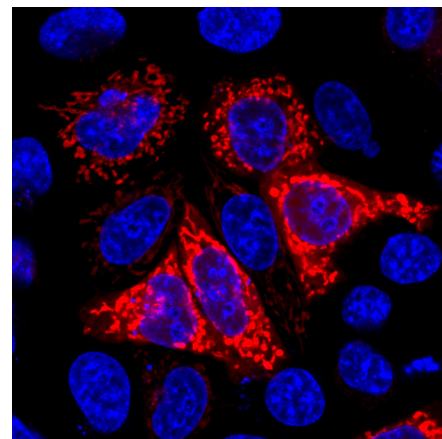


Figure 4. CF®540 Mix-n-Stain™-labeled Cox8A (mitochondria protein) in living cells via the CLIP-tag™. Cell nuclei were stained with Hoechst 33342. Blue: DAPI channel; Red: TMR channel.

Common tag types that can be labeled for cell surface or intracellular targets:

- SNAP-tag®
- HaloTag®
- CLIP-tag™
- TMP-tag

Mix-n-Stain™ Small Ligand Labeling Kits

Label/dye	Ex (nm)	Em (nm)	Cat. #	Staining
CF®405M	408	452	92362	Surface
CF®647	650	665	92359	Surface
CF®660C	667	685	92360	Surface
CF®680	681	698	92361	Surface
CF®408	408	450	92356	Intracellular
CF®500	500	510	92357	Intracellular
CF®540	540	570	92358	Intracellular
CF®555	555	585	92364	Intracellular
CF®650	650	670	92363	Intracellular

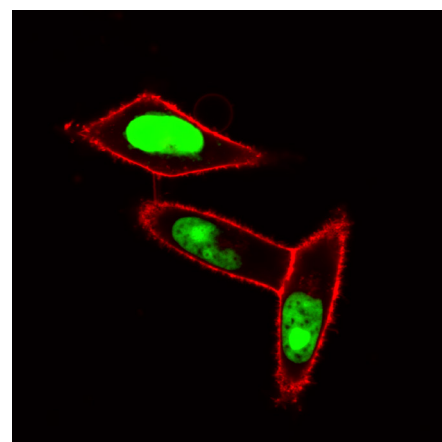


Figure 5. Two-color live cell imaging. CF®500 Mix-n-Stain™ kit was used to label nuclear protein H2B via the CLIP-tag™ (green); CF®568 Mix-n-Stain™ kit was used to label cell surface protein ADRβ2 via the SNAP-tag® (red).

Small Ligand for Labeling

Ligand	Cat. #	Size
TMP-PEG3-amine, TFA salt	91056	1 mg

Mix-n-Stain™ CF® Dye Antibody Labeling Kits

Label/Dye	Ex (nm)	Em (nm)	Cat. # 5-20 ug Ab	Cat. # 20-50 ug Ab	Cat. # 50-100 ug Ab
CF@350	347	448	92270	92250	92230
CF@405L	395	545	92303	92304	92305
CF@405M	408	452	92272	92252	92232
CF@405S	404	431	92271	92251	92231
CF@430	426	498	92316	92317	92318
CF@440	440	515	92319	92320	92321
CF@450	450	538	92322	92323	92324
CF@488A	490	515	92273	92253	92233
CF@514	516	548	92331	92332	92333
CF@532	527	558	92289	92290	92291
CF@543	541	560	92287	92267	92247
CF@555	555	565	92274	92254	92234
CF@568	562	583	92275	92255	92235
CF@570	568	591	92334	92335	92336
CF@583	583	606	92237	92238	92239
CF@594	593	614	92276	92256	92236
CF@633	630	650	92277	92257	92237
CF@640R	642	662	92278	92258	92245
CF@647	650	665	92279	92259	92238
CF@660C	667	685	92280	92260	92239
CF@660R	663	682	92281	92261	92243
CF@680	681	698	92282	92262	92240
CF@680R	680	701	92283	92263	92246
CF@700	695	720	92425	92426	92427
CF@750	755	777	92284	92264	92241
CF@770	770	797	92285	92265	92242
CF@790	784	806	92288	92268	92248
CF@800	797	816	92428	92429	92430
CF@820	822	835	92431	92432	92433

Mix-n-Stain™ Fluorescent Protein and Tandem Dye Antibody Labeling Kits

Label/dye	Cat. #	Labeling Size
APC	92306	25-50 ug Ab
	92307	50-100 ug Ab
R-PE	92298	25-50 ug Ab
	92299	50-100 ug Ab
RPE-CF@647T	92340	25-50 ug Ab
	92341	50-100 ug Ab
	92346	1 mg Ab
APC-CF@750T	92310	25-50 ug Ab
	92311	50-100 ug Ab

Mix-n-Stain™ Maxi Antibody Labeling Kits, 1 mg

Label/Dye	Ex (nm)	Em (nm)	Cat. # 1 mg Ab
CF@350	347	448	92420
CF@405M	408	452	92404
CF@405S	404	431	92421
CF@488A	490	515	92405
CF@555	555	565	92406
CF@568	562	583	92407
CF@594	593	614	92408
CF@633	630	650	92409
CF@647	650	665	92410
CF@680	681	698	92422
CF@750	755	777	92423
CF@770	770	797	92424
Fluorescein/FITC	494	518	92411
Cyanine 555 (equivalent to Cy@3)	555	565	92415
Cyanine 647 (equivalent to Cy@5)	650	665	92419

Mix-n-Stain™ Biotin, Enzyme, or Hapten Antibody Labeling Kits

Label	Cat. #	Labeling Size
Biotin	92286	5-20 ug Ab
Biotin	92266	20-50 ug Ab
Biotin	92244	50-100 ug Ab
HRP	92300	10-20 ug Ab
HRP	92301	25-50 ug Ab
HRP	92302	50-100 ug Ab
AP	92314	25-50 ug Ab
AP	92315	50-100 ug Ab
DNP	92325	5-20 ug Ab
DNP	92326	20-50 ug Ab
DNP	92327	50-100 ug Ab
DIG	92328	5-20 ug Ab
DIG	92329	20-50 ug Ab
DIG	92330	50-100 ug Ab



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 web: www.fisherbiotec.com

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 Zenon and DyLight are registered trademarks of ThermoFisher Scientific.
 Lightning-Link is a registered trademark of Expedon.
 SNAP-tag is a registered trademark and CLIP-tag is a trademark of New England Biolabs.
 HaloTag is a registered trademark of Promega Corporation.

