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## CF® Dye & Biotin SE Protein Labeling Kits

Kits for succinimidyl ester labeling antibodies or other proteins with Biotium's next-generation CF® Dyes or biotin. 3 x 1 mg labeling reactions per kit.



### Product attributes

### Product Description

This kit contains reagents for labeling antibodies or other proteins with a fluorescent CF® dye succinimidyl ester (CF® dye SE) or biotin succinimidyl ester (biotin SE). Learn more about next-generation [CF® dyes](#) with superior brightness, photostability, and water solubility compared to other fluorescent dyes.

**Note:** Conjugates of blue-fluorescent dyes like CF®350, CF®405S and CF®405M are not recommended for detecting low abundance targets and may be challenging to use in tissue specimens. Blue dyes have lower fluorescence and photostability, and cells and tissue have high autofluorescence in blue wavelengths, resulting in lower signal to noise compared to other colors.

See our full line of [Antibody & Protein Labeling Kits](#).



## CF® Dye & Biotin SE Protein Labeling Kits

SE Protein Labeling Kit	Ex/Em	Size	Catalog No.	Dye Features
<a href="#">CF@350</a>	347/448 nm	3 x 1 mg labelings	<a href="#">92210</a>	<a href="#">CF@350 Features</a>
<a href="#">CF@405S</a>	404/431 nm	3 x 1 mg labelings	<a href="#">92211</a>	<a href="#">CF@405S Features</a>
<a href="#">CF@405M</a>	408/452 nm	3 x 1 mg labelings	<a href="#">92212</a>	<a href="#">CF@405M Features</a>
<a href="#">CF@405L</a>	395/545 nm	3 x 1 mg labelings	<a href="#">92228</a>	<a href="#">CF@405L Features</a>
<a href="#">CF@488A</a>	490/515 nm	3 x 1 mg labelings	<a href="#">92213</a>	<a href="#">CF@488A Features</a>
<a href="#">CF@532</a>	527/558 nm	3 x 1 mg labelings	<a href="#">92208</a>	<a href="#">CF@532 Features</a>
<a href="#">CF@543</a>	541/560 nm	3 x 1 mg labelings	<a href="#">92209</a>	<a href="#">CF@543 Features</a>
<a href="#">CF@555</a>	555/565 nm	3 x 1 mg labelings	<a href="#">92214</a>	<a href="#">CF@555 Features</a>
<a href="#">CF@568</a>	562/583 nm	3 x 1 mg labelings	<a href="#">92215</a>	<a href="#">CF@568 Features</a>
<a href="#">CF@594</a>	593/614 nm	3 x 1 mg labelings	<a href="#">92216</a>	<a href="#">CF@594 Features</a>
<a href="#">CF@633</a>	630/650 nm	3 x 1 mg labelings	<a href="#">92217</a>	<a href="#">CF@633 Features</a>
<a href="#">CF@640R</a>	642/662 nm	3 x 1 mg labelings	<a href="#">92225</a>	<a href="#">CF@640R Features</a>
<a href="#">CF@647</a>	650/665 nm	3 x 1 mg labelings	<a href="#">92218</a>	<a href="#">CF@647 Features</a>
<a href="#">CF@660R</a>	663/682 nm	3 x 1 mg labelings	<a href="#">92219</a>	<a href="#">CF@660R Features</a>
<a href="#">CF@660C</a>	667/685 nm	3 x 1 mg labelings	<a href="#">92223</a>	<a href="#">CF@660C Features</a>
<a href="#">CF@680</a>	681/698 nm	3 x 1 mg labelings	<a href="#">92220</a>	<a href="#">CF@680 Features</a>
<a href="#">CF@680R</a>	680/701 nm	3 x 1 mg labelings	<a href="#">92226</a>	<a href="#">CF@680R Features</a>
<a href="#">CF@750</a>	755/777 nm	3 x 1 mg labelings	<a href="#">92221</a>	<a href="#">CF@750 Features</a>
<a href="#">CF@770</a>	770/797 nm	3 x 1 mg labelings	<a href="#">92222</a>	<a href="#">CF@770 Features</a>
<a href="#">Biotin</a>	N/A	3 x 1 mg labelings	<a href="#">92224</a>	

## CF® Dye Technical Data

Dye	Abs/Em (nm)	MW (free acid form)	Sephadex® media <sup>1</sup>	Amax (nm)	Cf A260/Amax	Cf A280/Amax	ε <sup>2</sup>	Optimal DOL (IgG)
<a href="#">CF@350</a>	355/450	~496	G-25	347	0.13	0.14	18,000	4-6
<a href="#">CF@405S</a>	411/431	~1169	G-25	404	0.19	0.7	33,000	3-5
<a href="#">CF@405M</a>	416/452	~503	G-25	408	0.24	0.13	41,000	4-6
<a href="#">CF@405L</a>	413/547	~1573	G-25	395	N/A	0.5	24,000	8-12
<a href="#">CF@410</a>	404/455	~242	G-25	416	0.15	0.2	46,000	5-7
<a href="#">CF@430</a>	424/497	~429	G-25	426	0.21	0.044	40,000	5-8
<a href="#">CF@440</a>	433/512	~479	G-25	440	0.303	0.139	40,000	5-8
<a href="#">CF@450</a>	448/533	~689	G-25	450	0.205	0.2	40,000	5-8
<a href="#">CF@488A</a>	490/516	~914	G-25	490	0.16	0.1	70,000	7-9
<a href="#">CF@503R</a>	503/532	~1100	G-25	503	0.21	0.09	90,000	4-10
<a href="#">CF@505</a>	505/519	~587	G-25	505	0.22	0.09	90,000	4-8
<a href="#">CF@510</a>	513/537	~562	G-25	513	0.25	0.14	90,000	3-5
<a href="#">CF@514</a>	516/549	~1216	G-25	516	0.14	0.073	105,000	5-8
<a href="#">CF@532</a>	531/552	~685	G-25	527	0.11	0.06	96,000	4-7
<a href="#">CF@543</a>	543/563	~887	G-25	541	0.305	0.095	100,000	4-7
<a href="#">CF@550R</a>	551/577	~686	G-25	551	0.12	0.08	100,000	5-6
<a href="#">CF@555</a>	554/568	~959	G-25	555	0.026	0.08	150,000	4-5, 3-6*
<a href="#">CF@568</a>	562/584	~714	G-25	562	0.17	0.08	100,000	5-6
<a href="#">CF@570</a>	568/592	~2998	G-25	568	0.0998	0.1	150,000	5-6
<a href="#">CF@583</a>	584/606	~3127	G-75	583	0.139	0.223	150,000	5-6
<a href="#">CF@583R</a>	585/609	~773	G-25	585	0.19	0.08	100,000	5-6
<a href="#">CF@594</a>	593/615	~729	G-25	593	0.24	0.08	115,000	4-7
<a href="#">CF@597R</a>	597/619	~800	G-25	597	0.25	0.08	100,000	5-6
<a href="#">CF@620R</a>	620/643	~738	G-25	617	0.28	0.45	115,000	5-6
<a href="#">CF@633</a>	629/650	~821	G-25	630	0.25	0.48	100,000	4-7
<a href="#">CF@640R</a>	642/663	~832	G-50	642	0.23	0.44	105,000	4-7
<a href="#">CF@647</a>	652/668	~985	G-25	650	0.01	0.03	240,000	4-5, 3-6*
<a href="#">CF@660C</a>	667/685	~3024	G-75	667	0.05	0.08	200,000	3-6, 2-3*
<a href="#">CF@660R</a>	662/682	~888	G-25	663	0.2	0.51	100,000	4-7
<a href="#">CF@680</a>	681/698	~3153	G-75	681	0.06	0.09	210,000	3-5, 2-3*
<a href="#">CF@680R</a>	680/701	~912	G-25	680	0.155	0.32	140,000	5-6
<a href="#">CF@700</a>	696/721	~2474	G-75	696	0.055	0.06	240,000	3-6
<a href="#">CF@710</a>	713/735	~860	G-25	712	0.11	0.07	115,000	5-6
<a href="#">CF@725</a>	729/750	~890	G-25	729	0.11	0.07	120,000	5-6
<a href="#">CF@740</a>	742/767	~900	G-25	742	0.132	0.08	105,000	5-6
<a href="#">CF@750</a>	755/779	~2921	G-75	755	0.01	0.03	250,000	3-5, 2-3*
<a href="#">CF@770</a>	770/797	~3091	G-75	770	0.041	0.06	220,000	3-5, 2-3*
<a href="#">CF@790</a>	783/808	~3179	G-75	784	0.104	0.07	210,000	3-5
<a href="#">CF@800</a>	797/817	~3334	G-75	797	0.09	0.08	210,000	3-5

Dye	Abs/Em (nm)	MW (free acid form)	Sephadex® media <sup>1</sup>	Amax (nm)	Cf A260/Amax	Cf A280/Amax	ε <sup>2</sup>	Optimal DOL (IgG)
<a href="#">CF@820</a>	822/835	~2711	G-75	822	0.0459	0.07	253,000	3-6
<a href="#">CF@850</a>	852/870	~2787	G-75	852	N/A	0.06	240,000	3-6
<a href="#">CF@870</a>	876/896	~2773	G-75	877	N/A	0.06	240,000	3-6

1. Sephadex® media recommendations are for antibody purification, not nucleic acid.

2. Extinction Coefficient (ε).

\*Suitable, but suboptimal DOL.

Sephadex is a registered trademark of Cytiva.

## Antibody & Protein Labeling Kits

Product Name	Label Options	Labeling Scale	Labeling Time	Features
<a href="#">Mix-n-Stain™ CF@ Dye Antibody Labeling Kits</a>	CF@ Dyes	≤5-20 ug IgG 20-50 ug IgG 50-100 ug IgG	~ 15 min.	<ul style="list-style-type: none"> <li>• Rapid, simple labeling</li> <li>• No purification</li> <li>• Tolerates BSA &amp; other additives</li> <li>• Dyes for super-resolution, spectral flow, &amp; NIR detection</li> </ul>
<a href="#">Mix-n-Stain™ FITC Antibody Labeling Kits</a>	FITC			
<a href="#">Mix-n-Stain™ Cyanine Dye Antibody Labeling Kits</a>	Cyanine 555 Cyanine 647			
<a href="#">Mix-n-Stain™ Biotin Antibody Labeling Kits</a>	Biotin			
<a href="#">Mix-n-Stain™ Digoxigenin Antibody Labeling Kits</a>	Digoxigenin (DIG)			
<a href="#">Mix-n-Stain™ DNP Antibody Labeling Kits</a>	DNP			
<a href="#">Mix-n-Stain™ Maxi Antibody Labeling Kits</a>	CF@ Dyes Cyanine Dyes	1 mg IgG	~ 30 min.	
<a href="#">Mix-n-Stain™ CF@ Dye IgM Antibody Labeling Kits</a>	CF@ Dyes FITC	25 ug IgM 100 ug IgM	15-30 min.	<ul style="list-style-type: none"> <li>• Rapid, simple labeling</li> <li>• No purification</li> </ul>
<a href="#">Mix-n-Stain™ STORM CF@ Dye Antibody Labeling Kits</a>	CF@ Dyes	50 ug IgG	~ 30 min.	<ul style="list-style-type: none"> <li>• Optimized to provide low 1-2.5 DOL</li> <li>• No purification</li> </ul>
<a href="#">Mix-n-Stain™ Nanobody Labeling Kits</a>	CF@ Dyes	5-20 ug Nanobody® 20-50 ug Nanobody®	~ 30 min.	<ul style="list-style-type: none"> <li>• Optimized for Nanobodies®</li> <li>• Tolerates BSA &amp; other additives</li> </ul>
<a href="#">Mix-n-Stain™ Nanobody Thiol Labeling Kits</a>	CF@ Dyes	~ 2 hours		<ul style="list-style-type: none"> <li>• Optimized for Nanobodies® with single exposed cysteine residue</li> </ul>
<a href="#">Mix-n-Stain™ Small Ligand Labeling Kits</a>	CF@ Dyes	0.1 umol small ligand	~ 30 min.	<ul style="list-style-type: none"> <li>• Label SNAP®, CLIP™, HaloTag® &amp; other small ligands</li> <li>• Dye options for surface or intracellular targets</li> </ul>
<a href="#">VivoBrite™ Rapid Antibody Labeling Kits for Small Animal In Vivo Imaging</a>	Near-IR CF@ Dyes	3 x 1 mg IgG	~ 2 hours	<ul style="list-style-type: none"> <li>• Dyes, buffers, &amp; spin vials for labeling + purification</li> <li>• Sterile syringes, filters and storage vials for in vivo use</li> </ul>
<a href="#">CF@ Dye &amp; Biotin SE Protein Labeling Kits</a>	CF@ Dyes Biotin	3 x 1 mg protein	~ 2 hours	<ul style="list-style-type: none"> <li>• Dyes, buffers, &amp; spin vials for labeling + purification</li> </ul>

## References

Download a list of [CF@ dye references](#).

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