

CF™594 Dye

Truly the brightest deep-red dye

Technical Summary

Abs/Em Maxima: 593/614 nm
Extinction coefficient: 115,000
Molecular weight: ~730
Flow cytometry laser line: 532 or 594 nm
Microscopy laser line: 594 nm
Direct replacement for: Alexa Fluor® 594, ATTO™ 594, DY-594, DyLight™ 594, Texas Red®

Advantages

- Yields the brightest antibody conjugates among spectrally similar dyes.
- Extremely photostable
- Highly water-soluble

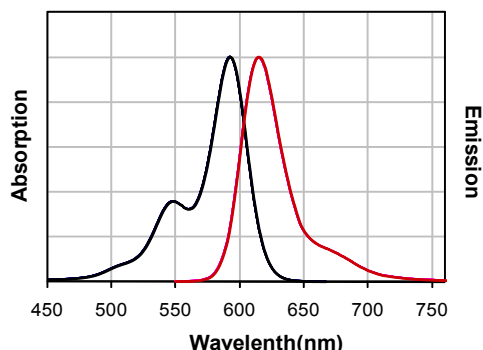


Figure 1. Absorption and emission spectra of CF™594 conjugated to goat anti-mouse IgG in PBS.

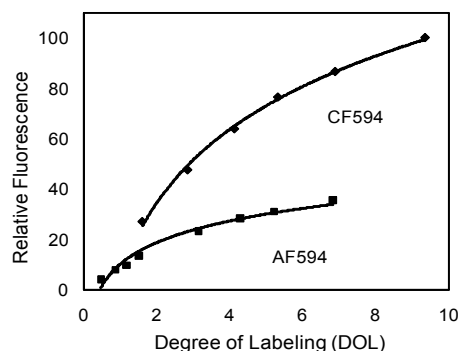


Figure 2. Relative fluorescence of CF™594- and Alexa Fluor® 594-goat anti-mouse conjugates as a function of number of dye per protein or degree of labeling (DOL). Fluorescence was measured at each dye's emission maximum in PBS using 594 nm excitation.

CF™594 is a deep red fluorescent dye spectrally similar to Alexa Fluor® 594 and Texas Red® dye (Figure 1). When conjugated to proteins, CF™594 is significantly brighter than Alexa Fluor® 594 (Figure 2) due to its high quantum yield and exceptional water solubility. CF™594 also has excellent photostability (Figure 3), making it ideal for demanding applications such as confocal microscopy and single molecule imaging. These properties make CF™594 the best deep-red dye for labeling proteins and nucleic acids. The dye is particularly useful in combination with our blue fluorescent CF™350, green fluorescent CF™488A and far red CF™647 for multi-color imaging.

A list of CF™594-based products is shown in Table 1. Please visit www.biotium.com to view our full spectrum of CF™ dyes and related products, including secondary antibodies, antibody labeling kits, and bioconjugates including phalloidins, annexin V and α -bungarotoxin.

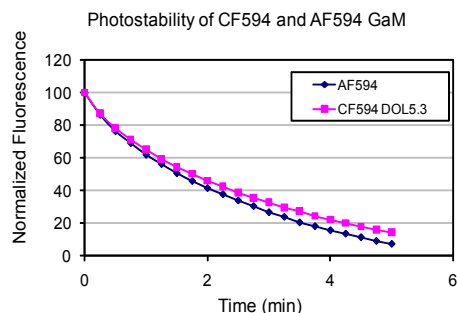


Figure 3. Intracellular staining of Jurkat cells was performed with mouse anti-CD3 followed by CF™594 or AlexaFluor®594 goat anti-mouse conjugates. Cells were continuously exposed using a mercury arc lamp microscope. Images were captured every 15 seconds for 5 min and fluorescence intensity of each frame was normalized to the first image.

If you are looking for an antibody conjugate not listed in our catalog, please let us know. We may be able to add it as a new product, or perform a custom conjugation for you.



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CF™594 fluorescent reagents

Table 1. CF™594 Product List

Product Name	Size	Cat No.
CF™594-Labeled Secondary Antibody Conjugates		
Donkey Anti-Goat IgG (H+L) whole antibody (min X Chicken, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, and Rat)	0.5 mL (2 mg/mL)	20116
Donkey Anti-Mouse IgG (H+L) whole antibody (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Rabbit, and Sheep)	0.5 mL (2 mg/mL)	20115
Donkey Anti-Rabbit IgG (H+L) whole antibody (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rat, and Sheep)	0.5 mL (2 mg/mL)	20152
Donkey Anti-Rat IgG (H+L) whole antibody (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Rabbit, and Sheep)	0.5 mL (2 mg/mL)	20159
Donkey Anti-Sheep IgG (H+L) whole antibody (min X Chicken, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, and Rat)	0.5 mL (2 mg/mL)	20156
Goat Anti-Chicken IgY (IgG) (H+L) whole antibody (min X Bovine, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, Rat, and Sheep)	0.5 mL (2 mg/mL)	20114
Goat Anti-Guinea Pig IgG (H+L) whole antibody	0.5 mL (2 mg/mL)	20118
Goat Anti-Human IgG (H+L) whole antibody (min X Bovine, Horse, and Mouse)	0.5 mL (2 mg/mL)	20154
Goat Anti-Mouse IgG (H+L) whole antibody	0.5 mL (2 mg/mL)	20110
Goat Anti-Mouse IgG (H+L) whole antibody, 2 mg/mL (min x Human, Bovine, Horse, Rabbit, and Swine)	0.5 mL (2 mg/mL)	20111
Goat Anti-Mouse IgG (H+L), F(ab')₂ fragment, 2 mg/mL	0.25 mL	20119
Goat Anti-Rabbit IgG (H+L) whole antibody	0.5 mL (2 mg/mL)	20112
Goat Anti-Rabbit IgG (H+L) whole antibody (min X Human, Mouse, and Rat)	0.5 mL (2 mg/mL)	20113
Goat Anti-Rabbit IgG (H+L), F(ab')₂ fragment	0.25 mL (2 mg/mL)	20153
Goat Anti-Rat IgG (H+L) whole antibody (min X Human, Bovine, Horse, and Rabbit)	0.5 mL (2 mg/mL)	20155
Goat Anti-Swine IgG (H+L) whole antibody	0.5 mL (2 mg/mL)	20160
Rabbit Anti-Goat IgG (H+L) whole antibody	0.5 mL (2 mg/mL)	20117
Rabbit Anti-Mouse IgG (H+L) whole antibody (min X Human)	0.5 mL (2 mg/mL)	20158
Rabbit Anti-Rat IgG (H+L) whole antibody (min X Human)	0.5 mL (2 mg/mL)	20157
Other CF™594 Bioconjugates		
Annexin V	0.5 mL (50 ug/mL)	29011
α-Bungarotoxin	0.5 mg	00007
Phalloidin	300 U	00045
Streptavidin	1 mg	29036
CF™594 Reactive Dyes and Labeling Kits		
CF™594, aminooxy	1 mg	92052
CF™594 hydrazide	1 mg	92157
CF™594 maleimide	1 μmole	92025
CF™594 succinimidyl ester	1 μmole	92132
CF™594 SE protein labeling kit	3 labelings (1 mg protein each)	92216
Mix-n-Stain CF™594 antibody labeling kit	1 labeling (5-20 ug antibody)	92276
Mix-n-Stain CF™594 antibody labeling kit	1 labeling (20-50 ug antibody)	92256
Mix-n-Stain CF™594 antibody labeling kit	1 labeling (50-100 ug antibody)	92236

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Alexa Fluor® and Texas Red® are trademarks of Invitrogen; ATTO dyes are products of ATTO-TEC GmbH; DY-dyes are products of Dyomics GmbH; DyLight® is a registered trademark of Thermo Fisher Scientific



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