CF™488A Dye

A highly photostable and bright green dye for 488 nm laser

Technical Summary

Abs/Em Maxima:	490/515 nm
Extinction coefficient:	70,000
Molecular weight:	~910
Flow cytometry laser line:	488 nm
Microscopy laser line:	488 nm
Direct replacement for:	FITC, FAM, Cy™2

Advantages

- Yields biologically more specific antibody conjugates and has less "spill-over" fluorescence in the red channel than other dye
- Extremely photostable
- Highly water-soluble and pH-insensitive

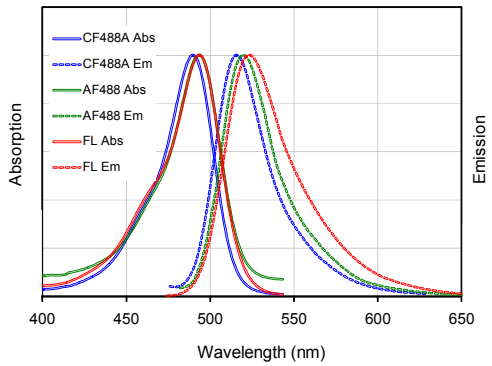

Figure 1. Absorption and emission spectra of CF™488A (blue), other dye (green) and FITC (red) conjugated to goat anti-mouse IgG in PBS.

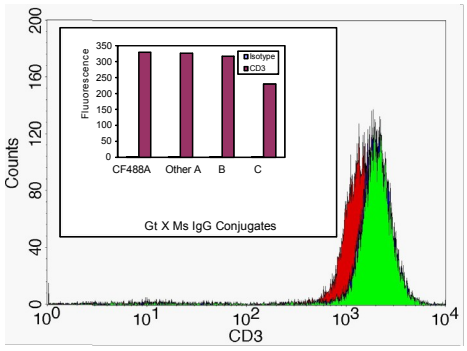

Figure 2. Jurkat cells were stained with intracellular CD3 or isotype control (BD Biosciences) followed by goat anti-mouse IgG conjugates from the manufacturer's shown above. The inset graph depicts the median fluorescence of the population as analyzed on a Beckman Coulter FC-500. The histogram depicts an overlay of CD3-stained cells with CF488A (green), other dyes (as analyzed on a BD FACS Calibur in the FL1 channel.

CF™488A is a green fluorescent dye optimally excitable by the 488 nm argon laser line. Under common detection conditions, CF™488A is at least as bright as other 488 dye. However, a major advantage of CF™488A over other dye is that antibody conjugates prepared from the former are biologically more specific. Other dye carries multiple negative charges, which can significantly change the isoelectric point of the proteins the dye labels and consequently alter the specificity of the protein conjugates. CF™488A, on the other hand, is minimally charged. Thus, antibody conjugates prepared from the dye ensure biological detection with high signal-to-noise ratio. Another feature of CF™488A is that the emission peak wavelength is about 10 nm shorter than that of other dye and 15 nm shorter than that of the traditional green dye FITC (or FAM). The shorter wavelength of CF™488A offers the advantage of less fluorescence "spill-over" in the red channel in multi-color detection applications.

A list of CF™488A-based products are shown in Table 1. A full selection of secondary antibodies, antibody labeling kits, and other bioconjugates including phalloidins, annexin V and α-bungarotoxin are also available for many CF™ dyes. Please visit the Biotium website at www.biotium.com for details.

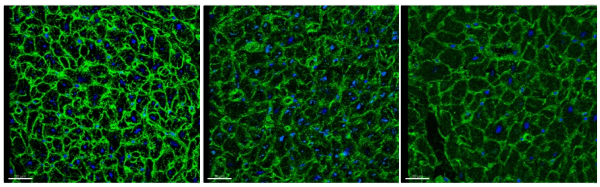

Figure 3. Cryosections (6 µm) of human control heart sections stained with anti-fibronectin followed by goat anti-rabbit IgG labeled with CF™488A, Cy™2 and other dye, respectively. Courtesy of Dr. Sawa Kostin at Max-Planck-Institute für Herz- und Lungenforschung (W.G. Kerckhoff-Institut) in Bad Nauheim (Hessen)-Germany.

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

Biotium

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CF™488A fluorescent reagents

Table 1. CF™488 Product List

Product Name	Size	Cat No.
CF™488A-Labeled Secondary Antibody Conjugates		
Donkey Anti-Goat IgG (H+L) whole antibody , 2 mg/mL (min X Chicken, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, and Rat)	0.5 mL	**20016**
Donkey Anti-Mouse IgG (H+L) whole antibody , 2 mg/mL (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Rabbit, and Sheep)	0.5 mL	**20014**
Donkey Anti-Rabbit IgG (H+L) whole antibody , 2 mg/mL (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rat, and Sheep)	0.5 mL	**20015**
Donkey Anti-Rat IgG (H+L) whole antibody , 2 mg/mL (min X Bovine, Chicken, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Rabbit, and Sheep)	0.5 mL	**20027**
Donkey Anti-Sheep IgG (H+L) whole antibody , 2 mg/mL (min X Chicken, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, and Rat)	0.5 mL	**20024**
Goat Anti-Chicken IgY (IgG) (H+L) whole antibody , 2 mg/mL (min X Bovine, Goat, Guinea Pig, Syrian Hamster, Horse, Human, Mouse, Rabbit, Rat, and Sheep)	0.5 mL	**20020**
Goat Anti-Guinea Pig IgG (H+L) whole antibody , 2 mg/mL	0.5 mL	**20017**
Goat Anti-Human IgG (H+L) whole antibody , 2 mg/mL (min X Bovine, Horse, and Mouse)	0.5 mL	**20022**
Goat Anti-Mouse IgG (H+L) whole antibody , 2 mg/mL	0.5 mL	**20010**
Goat Anti-Mouse IgG (H+L) whole antibody , 2 mg/mL (min x Human, Bovine, Horse, Rabbit, and Swine)	0.5 mL	**20018**
Goat Anti-Mouse IgG (H+L), F(ab')$_2$ fragment, 2 mg/mL	0.25 mL	**20011**
Goat Anti-Rabbit IgG (H+L) whole antibody , 2 mg/mL	0.5 mL	**20012**
Goat Anti-Rabbit IgG (H+L) whole antibody , 2 mg/mL (min X Human, Mouse, and Rat)	0.5 mL	**20019**
Goat Anti-Rabbit IgG (H+L), F(ab')$_2$ fragment, 2 mg/mL	0.25 mL	**20013**
Goat Anti-Rat IgG (H+L) whole antibody , 2 mg/mL (min X Human, Bovine, Horse, and Rabbit)	0.5 mL	**20023**
Goat Anti-Swine IgG (H+L) whole antibody , 2 mg/mL	0.5 mL	**20028**
Rabbit Anti-Goat IgG (H+L) whole antibody , 2 mg/mL	0.5 mL	**20021**
Rabbit Anti-Mouse IgG (H+L) whole antibody , 2 mg/mL (min X Human)	0.5 mL	**20026**
Rabbit Anti-Rat IgG (H+L) whole antibody , 2 mg/mL (min X Human)	0.5 mL	**20025**
Other CF™488A-Labeled Products		
Annexin V, 50 µg/mL	0.5 mL	**29005**
α-Bungarotoxin	0.5 mg	**00005**
Phalloidin	300 U	**00042**
Streptavidin	1 mg	**29034**
CF™488A Reactive Dyes and Labeling Kits		
CF™488A, aminooxy	1 mg	**92051**
CF™488A hydrazide	1 mg	**92152**
CF™488A maleimide	1 µmole	**92022**
CF™488A succinimidyl ester	1 µmole	**92120**
CF™488A SE protein labeling kit	3 labelings (for 1 mg protein each)	**92213**
CF™488A SE microscale protein labeling kit	3 labelings (for 20-100 µg protein each)	**92233**

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