

Product Information

CF™488A, Hydrazide

Catalog Number **SCJ4600015**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

TECHNICAL BULLETIN

Product Description

CF™488A, hydrazide can be used as a fixable polar tracer for visualizing cell morphology, or for labeling biomolecules with an aldehyde or ketone group (such as carbohydrate molecules after peroxidation with periodate).

CF488A is a green fluorescent dye optimally excitable by the 488 nm argon laser line. Under common detection conditions, CF488A is at least as bright as Alexa Fluor® 488. However, a major advantage of CF488A over Alexa Fluor 488 is that antibody conjugates prepared from the former are biologically more specific. Alexa Fluor 488 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. CF488A, 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 CF488A is that the emission peak wavelength is about 10 nm shorter than that of Alexa Fluor 488 and 15 nm shorter than that of the traditional green dye FITC (or FAM). The shorter wavelength of CF488A offers the advantage of less fluorescence “spill-over” in the red channel in multi-color detection applications.

CF488A dye properties:

Abs/Em Maxima: 490/515 nm (See Figure 1)

Extinction coefficient: 70,000

Molecular weight: ~910

A_{280}/A_{max} or CF (correction factor for estimating degree of protein labeling): 0.1

Flow cytometry laser line: 488 nm

Microscopy laser line: 488 nm

Direct replacement for: Alexa Fluor 488, Cy™2,

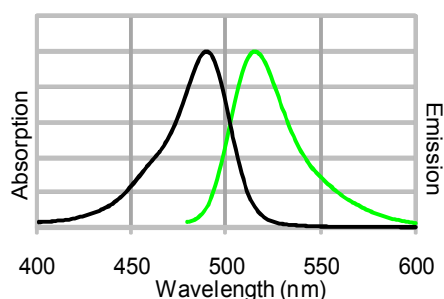
DyLight® 488, FAM, and fluorescein (FITC)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Figure 1.

Absorption and emission spectra of CF488A conjugated to goat anti-mouse IgG in PBS.



Preparation Instructions

Stock solutions may be prepared in water or PBS. Stock solutions may be stored at $-20\text{ }^{\circ}\text{C}$ for at least 6 months.

Storage/Stability

Store the dye desiccated at $-20\text{ }^{\circ}\text{C}$. When stored as directed, the dye should remain active for at least 6 months.

This product is distributed by Sigma-Aldrich Co. under the authorization of Biotium, Inc. This product is covered by one or more US patents and corresponding patent claims outside the US patents or pending applications owned or licensed by Biotium, Inc. including without limitation: 12/334,387; 12/607,915; 12/699,778; 12/850,578; 61/454,484. In consideration of the purchase price paid by the buyer, the buyer is hereby granted a limited, non-exclusive, non-transferable license to use only the purchased amount of the product solely for the buyer's own internal research in a manner consistent with the accompanying product literature. Except as expressly granted herein, the sale of this product does not grant to or convey upon the buyer any license, expressly, by implication or estoppel, under any patent right or other intellectual property right of Biotium, Inc.

Buyer shall not resell or transfer this product to any third party, or use the product for any commercial purposes, including without limitation, any diagnostic, therapeutic or prophylactic uses. This product is for research use only. Any other uses, including diagnostic uses, require a separate license from Biotium, Inc. For information on purchasing a license to use this product for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.

CF is a trademark of Biotium.
Alexa Fluor is a registered trademark of Invitrogen.
Cy is a trademark of GE Healthcare.
DyLight is a registered trademark of Thermo Fisher Scientific.

AKN,MAM 10/11-1