Fibrinogen Conjugates

Quick Facts

Storage upon receipt:

- ≤–20ºC
- Desiccate
- Protect from light

Abs/Em: See Table 1

Introduction

Fibrinogen is a key component in the blood clotting process and can support both platelet–platelet and platelet–surface interactions by binding to the glycoprotein IIb-IIIa (GPIIb-IIIa) receptor.[1] Activation of the GPIIb-IIIa complex is necessary before soluble fibrinogen can bind, although the events that lead to this activation are not well understood.[2] Fluorescently labeled fibrinogen has proven to be a valuable tool for investigating platelet activation and subsequent fibrinogen binding. For instance, fluorescein-labeled fibrinogen has been used to detect fibrinogen bound to activated platelets by flow cytometry.[3]

Molecular Probes offers five human fibrinogen conjugates in four fluorescent colors. The Alexa Fluor® 488 human fibrinogen conjugate (F-13191), along with Oregon Green® 488 human fibrinogen conjugate (F-7496), have spectral characteristics similar to fluorescein conjugates. However, the fluorescence of Oregon Green 488 and Alexa Fluor 488 protein conjugates are more photostable and less pH-dependent than that of fluorescein–protein conjugates. The red-orange–fluorescent Alexa Fluor 546 human fibrinogen conjugate (F-13192) is brighter and more photostable than tetramethylrhodamine conjugates of fibrinogen, while possessing similar spectral characteristics. Similarly, the red-fluorescent Alexa Fluor 594 human fibrinogen conjugate (F-13193) is brighter than Texas Red® conjugates of fibrinogen, yet has similar excitation and emission maxima. The Alexa Fluor 647 fibrinogen conjugate (F-35200) yields bright, far-red fluorescence similar to that of Cy5™ dye and is useful for multicolor applications.

Table 1. Spectral characteristics of human fibrinogen conjugates.

Cat #	Label	Abs *	Em *
F-7496	Oregon Green 488	496	524
F-13191	Alexa Fluor 488	496	520
F-13192	Alexa Fluor 546	558	573
F-13193	Alexa Fluor 594	592	618
F-35200	Alexa Fluor 647	650	668

* Absorption (Abs) and fluorescence emission (Em) maxima, in nm.

Materials

Contents

Each conjugate of fibrinogen is supplied lyophilized in a unit size of 5 mg.

Storage and Handling

Upon receipt, the lyophilized product should be stored desiccated at ≤–20°C. A 1.5 mg/mL stock solution can be prepared by reconstituting the conjugate in 3.33 mL of 0.1 M sodium bicarbonate (pH 8.3) at room temperature. Complete solubilization may take an hour or more with occasional gentle mixing. Stock solutions can be stored at 4°C with the addition of sodium azide at a final concentration of 2 mM. For long-term storage, divide the solution into aliquots and freeze at ≤–20°C. When properly stored, these products are stable for several months. PROTECT FROM LIGHT. AVOID REPEATED FREEZING AND THAWING.

Caution: The fibrinogen in this conjugate is isolated from human serum. Although the serum has been tested and shown to be negative for HIV and hepatitis B, the conjugate should be treated as potentially infectious.

Properties

The conjugate is prepared by attachment of approximately 15 dye molecules per fibrinogen molecule and subsequent purification to remove unreacted dye. Fibrinogen has a molecular weight of approximately 340,000 daltons. The absorption and fluorescence emission maxima of the conjugates are listed in Table 1.

References

1. J Biol Chem 270, 28812 (1995); **2.** Biochem Pharmacol 36, 4035 (1987); **3.** Cytometry 17, 287 (1994).

Product List *Current prices may be obtained from our Web site or from our Customer Service Department.*

Cat #	Product Name	Unit Size
F-13191	fibrinogen from human plasma, Alexa Fluor® 488 conjugate	5 mg
F-13192	fibrinogen from human plasma, Alexa Fluor® 546 conjugate	5 mg
F-13193	fibrinogen from human plasma, Alexa Fluor® 594 conjugate	5 mg
F-7496	fibrinogen from human plasma, Oregon Green® 488 conjugate	5 mg
F-35200	fibrinogen from human plasma, Alexa Fluor® 647 conjugate	5 mg

Contact Information

Further information on Molecular Probes' products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Leiden, the Netherlands. All others should contact our Technical Assistance Department in Eugene, Oregon.

Please visit our Web site — **www.probes.com** — for the most up-to-date information.

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