Lectin HPA Conjugates

Table 1. Contents and Storage Information.

Material	Amount	Concentration	Storage	Stability
Lectin HPA Alexa Fluor® 488 conjugate	1 mg	See Table 2	≤–20°C Desiccate Protect from light	1 year
Approximate Fluorescence Excitation and Emission, in nm: ~495/519 nm				

Introduction

Lectins are oligomeric proteins with saccharide-binding sites that can recognize and bind particular glycoconjugates. The lectin *Helix pomatia* agglutinin (HPA), which is isolated from the edible snail *Helix pomatia,* selectively binds to α-*N*-acetyl-galactosamine residues and type A erythrocytes. This lectin exists as a hexamer with a molecular weight of approximately 70,000 daltons.[1]

Fluorescent lectins are versatile probes with diverse applications, including detection of cell surface and intracellular glycoconjugates by microscopy [2] and flow cytometry,[3,4] localization of glycoproteins in gels,[5] precipitation of glycoproteins in solution, and agglutination of specific cell types.[1] Molecular Probes offers an Alexa Fluor® 488 dye conjugate of lectin HPA.

Guidelines for Use

Preparing Lectin HPA Conjugates

A 1 mg/mL solution can be prepared by dissolving the contents of one vial in 1.0 mL of phosphate-buffered saline (PBS). Solutions can be stored at 2–6°C for approximately three months. For longer storage, divide the solutions into aliquots and freeze at ≤–20°C. PROTECT FROM LIGHT. AVOID REPEATED FREEZING AND THAWING OF SOLUTIONS.

Using Conjugate Solutions

It is a good practice to centrifuge the protein conjugate solution briefly in a microcentrifuge before use; only the supernatant should then be added to the experiment. This step will eliminate any protein aggregates that may have formed during storage, thereby reducing nonspecific background staining.

Due to the diversity of potential applications, please consult the literature for an appropriate working concentration. The concentrations in Table 2 are recommended starting ranges for some of the more common applications. However, because staining conditions will vary with the application, optimal concentrations should be determined empirically.

Table 2. Recommended fluorescent lectin concentrations for various applications.

Application	Working Concentration
Staining glycoproteins in gels 4	1–10 mg/mL
Staining intracellular and cell surface glycoconjugates 5,6	5–50 µg/mL
Agglutinating cells 6	10–250 µg/mL

References

1. Adv Immunol 34, 213 (1983); **2.** J Parasitol 76, 130 (1990); **3.** Cytometry 19, 112 (1995); **4.** Mol Biochem Parasitol 23, 165 (1987); **5.** Anal Biochem 96, 208 (1979); **6.** Histochemistry 56, 265 (1978).

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

Cat #	Product Name	Unit Size
L11271	lectin HPA from Helix pomatia (edible snail), Alexa Fluor® 488 conjugate	1 mg

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