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Lectin PNA Conjugates

Quick Facts

Storage upon receipt:
- ≤–20°C
- Desiccate
- Protect from light

Abs/Em: See Table 1

Table 1. *Lectin PNA conjugates and spectral characteristics.*

Catalog #	Conjugate	Abs *	Em *
L-21409	Alexa Fluor 488	495	519
L-32458	Alexa Fluor 568	579	603
L-32459	Alexa Fluor 594	590	617
L-32460	Alexa Fluor 647	650	668

* Approximate absorption (Abs) and emission (Em) maxima, in nm.

Introduction

Lectin PNA, isolated from peanuts, is a 110 kDa tetramer composed of identical subunits. This lectin is specific for terminal β-galactose, and will agglutinate human erythrocytes but only after neuraminidase treatment.[1] Molecular Probes offers several Alexa Fluor® dye conjugates of lectin PNA; Table 1 provides a summary of absorption and emission maxima for these conjugates.

Contents and Storage

The fluorescent conjugates of lectin PNA are supplied lyophilized in unit sizes of 1 mg. When stored desiccated at ≤–20°C, the lyophilized products are stable for at least one year. Solutions up to ~1 mg/mL can be made by dissolving the protein in deionized water. Solutions, with the addition of sodium azide to a final concentration of 2 mM, can be stored at 2–6°C for at least four months with no loss of activity. For longer storage, divide the solutions into aliquots and freeze at ≤–20°C. PROTECT FROM LIGHT. AVOID REPEATED FREEZING AND THAWING OF SOLUTIONS.

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

Applications

PNA binding sites are widespread in human tissues, with staining patterns varying by tissue type.[2] Research has shown PNA to be selective for acrosomes in rat and human sperm,[3,4] and PNA serves as a marker for certain melanomas.[5,6] PNA has also been used to label the synaptic extracellular matrix in the study of developing neuromuscular junctions.[7] Since the applications of the PNA lectin are varied, researchers should consult the primary literature for protocol information.

References

1. J Biol Chem 250, 8518 (1975); **2.** Hum Pathol 15, 904 (1984); **3.** Mol Reprod Dev 55, 289 (2000); **4.** Histochem J 29, 583 (1997); **5.** Hum Pathol 30, 556 (1999); **6.** Oncol Res 5, 235 (1993); **7.** J Neurosci 14, 796 (1994).

Product List

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

Cat #	Product Name	Unit Size
L-21409	lectin PNA from *Arachis hypogaea* (peanut), Alexa Fluor® 488 conjugate	1 mg
L-32458	lectin PNA from *Arachis hypogaea* (peanut), Alexa Fluor® 568 conjugate	1 mg
L-32459	lectin PNA from *Arachis hypogaea* (peanut), Alexa Fluor® 594 conjugate	1 mg
L-32460	lectin PNA from *Arachis hypogaea* (peanut), Alexa Fluor® 647 conjugate	1 mg

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