CF® Dye PNA Lectin (Arachis hypogaea)

PNA lectin is a widely used histological fluorescent stain and is labeled with our superior CF® Dyes. It is specific for terminal β-galactose and binds preferentially to the commonly occurring structure, galactosyl (β-1,3) N-acetylgalactosamine.

Product attributes

Colors	Green, Red, Far-red, Near-infrared
Probe cellular localization	Membrane/cell surface
Cell permeability	Membrane impermeant
Fixation options	Fix before staining (formaldehyde), Fix after staining (formaldehyde), Fix before staining (methanol), Fix after staining (methanol), Permeabilize after staining

Product Description

Arachis hypogaea (peanut) PNA Lectin is specific for terminal β-galactose and binds preferentially to a commonly occurring structure, galactosyl (β-1,3) N-acetylgalactosamine. PNA conjugates are widely used histological stains.

- Isolated from peanuts and purified by affinity chromatography
- Available with green, red, and far-red fluorescence
- Superior CF® Dyes are bright, photostable, and water-soluble

Lectins are proteins or glycoproteins of non-immune origin that agglutinate cells and /or precipitate complex carbohydrates. Lectins are capable of binding glycoproteins even in presence of various detergents. The lectin has a molecular weight of 110 kDa and consists of four identical subunits of approximately 27 kDa each. PNA does not agglutinate normal human erythrocytes, but strongly agglutinates neuraminidase treated erythrocytes.

Find the Right Stain for Your Application

PNA and other lectins are carbohydrate binding proteins that recognize specific sugar moieties on glycoproteins. The presence and distribution of these targets vary between cell types and tissues. As a result, other cell stains or other lectin conjugates, Wheat Germ Agglutinin (WGA) Conjugates and ConA Lectin Conjugates, may produce better staining and may be more appropriate for your cell type. Lectin conjugates can be used to selectively stain the cell surface of live cells, and withstand fixation and permeabilization. When cells are fixed and permeabilized before staining, fluorescent lectins stain both cell surface and organelles in the secretory pathway. Lectins may be toxic or stimulatory to live cells depending on cell type. To find the right stain for your application, see our Membrane & Cell Surface Stains Comparison, or download our Membrane & Surface Stains Brochure. See our Cellular Stains Table for more information on how our dyes stain various organisms.

Superior CF® Dyes

Biotium's next-generation CF® Dyes were designed to be highly water-soluble with advantages in brightness and photostability compared to other fluorescent dyes. Learn more about CF® Dyes.

PNA Lectin Conjugates

Conjugation	Ex/Em	Size	Catalog No.	Dye Features
CF®488A	490/515 nm	1 mg	29060	CF®488A Features
CF®568	562/583 nm	1 mg	29061	CF®568 Features
CF®594	593/614 nm	1 mg	29062	CF®594 Features
CF®640R	642/662 nm	1 mg	29063	CF®640R Features
CF®740	742/767 nm	1 mg	29137	CF®740 Features

Full List of Lectin Conjugates

Product	Features
CF® Dye Concanavalin A (Con A)	• Cell surface stain for yeast, fungi, and mammalian cells • Selectively binds to a-mannopyranosyl and a-glucopyranosy residues • Available with a wide selection of CF® Dyes
CF® Dye Wheat Germ Agglutinin (WGA)	• Cell surface stain for mammalian cells and gram+ bacteria • Also stains yeast bud scars • Has high affinity for sialic acid and N-acetylglucosamine • Choose from a wide selection of CF® Dyes or HRP

Product	Features
CF® Dye Peanut Lectin (PNA) from Arachis hypogaea	• Specific for terminal β-galactose and binds preferentially to galactosyl (β-1,3) N-acetylgalactosamine • Choice of 4 CF® dye colors
CF® Dye Lycopersicon Esculentum (Tomato) Lectin (LEL, TL)	• Marker for blood vessels and microglial cells • Binds to [GlcNAc] 1,3-N-acetylglucosamine, glycophorin, and Tamm-Horsfall glycoprotein • Used to study tumor angiogenesis or tracing neovascular development in xenograft models • Choice of 5 CF® Dyes or biotin
CF® Dye Ulex Europaeus Agglutinin I (UEA I)	• Marker for human endothelial cells and incompletely differentiated gastrin cells • Binds to glycoproteins and glycolipids containing α-linked fucose residues • Choice of 5 CF® Dyes or biotin
CF® Dye Phaseolus Vulgaris Leucoagglutinin (PHA-L)	• Used to stimulate lymphocyte and T cell proliferation • Choice of 5 CF® Dyes or biotin
CF® Dye Datura Stramonium Lectin (DSL)	• Binds to (beta-1,4) linked N-acetylglucosamine oligomers • Choice of 5 CF® Dyes or biotin
CF® Dye Sambucus Nigra Lectin (SNA, EBL))	• Binds to sialic acid attached to terminal galactose • Choice of 6 CF® Dyes or biotin

References

Download a list of CF® dye references.