Concanavalin A (Con A) CF® Dye Conjugates



A lectin labeled with our superior fluorescent CF® dyes is an effective and widely used cell surface stain for yeast, fungi, and mammalian cells.

Product attributes

Probe cellular localization	Membrane/cell surface
For live or fixed cells	For fixed cells, For live/intact cells
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
Colors	Blue, Green, Orange, Red, Far-red, Near-infrared

Product Description

Concanavalin A (Con A) is a widely used lectin that selectively binds to the glycoproteins, a-mannopyranosyl and a-glucopyranosy. These are commonly found in the cell wall of yeast and fungi, and the cell membrane of mammalian cells and tissues.

- Stain the cell wall of yeast and fungi, and the cell membrane of mammalian cells and tissues
- Detect glycoconjugates in microscopy and flow cytometry
- Stain glycoproteins in gels
- Withstands fixation and permeabilization
- Choice of 11 CF® dyes from UV to near-infrared
- Superior CF® dyes are bright, photostable, and water-soluble

Lectins are also versatile probes for detecting glycoconjugates in microscopy and flow cytometric applications and for gel staining of glycoproteins. In neutral and alkaline solutions, Con A exists as a tetramer with a molecular weight of approximately 104 kDa. In acidic solutions (pH below 5.0), Con A exists as a dimer. Con A 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.

Find the Right Stain for Your Application

Con A 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 surface stains or other lectin conjugates, Wheat Germ Agglutinin (WGA) Conjugates and PNA Lectin Conjugates, may produce better surface 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 Alexa Fluor®, DyLight®, and other fluorescent dyes. Learn more about CF® Dyes.

Note: Conjugates of blue-fluorescent dyes like CF®350, CF®405S and CF®405M are not recommended for detecting low abundance targets and may be challenging to use in tissue specimens. Blue dyes have lower fluorescence and photostability, and cells and tissue have high autofluorescence in blue wavelengths, resulting in lower signal to noise compared to other colors.

Concanavalin A Conjugates

Product	Conjugation	Ex/Em	Size	Catalog No.	Purchase
CF®350 Concanavalin A (Con A)	CF®350	347/448 nm	5 mg	29015	Purchase 29015
CF®405S Concanavalin A (Con A)	CF®405S	404/431 nm	5 mg	29075	Purchase 29075
CF®405M Concanavalin A (Con A)	CF®405M	408/452 nm	5 mg	29074	Purchase 29074
CF®488A Concanavalin A (Con A)	CF®488A	490/515 nm	5 mg	29016	Purchase 29016
CF®594 Concanavalin A (Con A)	CF®594	593/614 nm	5 mg	29017	Purchase 29017
CF®633 Concanavalin A (Con A)	CF®633	630/650 nm	5 mg	29018	Purchase 29018
CF®640R Concanavalin A (Con A)	CF®640R	642/662 nm	5 mg	29019	Purchase 29019
CF®680 Concanavalin A (Con A)	CF®680	681/698 nm	5 mg	29020	Purchase 29020
CF®740 Concanavalin A (Con A)	CF®740	742/767 nm	5 mg	29136	Purchase 29136
CF®750 Concanavalin A (Con A)	CF®750	755/777 nm	5 mg	29080	Purchase 29080
CF®770 Concanavalin A (Con A)	CF®770	770/797 nm	5 mg	29058	Purchase 29058

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
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

Product	Features
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

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References

CF®680 ConA
Acta Histochem (2019), DOI: 10.1016/j.acthis.2018.11.006.

Download a list of CF® dye references.

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