

Molecular Probes™ Concanavalin A Conjugates

Catalog Numbers C11254, C11252, C21401, C11253, C21402, C21421, C827, C6741, C860, C825

Pub. No. MAN0029152 Rev. A.0



WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product Description

Fluorescent lectins are versatile probes for detecting glycoconjugates in histochemical and flow cytometric applications and for localizing glycoproteins in gels. Concanavalin A selectively binds to α -mannopyranosyl and α -glucopyranosyl residues.

In neutral and alkaline solutions, concanavalin A exists as a tetramer with a molecular weight of approximately 104,000 daltons. In acidic solutions (pH below 5.0), concanavalin A exists as a dimer.

When concanavalin A is succinylated with succinic anhydride, it is irreversibly converted to a dimer that retains the same sugar-binding specificity as the parent lectin. However, succinyl-concanavalin A has a different profile of biological activities from the tetrameric form. Succinyl-concanavalin A does not induce capping of cell surface glycoprotein receptors, inhibit capping of cell surface immunoglobulin receptors, or strongly agglutinate erythrocytes or spleen cells. The mitogenic effect of succinyl-concanavalin A is similar to that of the native lectin, although it is mitogenic over a significantly wider range of concentrations than the tetramer.

Invitrogen™ offers a broad selection of concanavalin A conjugates. Tabel 1 provides a summary of these products, including spectral properties.

Contents and Storage

Table 1 Concanavalin A conjugates

Material	Cat. No.	Amount ^[1]	Fluorescence excitation / emission ^[2]	Storage ^[3]
Alexa Fluor™ 350 conjugate	C11254	5 mg	346 nm / 442 nm	Store at ≤ 20°C. Desiccate. Protect from air.
Alexa Fluor™ 488 conjugate	C11252	5 mg	495 nm / 519 nm	
Alexa Fluor™ 488 conjugate, succinylated.	C21401	5 mg	495 nm / 519 nm	
Alexa Fluor™ 594 conjugate	C11253	5 mg	590 nm / 617 nm	
Alexa Fluor™ 633 conjugate	C21402	5 mg	632 nm / 647 nm	
Alexa Fluor™ 647 conjugate	C21421	5 mg	650 nm / 668 nm	
Fluorescein conjugate	C827	10 mg	494 nm / 518 nm	
Oregon Green™ 488 conjugate	C6741	5 mg	496 nm / 524 nm	
Tetramethylrhodamine conjugate	C860	10 mg	555 nm / 580 nm	
Texas Red™ conjugate	C825	10 mg	595 nm / 615 nm	

^[1] Conjugates are provided in a lyophilized format.

^[2] Complete spectra for these dyes are available at <http://invitrogen.com>

^[3] When stored as directed, products are stable for at least 1 year.

Prepare stock solution

- Stock solutions can be made at 1–5 mg/mL in 0.1 M sodium bicarbonate (approximate pH = 8.3).
- In most cases, a small percentage of the conjugate will remain as a visible aggregate in solution.
- Store solutions at 2–6°C with the addition of 2 mM sodium azide. For longer storage, divide the solution into aliquots and freeze at ≤–20°C.

IMPORTANT! Protect from light and avoid repeated freezing and thawing.

Guidelines for use

- Centrifuge the protein conjugate solution briefly in a microcentrifuge before use.
- Only the supernatant should be added to the experiment. This step will eliminate any protein aggregates that may have formed during storage and reduce nonspecific background staining.
- Training protocols vary with application. The appropriate dilution of concanavalin A conjugate should be determined empirically. A final concentration of 50-200 µg/mL is typically satisfactory for immunohistochemical applications.

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

Revision history: Pub. No. MAN0029152 A.0

Revision	Date	Description
A.0	16 February 2023	New document for Molecular Probes™ Concanavalin A Conjugates.

The information in this guide is subject to change without notice.

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