

## Product Information

### Concanavalin A from *Canavalia ensiformis* (Jack bean) γ-Irradiated

Catalog Number **C0412**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

CAS RN 11028-71-0  
Synonym: Con A

#### Product Description

Concanavalin A is a lectin, a protein characterized by sugar-binding capabilities. Con A demonstrates a binding specificity to  $\alpha$ -D-mannose and  $\alpha$ -D-glucose moieties and is useful for carbohydrate studies, glycoprotein purification, enzyme tagging, cell membrane studies, cell agglutination, and cell typing. In cell culture applications, it has the ability to induce mitogenic activity of T-lymphocytes and to increase synthesis of cellular products.

At pH 7 or greater, Con A has a tetrameric structure consisting of 4 subunits with equal molecular masses of 26 kDa. In acidic conditions (pH 4.5–5.5) Con A converts to a dimeric structure. Each monomer, regardless of pH or molecular structure, contains 2 metal ion binding sites. Metal ions ( $\text{Ca}^{2+}$  and  $\text{Mn}^{2+}$ ) must be bound to these sites in order for the sugar binding to occur.

This Concanavalin A product is supplied as an aseptically filled, lyophilized powder, which has been  $\gamma$ -irradiated.

This Con A product agglutinates 2% fresh human type A red blood cells in 0.01 M Phosphate Buffered Saline containing calcium and manganese, pH 6.8 at  $\leq 64\text{ }\mu\text{g}$  lectin/ml.

The mitogenic property of this lectin was confirmed by 5-bromo-2'-deoxyuridine incorporation in human peripheral blood mononuclear cells at  $\leq 125\text{ }\mu\text{g}/\text{ml}$  culture medium.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

To reconstitute, add 1.0 ml of sterile PBS or tissue culture medium to the vial and gently rotate. Solution may appear slightly hazy. Reconstituted product may be further diluted to desired working concentration using sterile buffer prior to use. Filtration should be avoided to prevent any product loss.

#### Storage/Stability

Store the product at  $-20\text{ }^{\circ}\text{C}$ .

Solutions may be stored frozen in aliquots at  $-20\text{ }^{\circ}\text{C}$ . Prolonged storage of product and repeated freezing and thawing are not recommended.

#### References

- Berger, S., Lymphocytes as resting cells. *Methods in Enzymology*, **58**, 486-494 (1979).
- Cunningham, B. et al., in *Mitogens in Immunobiology*. Oppenheim, J., and Rosenstreich, D., eds., Academic Press (New York, NY: 1975), pp. 13-30.
- Quantitation and Functional Assay of T and B Cells. in *Immunology Series No. 8 Procedural Guide*, (May 1978), pp. 11-20, U.S. Dept. HEW-PHS, CDC Bureau of Laboratories, Atlanta, GA 30333.

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