

## Concanavalin A (Con A) from Jackbean (*Canavalia ensiformis*) meal (Lot 161101a)

**L-CONA-200MG**

**11/18**

### DESCRIPTION

**(1) FORM**

Affinity purified, off-white lyophilised powder.

**(2) BIOCHEMICAL / PHYSIOLOGICAL PROPERTIES**

Con A is not blood group specific, has an affinity for terminal  $\alpha$ -D-mannose and  $\alpha$ -D-glucose residues and requires the presence of  $\text{Ca}^{2+}$  and  $\text{Mn}^{2+}$  for activity. Con A exists in dimeric (pH < 5.6), tetrameric (pH between 5.6 and 7.0) and aggregate (pH > 7.0) forms. An active dimer above pH 5.6 can be generated by succinylation. Con A exhibits mitogenic activity which is dependent upon its degree of aggregation.

**(3) PROPERTIES**

Activity: 20  $\mu\text{g}/\text{mL}$

Electrophoretic purity: Electrophoresis was preformed using a 14% acrylamide gel.

UV absorbance: In 100 mM NaCl;  $\lambda_{\text{max}} = 275.8$ ;  $E1\% = 13.7$ .

Solubility: Slightly hazy, colourless solution at 10 mg/mL in water.

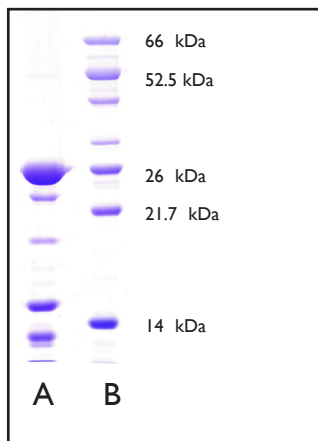
Activity note: Activity is determined using a twofold serial dilution of 1 mg/mL solution of Con A in PBS\* (8.0 g NaCl, 0.3 g KCl, 0.2 g  $\text{KH}_2\text{PO}_4/\text{L}$ ; pH 7.2) containing 1 mM  $\text{Ca}^{2+}$  and 1 mM  $\text{Mn}^{2+}$ . The activity is expressed as the lowest concentration to give agglutination of a 2% suspension of human red blood cells (type O) in PBS\* after 1 hr incubation at room temperature.

**(4) STORAGE / STABILITY / SAFETY**

Storage temperature: below  $-10^\circ\text{C}$

Shelf life: > 3 years below  $-10^\circ\text{C}$

Safety statement: 22-24 / 25



**Figure 1.** Isoelectric focusing of purified Con A shows that it exists as a heterogenous mixture of isoforms with pI values in the range of 4.5-5.5 (Entlicher et al., 1971).

**lane A,** Megazyme Con A, 10  $\mu\text{g}$ ;

**lane B,** low molecular weight markers (in-house standards).

\*. **Reference**

Entlicher, G.J., Kostir, V. and Kocourek, J. (1971) *Studies on phytohemmagglutinins.*

8. Isoelectric point and multiplicity of purified concanavalin A. *Biochim Biophys Acta* **236(3)**: 795-7.