

CONCAVALIN A (Con A) (Lot 191201A)

11/23

L-CONA-1000MG

(1) FORM

Affinity purified, off-white lyophilised powder.

(2) BIOCHEMICAL / PHYSIOLOGICAL PROPERTIES

Con A is not blood group specific, has an affinity for terminal α -D-mannose and α -D-glucose residues and requires the presence of Ca^{2+} and 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 performed using a 14% acrylamide gel.

UV absorbance: In 100 mM NaCl; $\lambda_{\text{max}} = 275.8$; $E^{1\%} = 13.7$.

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 Ca^{2+} and 1 mM 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°C

Shelf life: > 3 years below -10°C

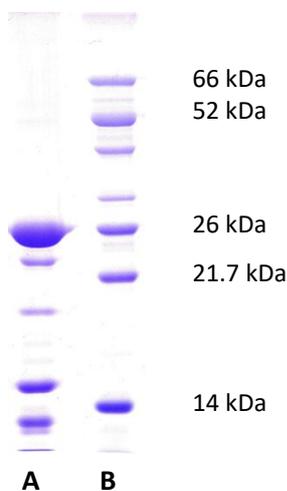


Figure 1. SDS gel of purified Con A shows that it exists as a heterogeneous mixture of isoforms. Note that PI values are in the range of 4.5-5.5 (Entlicher et al., 1971).

lane A, Megazyme Con A, 10 μg ;

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

*. **Reference**

Entlicher, G.J., Kostir, V. & Kocourek, J. (1971). *Studies on phytohemmagglutinins. 8. Isoelectric point and multiplicity of purified concanavalin A.* *Biochim Biophys Acta*, **236(3)**, 795-7.