

Concanavalin A

Cell Culture Tested

Product Code: TC220

Product Description :

Molecular Weight: 104kDa

CAS No: 11028-71-0

Synonym: Con A

Concanavalin A (Con A) is a glycoprotein isolated from Jack bean (*Canavalia ensiformis*). Con A specifically binds with specific terminal sugar residues like α -mannose and α -galactose structures found in sugars, glycoproteins and glycolipids. It agglutinates red blood cells and complexes with blood group substances, immunoglobulins, glycopeptides and carcinoembryonic antigens. Hence it is widely used in hormone receptor studies, mitogenic assays and for characterizing normal and malignant cells. It is also used to initiate mitogenesis in T lymphocytes by stimulating the energy metabolism of thymocytes.

In neutral and alkaline solutions, Concanavalin A exists as a tetramer consisting of 4 subunits of 26.5kDa each. In acidic solutions (pH below 5.0), Concanavalin A exists as a dimer.

In cell culture application for stimulating T lymphocytes, Concanavalin A is generally used at a concentration of 50-100 μ g/ml.

Directions :

Preparation instructions:

Concanavalin A is soluble in water and phosphate buffered saline (PBS). Stock solutions can be reconstituted with a buffer of desired choice before use. Solubility of Concanavalin A improves with increasing concentration of sodium chloride (NaCl) up to 1 molar.

It is recommended to filter sterilize the working solution rather than filtering the stock solution. This avoids product loss during filtration.

Quality Control:

Appearance

White to off white powder or flocculates .

Solubility

Slightly hazy to clear , colorless to faint yellow solution at 0.1gm in 100ml of water .

Assay

NLT 90%

Cell Culture Test

Passes

Storage and Shelf Life:

The product is stable for 36 months when stored at -20°C.

Stock solutions should be stored at -20°C in small aliquots. Avoid repeated freezing and thawing of stock solution. Solutions of Concanavalin A in NaCl can be frozen for long term storage.

It has been observed that storage at pH 8.60 - 8.80 causes precipitation. Concanavalin A tends to agglutinate in presence of high concentrations of 2-mercaptoethanol. Concanavalin A solutions lose their activity on heating at 80°C for 5 minutes because of denaturation.

Shelf life is 36 months.

Use before expiry date given on the product label.

Disclaimer :

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