FOR RESEARCH USE ONLY!

Jacalin-Sepharose®

rev. 12/12

Catalog # **6561-1** **1 ml**
6561-5 **5 ml**
6561-25 **25 ml**

INTRODUCTION:
Jacalin, an alpha-D-galactose binding lectin extracted from Jackfruit seeds, binds with high specificity to human IgA1 and other o-glycoproteins such as mucin or glycopeptides. BioVision's high-quality Jacalin-Sepharose® exhibits specific, high-yield purification of human IgA from serum or colostrum and thus can also be used for removing contaminating IgA from IgG. Jacalin can also be used to separate IgA1 subclass from IgA2. Precautions should be taken while purifying antibodies produced in the presence of bovine serum as Jacalin is capable of binding to bovine glycoproteins, e.g. feutin that may interfere with the purification.

PREPARATION:
Jacalin-Sepharose beads are prepared by covalently coupling BioVision's highly purified Jacalin (Cat # 6560) to 6% cross-linked Sepharose beads. The coupling technique is optimized to give a higher binding capacity for IgA & minimal leaching of Jacalin. The binding capacity of Jacalin-Sepharose is ≥ 3 mg human IgA per ml of wet beads.

APPLICATIONS:
Purification of human IgA from serum or colostrum samples or removal of contaminating IgA from IgG samples.

CONTENTS: Supplied as 50% slurry in 20% Ethanol/H_2O.

STORAGE: Store at 4°C. Do not freeze. Stable, as supplied, for at least 1 year.

BINDING CAPACITY: Binding of IgA ≥ 3 mg human IgA/ml Jacalin-Sepharose.

FLOW RATE TESTED*: 2.07 ml/min
*Test condition: Calculations based on the time required to pass 18 ml of water through 2 ml settled beads (column diameter 1.5 cm).

USAGE: Reusable for up to 10 times without significant loss of binding capacity.

PROTOCOL EXAMPLE (ANTIBODY PURIFICATION):

1. Carefully pack the column avoiding air bubbles.
2. Equilibrate the column with 5X resin volume of Binding Buffer & allow the buffer to drain through the column. Do not let the resin bed dry.
3. Dilute serum sample with Binding Buffer (1:1 ratio).
4. Mix well the diluted serum sample. Make sure there are no bubbles in the sample solution.
5. Apply the diluted sample onto the column. Do not let the resin bed dry.
6. Collect the flow-through.
7. Reapply the flow-through to the column & collect the sample. Repeat 4 times.
8. Wash the column 4 – 5 times with 5X volume of Binding Buffer containing 0.5 M NaCl.
9. Wash the column 4 - 5 times with Binding Buffer.
10. Elute antibodies with Elution Buffer ~3-5X resin bed volume.
11. Collect fractions using micro centrifuge tube.
12. Assay protein concentration by measuring the absorbance at 280 nm and combine the fractions with highest absorbance. 1 OD_{280} = 0.757 mg/ml IgA.
13. Remove melibiose or galactose from samples by gel filtration/desalting column/dialysis.
14. To regenerate/store column:
    a. Wash with 5 volumes of Elution Buffer.
    b. Wash with 5 volumes of distilled water.
    c. Store column in 20 % Ethanol/H_2O at 4°C.

BUFFERS:

Binding Buffer: PBS/TBS
Elution Buffer: 0.1 M melibiose or 0.1 M alpha-D-galactose in PBS.

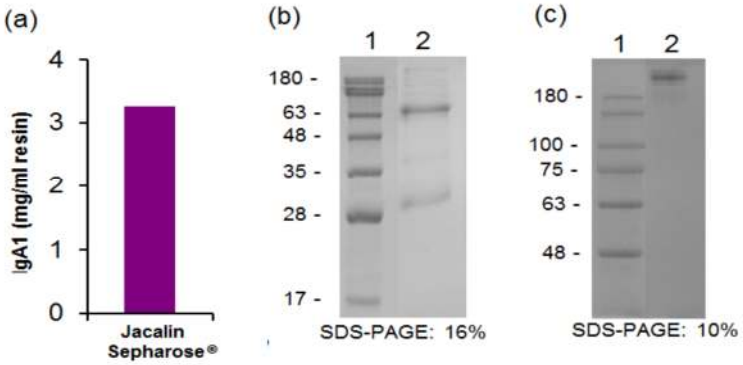

Figure: Jacalin-Sepharose® for specific, high-yield purification of human IgA1. (a) Purification of IgA1 from human serum. Elution was performed with 0.1 M melibiose. SDS-PAGE of purified IgA1 under reduced (b) and non-reduced (c) conditions. Lane 1: Marker; Lane 2: IgA fraction (5 µg) purified using BioVision Jacalin-Sepharose®.

RELATED PRODUCTS:

- Recombinant Protein A & Agarose, Sepharose & Magnetic Beads
- Recombinant Protein G & Agarose, Sepharose & Magnetic Beads
- Recombinant Protein L & Sepharose & Magnetic Beads
- Recombinant Protein A/G & Sepharose & Magnetic Beads
- Recombinant Protein A/G/L & Sepharose & Magnetic Beads
- Protein A Polyclonal Antibody
- Protein G Polyclonal Antibody
- Protein L Polyclonal Antibody

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