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A Geno Technology, Inc. (USA) brand name

Immobilized Jacalin

For the purification of Immunoglobulin A (IgA)

KIT COMPONENTS Cat. # 786-167

Immobilized Jacalin: 2ml Resin **Supplied as 50% slurry containing 0.02% sodium azide as a preservative.*

STORAGE CONDITION

The kit is shipped at ambient temperature. Upon arrival, store at 4°C (DO NOT FREEZE).

SPECIFICATIONS

- **Binding Capacity:** 1-3mg human IgA/ml resin
- **Loading:** ≈4.5mg jacalin/ml of resin
- **Support:** 6% cross-linked agarose

INTRODUCTION

Jacalin, or *Artocarpus integrifolia* lectin, is a tetrameric two-chain lectin with a molecular weight of 66kDa. Jacalin is a α-D-galactose binding lectin purified from jack-fruit (*Artocarpus integrifolia*) seeds. Applications include isolating IgA from human serum and colostrums, isolating human plasma glycoproteins and histochemistry. Jacalin also binds IgD.

ADDITIONAL MATERIALS

- 1X Phosphate Buffered Saline (PBS)
- Elution Buffer: 0.1M Melibiose (6-O-α-D-Galactopyranosyl-D-glucose) or 0.1M α-D-galactose in PBS
  - *Melibiose is a disaccharide formed by an alpha linkage between galactose and glucose (D-Gal-α(1→6)-D-Glc)*
- Disposable columns

PROTOCOL FOR HUMAN IgA PURIFICATION

1. Equilibrate the Immobilized Jacalin to room temperature and pack a suitable amount into a column.
2. Wash the column with 5 column volumes of 1X PBS
3. Dilute the human serum 1:1 with PBS and add to the column.
4. Wash the column with a further 5 column volumes of PBS. To ensure adequate washing, monitor the flow through using an absorbance of 280nm and continue washing until no further change is seen.
5. To recover the bound IgA, add repeating single column volumes of Elution Buffer and monitor elution with absorbance readings at 280nm.

6. To remove the melibiose or galactose sugar, perform a buffer exchange into PBS using desalting columns. We recommend our SpinOUT™ GT600 columns. Dialysis can also be used and we recommend our Tube-O-DIALYZER™ dialysis devices.

7. Regenerate the columns by washing with >20 column volumes of PBS and then store the columns in deionized water supplemented with 0.02% sodium azide.

RELATED PRODUCTS

- ***SpinOUT™ GT-600 Desalting Columns (Cat. #786-170, 786-171, 786-703 to 786-705):*** *The SpinOUT™ GT-600 columns are versatile, spin-format columns for the desalting and buffer exchange of protein solutions ranging from 5µl through to 4ml sample volumes. The SpinOUT™ columns are simply to use as the protein sample is applied and then centrifuged to recover protein with the column retaining >95% of the salts and small molecules (<1,000Da for GT-600 and <1,500 for GT-1200). Spin-OUT™ GT-600 is for the purification of proteins > 6kDa and nucleic acids larger than 10bp.*
- ***Tube-O-DIALYZER™ (Cat. # 786-610 to 786-624)****: Patented dialysis device for 100% sample recovery. Available with MWCO 1, 4, 8, 15 and 50kDa. Tube format allows for total sample recovery.*

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