



Biotin-Capture Beads

Cat. 1008-1/5/10

Avidin support for immobilization of biotinylated molecules

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Introduction

The **Biotin-Capture Beads** manufactured by Adar biotech, contain modified Avidin that is immobilized on rigid, highly cross-linked beaded agarose possessing high chemical Stability. Adar Biotech's modified Avidin provides a substantial improvement over native Avidin. The high affinity to biotin is maintained, while background problems are minimized due to chemical modification on the protein. The **Biotin-Capture Beads** has proven to be particularly useful in the isolation of antigens and nucleic acids by employing biotinylated antibodies, or nucleic acid probes respectively. **Biotin-Capture Beads** can be used in numerous additional affinity chromatography applications.

Biotin-Capture Beads Specifications.

Matrix: Sepharose CL-4B

Coupling method: TargetLock

Type of Avidin bound to beads: Modified Avidin

Binding capacity: 2-4 mg biotinylated BSA per ml of beads

Bead size: 40-165 μm

Bead structure: Highly cross-linked spherical agarose, 4%

Max back pressure: 0.3 MPa, 3 bar

Max. flow rates: 4 ml/min/cm²

Recommended flow rate: 1-2 ml/min/cm²

Stability of the matrix: pH 2-11.

Storage: 4°C in PBS pH 7.4 added with NaN₃ 0.05% (w/v) as a preservative.

Protocol: Immobilization of biotinylated molecules on column

A. Buffers needed

Column Equilibration buffer: Phosphate buffer saline (PBS) pH 7.4

Wash buffer: Phosphate buffer saline (PBS) pH 7.4 plus 1% Triton X-100.

Storage buffer: Phosphate buffer saline (PBS) pH 7.4 plus 0.1% sodium azide as a preservative

B. Preparation of column:

1. Mix 5 ml of the **Biotin-Capture Beads** slurry thoroughly until homogeneous suspension is visible.
2. Transfer the gel suspension into an appropriate column with inner diameter of 1.0 to 1.5 cm.
2. Equilibrate the column with Equilibration buffer by washing with 5-10 column volumes. Recommended flow rates are 1-2 ml/min/cm².

C. Binding biotinylated proteins on Column:

1. Apply approximately 20-30 mg of the biotinylated proteins per 5 ml of beads (you may adjust protein content to quantity of beads according to beads capacity binding) to column at a rate between 1 ml/min to 2 ml/min using a syringe or a pump.
2. Wash with x20 column volumes of Wash buffer. Now, the affinity support is ready for use.

D. Storage

1. Storage conditions: Store product at 4°C, with Storage buffer.