



Biotin-Capture Beads

Cat. 1008-1/5/10

Avidin support for immobilization of biotinylated molecules

ver. 1.2

Introduction

The **Biotin-Capture Beads** manufactured by Adar biotech uses modified Avidin that is immobilized on rigid, highly cross-linked beaded agarose with 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 of 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. This product can be used for numerous additional affinity chromatography applications.

Biotin-Capture Beads Specifications.

Matrix: Sepharose™ CL-4B

Type of Avidin bound to beads: Modified Avidin

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

Bead size: 40-140 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 ligand

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 7.42 plus 1 mM sodium azide as preservative

B. Preparation of beads to work in column:

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

C. Protein purification on column:

1. Apply the sample (in most cases biotinylated antibodies-protein complexes) to column at a rate between 0.1 ml/min to 0.5 ml/min. using a syringe or a pump. The total volume of the sample applied is not critical in most cases. Save the flow through for SDS-PAGE analysis.
2. Wash with 5-10 column volumes of Wash buffer or by. Now, the affinity support is ready for use.

D. Storage of Biotin-Capture Beads

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