ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

BSA Protein-Agarose

Cat. BSA15-AS Bovine Serum Albumin-Agarose (Aff matrix) **SIZE**: 1 ml

FORM: Soln Lyophilized

Expression of genes in E. coli or yeast or baculovirus offers a convenient system to produce large amounts of recombinant proteins that may otherwise be difficult to isolate from natural cells and tissues. Very often antibodies to these newly identified proteins are not available to study its biochemical properties, monitor protein expression, and purification. In order to circumvent this problem, short pieces of well-defined peptides (Poly-His, Flag-epitope or c-myc epitope or HA-tag) or small proteins (bacterial GST, MBP, Thioredoxin, b-Galactosidase, VSV-Glycoprotein etc) are often cloned along with the target gene. Proteins are expressed as fusion proteins. Antibodies to these fusion-tags are already available to monitor fusion protein expression and purification. Therefore, fusion-tags serve as universal tags much like secondary antibodies. Many tags have their own characteristics. Poly-His-fusion proteins (6 x His) can bind to Nickel-Sepharose or Nickel-HRP. GST-fusion proteins can bind to glutathione-Sepharose. Therefore, a high degree of purification of fusion protein can be achieved in just one affinity purification step. Purity of fusion proteins can be followed by Tag-antibodies. Very often, fusion proteins are directly injected into animals to generate antibodies. Some fusion tags can be removed later by treatment with enzymes to generate tag-free recombinant proteins.

Source of Antigen and Antibodies

Purified BSA was coupled to agarose at ~10 mg/ml of beads (**Cat # BSA15-AS**) using CNBR-activated agarose beads. The affinity matrix is supplied in PBS pH 7.4 containing 0.05% azide. The column has a binding capacity of approx. 5-10 mg anti-BSA per ml of beads. Typically, this may corresponds to 5-10 ml antiserum containing antibodies to BSA. The anti-BSA IgG may vary and therefore, binding capacity of the BSA-agarose must be evaluated for each batch of antiserum,

Store at 4oC. DO NOT FREEZE.

Suggested uses

Many antibodies are made to small peptides or haptens that are injected as BSA-conjugates. Antibodies are produced against the carrier protein (BSA) and the coupled peptide or hapten. Anti-BSA antibodies may interfere with some analyses. The BSA-agarose column (Cat # BSA15-AS) can be used to remove the anti-BSA antibodies using standard antibody purification techniques.

We recommend processing approx. 1-5 ml antiserum per 1 ml of the beads or it can be scaled up accordingly. Load antiserum diluted 1:5 in PBS to adsorb anti-BSA at room temp. Collect unbound fraction containing BSA-depleted antiserum It may be necessary to repeat this adsorption if the sample contain high concentrations of ant-BSA.

The column can be regenerated by passing 3 mls of 0.1M Glycine buffer, pH 2.5, and then immediately washing with PBS pH 7.4 with 10-20 volumes. Store column in PBS containing 0.05% azide at 4oC. DO NOT FREEZE the beads at any stage.

Immobilized albumin can also be used to affinity purify antibodies to BSA. It has also been used to remove from plasma a variety of substances (bilirubin, thyroxine, digitoxin etc) which binds to albumin. Elution of the bound substances can be achieved with 10-40 mg/ml of BSA or 50% ethanol or low (2.5) or high pH (11).

This product is for in vitro research use only.

Related material available from ADI

Purified GST, Monoclonal anti-GST, GST Coated ELISA plates; Anti-Goat HRP conjugates'

Western blot Recycling Kit; Strips antibodies in 5-10 min at room temp.

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