

Product Specification Sheet

DNP (2-4-Dinitrophenyl)-BSA Protein-Agarose

– Cat. # DNP35-AS-1

DNP-BSA protein-Agarose Conjugate (aff column)

SIZE: 1 ml

Asthma is a chronic lung disease characterized by airway hyper-responsiveness (AHR) to allergens, airway edema, and increased mucus secretion. Increased levels of circulating IgE and IgG1 antibody and a propensity to allergic responses, atopy, are associated with the development of asthma. Animal models of AHR, where control of the timing of exposure to the initiating antigen, the use of a defined allergen trigger, and genetic manipulation are likely to enhance the understanding of AHR. Dinitrophenol (DNP) has long been employed as a model immunogen as a single antigen to reduce the complexity of modeling AHR.

One of the primary aspects of the immune response is the interaction of antigens with lymphocytes to induce the formation of antibodies, that in turn makes the antigen harmless. Much of our current understanding of the antibody response to antigens has been derived by using the antibody-hapten model. One known model uses the dinitrophenyl (DNP) group. Immunization of many mammalian species with DNP-protein conjugates results in production of antibodies specific for DNP and the amino acid side chains to which it is attached.

DNP conjugates (DNP-KLH or DNP-BSA) useful for the production of antibodies specific for DNP and hemocyanin or BSA. DNP-immunization produced a significant variation in the amount and antibody class (IgGs, IgA, IgE, IgM) among strains, and under various experimental conditions. DNP preparations (purity and supplier), doses (amount per injection), routes (intramuscular, intravenous, aerosol, liposome entrapped, polymerized etc), frequency of exposure (single injections, multiple etc) may induce a defined class of antibody and its level may vary as well. DNP-induced antibody production has been used to assess the immune status of normal and immune-compromised animals.

Source of Antigen and Antibodies

DNP-BSA conjugate (#DNP35-N-10) was coupled to agarose at ~1-2 mg/ml of beads using CNBR-activated agarose beads (**Cat # DNP35-AS**). The affinity matrix is supplied in PBS pH 7.4 containing 0.05% azide (50% agarose:buffer or 1:1 suspension; 1 ml refers to 1 ml of gel volume).

Store at 4°C. DO NOT FREEZE.

Suggested uses

The DNP-BSA-agarose column (Cat # **DNP35-AS**) can be used to remove the anti-DNP antibodies or DNP-binding proteins using standard antibody purification techniques.

We recommend processing approx. 0.2-1 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-DNP IgG 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 anti-DNP IgG.

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 4°C. DO NOT FREEZE the beads at any stage.

Form & Storage of Antibodies/Peptide Control

Amber Solid powder. Reconstitute in distilled water or buffer at a desired concentration.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

**All product are for In vitro research use only.*

Related material available from ADI

DNP-KLH and DNP-BSA proteins conjugates.

Anti-DNP antibodies quantitation ELISA kits for mouse, rabbit, goat etc.

Anti-KLH antibodies quantitation ELISA kits for mouse, rabbit, goat etc.

DNP35-AS-1

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Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A;

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com