ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Anti-Ovalbumin IgG-Agarose, affinity matrix

Cat. OVA11-AS Rabbit anti-Chicken egg ovalbumin (OVA) IgG-Agarose (Aff matrix) **SIZE**: 1 ml

Chicken egg albumin (Ovalbumin) is the major protein constituent of egg whites. Chicken egg albumin is a phosphorylated-glycoprotein. From the amino acid sequence, the peptide portion of the molecule consists of 385 residues and has a molecular weight of 42.7 kDa. This sequence completely agrees with the reported m-RNA (messenger RNA) sequence. The carbohydrate and phosphate portions account for an additional 1428 and 160 grams per mole respectively, giving a total molecular weight of 44.3 kDa. Differential scanning calorimetry indicates the chicken egg albumin denatures at 84 □C. Ovalbumin can be used as a carrier protein to conjugate to synthetic peptides for use as an immunogen. It has the following amino acids: 20 Lys, 10 Tyr, 6 Cys, 14 Asp, and 33 Glu which make it suitable for conjugation.

Ovalbumin (egg albumin) is one of the major allergens in chicken egg white, and is often the cause of hypersensitivity reactions to food. It serves as a model allergen, suitable for studying the relationship between structure and function, because the amino acid sequence and post-translational modifications of the protein are known.

Egg allergies occur in about 0.5 percent of the population and in about 5 percent of children with allergies. Because influenza and yellow fever vaccines are both made in eggs, egg proteins (primarily ovalbumin) are present in the final product. Residual quantities of egg proteins found in the influenza vaccine (i.e., about 0.02-1.0 ug per dose) are sufficient to induce severe but rarely fatal hypersensitivity reactions in children with egg allergies. ADI has developed an ELISA kit for the detection and quantification of egg albumin in food products, and is an important tool for the standardization and characterization of such allergens.

Source of Antigen and Antibodies

Highly purified ovalbumin was used to generate antibodies in rabbit. Purified anti-ovalbumin IgG was coupled to agarose at ~1-2 mg/ml of beads (Cat # OVA11-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. 0.5-2 mg ovalbumin per ml of beads. The binding capacity of the anti-ovalbumin-agarose must be evaluated for a given samples. The affinity matrix is supplied as 1:1 suspension (1 ml beads and 1 ml of buffer in PBS, pH 7.4, 0.05% azide as preservative in a ready to use column.).

Store at 4oC. DO NOT FREEZE.

Suggested uses

This product can be used to remove ovalbumin from biological samples. The affinity column may also be used to purify ovalbumin-containing hapten conjugates etc. We recommend processing approx. 0.001-1 mg/ml ovalbumin-containing samples per 1 ml of the beads or it can be scaled up accordingly. Load samples diluted 1:5 in PBS to adsorb ovalbumin at room temp. Collect unbound fraction containing BSA-depleted samples. It may be necessary to repeat this adsorption if the sample contain high concentrations of ovalbumin.

The column can be regenerated by passing 5 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.

ADI makes an ELISA kit to measure the ovalbumin concentration (cat #6050). This kit should be used to measure ovalbumin before and after ovalbumin removal to determine the efficacy of the ovalbumin removal.

ADI also has an ELISA kit to determine the anti-ovalbumin IgG in samples that have been injected with ovalbumin containing sample to determine if it made any antibodies to ovalbumin (Cat# 600-100-OGG).

This product is for in vitro research use only.

Related material available from ADI

Ovalbumin-Agarose and antibodies to BSA

ovalbumin ELISA kit #6050

Purified ovalbumin, Monoclonal anti-ovalbumin IgG's;

BSA (bovine serum albumin) protein and anti-BSA IgG ELISA kits and kits to remove BSA from samples

OVA11-AS 100630A

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