

Product Specification Sheet

Chicken Ovalbumin Protein

□ **Cat # OVA15-N-1000** Chicken egg ovalbumin protein (ELISA, antigen, allergy grade)

SIZE: 1 g

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.

Model Antigen or Control Antigen

Antibodies are produced to a foreign antigen (protein, peptide, small molecule, bacteria or viruses etc). Most large proteins are able to produce antibodies in a foreign host but small molecules (Haptens) such as small chemicals or drugs or antibiotics or peptides must be coupled to a large carrier protein (BSA, Ovalbumin, thyroglobulin, toxoids etc) to make antibodies. The presence of antibody enhancers (adjuvants) often boost the antibody response by attracting the antibody producing cells. Traditionally, oil-based adjuvants, with or without killed bacterium (e.g., complete and incomplete Freund's), are used for animal studies. Recently, non-Freund's type adjuvants such as Titermax have been used to avoid the usage of Freund's adjuvant or use in vaccines where traditional adjuvant cannot be used.

Model antigens have typically been used to study the immune status of immune compromised animals or to compare the effect of added substances (adjuvant). A variety of model antigens can be used: Proteins (medium size such ovalbumin (45 kda) or BSA (65 kda), Thyroglobulin & KLH (>100 Kda-million Kda), Peptides (10-100 amino acid), haptens (DNP), bacterial protein (HbSAg), Toxoid (Cholera or Diphtheria), Viral recombinant proteins (HIV or H1N1 or H5N1, influenza) are used to study the immune responses. The advantage of using these model antigens is that they are available in purified form and there antibodies and ELISA kits are also available.

Model antigen doses, routes of immunization, frequency of injection, immunization period, animal selection, and the use of adjuvant must be selected based upon experimental protocol.

Source of Antigen/Protein

Ovalbumin was purified (>98%) from chicken egg white (**cat # OVA15-N-1000**). It is supplied as lyophilized powder without any preservative. Extinction coefficient: E1% = 6.9 to 7.6 (280 nm).

Prepare stock solution of the protein in PBS or other buffers and sterile filter solution for in vivo or cell culture use. The stock solution must be frozen in suitable aliquots and kept at -20oC for storage. Suitable bacteriostatic agents (azide or merthiolate) can be added as desired.

Highly purified, antigen grade ovalbumin from chicken egg white was used to obtain antibodies polyclonal antibodies in **rabbits (cat # OVA11-S), mice (#OVA14-S) and rats (#OVA16-S)**. Antisera are supplied in 100ul solution or powder containing 0.05% azide. Store stock at -20oC. Powder can be reconstituted in 100 ul PBS or water. Store solution at -20oC or below.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Purified ovalbumin protein for coating or as ELISA control, or Western Blotting or use as model antigen. It has been tested for reactivity with a variety of antibodies made in mouse, rabbit, goat, etc.

ELISA (50-200 ng control antigen/well).

The purified ovalbumin has also been tested and used in our quantitative ovalbumin ELISA #6010 and #6050. We recommend making stock solutions of 1 mg/ml (based upon dry weight of the powder) in PBS and measuring the ovalbumin concentration by ELISA.

Allergy studies or carrier antigen-The protein has been recrystallized 5X and has a purity of >98%. It has undetectable level of contaminants or toxin proteins. It is suitable to be used for allergy studies or as carrier protein for peptide, drugs, hormones or vaccine proteins.

*This product is for In vitro research use only.

Related Items

Catalog#	ProdDescription
600-105-OGG	Mouse Anti-Ovalbumin IgG (IgG specific) ELISA Kit, 96 tests, Quantitative
600-150-OGA	Mouse Anti-Ovalbumin IgA ELISA Kit,
600-165-OGE	Mouse Anti-Ovalbumin IgE ELISA Kit,
600-170-OGM	Mouse Anti-Ovalbumin IgM ELISA Kit,
6050	Chicken Egg Ovalbumin ELISA Kit, 96 tests,
610-100-OGG	Rat Anti-Ovalbumin IgG, 96 tests,
610-110-OGE	Rat Anti-Ovalbumin IgE ELISA Kit,
610-120-OGM	Rat Anti-Ovalbumin IgM ELISA Kit,
DNP55-N-10	Dinitrophenyl (DNP)-Ovalbumin (OVA) protein conjugate
670-130-OVM	Monkey Anti-Ovalbumin Ig's ELISA Kit,
SP-53698-1	Ovalbumin (257-264) antigen peptide [Ser-Ile-Ile-Asn-Phe-Glu-Lys-Leu-OH:]

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