

Product Specification Sheet

**Egg proteins Antibodies and Protein Controls**

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|-----------------------|--|---------------------|
| <b>Cat #</b> CEGT11-S | <b>Rabbit Anti-Chicken whole egg</b> (total) protein antiserum | <b>SIZE:</b> 100 ul |
| <b>Cat #</b> CEGT11-C | Chicken whole egg (total) protein control for Western blot     | <b>SIZE:</b> 100 ul |
| <b>Cat #</b> CEGT15-N | Chicken whole egg proteins                                     | <b>SIZE:</b> 10 mg  |

Allergy to chicken egg or proteins is one of the more frequent causes of food hypersensitivity in infants and young children. Both IgG and IgA class antibodies may be detected. Ovalbumin intolerance has been implicated in a number of conditions affecting children. In particular, children with cystic fibrosis show elevated anti-ovalbumin antibodies. Ovalbumin antibodies have also been noted in some forms of kidney disease. A relationship between food allergy and infantile autism has also been observed. Children with insulin-dependent diabetes mellitus show an enhanced immune response to both  $\beta$ -lactoglobulin and ovalbumin, a phenomenon that may be related to the development of the disease. Conditions related to ovalbumin intolerance usually resolve once egg and egg based foods have been withdrawn from the patient's diet.

Intolerance to egg proteins could be due not only to the ovalbumin protein found in egg white but also to other major proteins present in the yolk. The major proteins of chicken eggs are: Ovalbumin (45 kda, 54%), Conalbumin (13%, 80 kda), Ovomucoid (11%, 28 kda), Lysozyme (3.5%, 14 kda), Globulins (G2, G3) (8.0%, mol wt?), Ovomucin (1.5%, mol wt?). Other protein components include, flavoprotein (0.8%), ovoglycoprotein (0.5%), ovomacroglobulin (0.5%), ovinhibitor (0.1%) and avidin (0.05%).

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 made antibodies to major chicken egg proteins to help detect these proteins using appropriate immunoassay.

**Source of Antigen and Antibodies**

|                     |   |
|---------------------|---|
| <b>Antigen</b>      | Chicken egg total proteins (egg white and yolk ( <b>Cat # CEGT15-N</b> ))                               |
| <b>Ab Host/type</b> | Rabbit, Polyclonal antiserum # <b>CEGT11-S</b>  |
| <b>2-Ab</b>         | Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).                     |
| <b>-ve</b>          | Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control |

Chicken egg whole proteins (egg white and yolk) were extracted in a PBS, pH 7.5 (**Cat # CEGT15-N**). The proteins are supplied in liquid at 10 mg/ml in PBS 0.05% azide or in powder form. Reconstitute powder in PBS at

1-10 mg/ml. It can be used positive control for antibody #CEGT11-S or for coating ELISA plates.

For Western blot +ve control (**Cat # CEGT11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of #CEGT11-C for good visibility with antibody Cat #CEGT11-S. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the CEGT11-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

**Form & Storage of Antibodies/Peptide Control**

**Antiserum (unpurified)**

100ul solution lyophilized powder  
Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

**Storage**

**Short-term:** unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

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

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

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

**Recommended Usage**

Western Blotting (1:1K-5K using Chemiluminescence technique)..

**ELISA** (1:10-50K; using 50-100 ng control antigen/well).

**References:** Welsh CJ (1986) Int Arch Allergy Appl Immunol 80(2):192-9; Sampson HA (1985) J. Pediat. 107, 669-675; Bock SA (1990) J. Pediat. 117, 561-567; Bleumink E (1971) Int. Arch. Allergy 40, 72-88; Atsuo U (1997) J. Allergy Clin. Immunol. 100, 171-176

\*This product is for In vitro research use only.

**Ovalbumin ELISA and anti-ovalbumin IgG, IgM ELISA Mouse and Rat anti-ovalbumin ELISA kits**

CEGT11-S-C-15-N