

Product Specification Sheet

Chicken egg white lysozyme protein (Muramidase) protein and antibodies

Cat # CELY14-S	Rabbit Anti-Chicken egg white lysozyme protein antiserum	SIZE: 100 ul
Cat # CELY14-C	Chicken egg white lysozyme protein control for Western blot	SIZE: 100 ul
Cat # CELY15-N	Chicken egg white lysozyme protein	SIZE: 100 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 β -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 Conditions related to ovalbumin intolerance usually resolve once egg and egg based foods have been withdrawn from the patient's diet.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), Ovomuroid (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%).

Lysozyme (Muramidase; Lysozyme c; Mucoprotein N-acetylmuramoylhydrolase) is a single chain polypeptide of 129 amino acids cross-linked with four disulfide bridges. It hydrolyzes b-1-4 linkages between N-acetylmuraminic acid and N-acetyl-D-glucosamine residues in peptidoglycan and between N-acetyl-D-glucosamine residues in chitodextrin. The enzyme is often used for lysing bacterial cells by hydrolyzing the peptidoglycan present in the cell walls. Gram-positive cells are quite susceptible to this hydrolysis as their cell walls have a high proportion of peptidoglycan. Gram-negative bacteria are less susceptible due to the presence of an outer membrane and a lower proportion of peptidoglycan. However, these cells may be hydrolyzed more easily in the presence of EDTA.

Lysozyme (Cat# CLYS15-N) is purified (>95%, 14.3 kda, pI=11.35; optimal pH 6.2; enzyme activity ~50,000 units/mg) from chicken egg white. It is supplied as lyophilized in sodium acetate buffer. This highly purified enzyme preparation has been used in mass spectrometry as a protein mass calibration standard and in structural studies of proteins. The powder can be reconstituted in 10mM Tris, pH 8.0 for activity or other desired buffers.

Source of Antigen and Antibodies

Antigen	Highly purified chicken egg lysozyme (Cat # CELY15-N)
Ab Host/type	Rabbit, Polyclonal antiserum # CELY14-S
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Chicken egg lysozyme (Cat # CELY15-N) can be used positive control for antibody #CELY14-S or for coating ELISA plates. Store at -20oC for long term.

For Western blot +ve control (Cat # CELY14-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of #CELY14-C for good visibility with antibody Cat #CELY14-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 CELY14-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: Rupley J A(1964) BBA 83, 245-255; Holler H (1975) Biochem. 14, 2377; Abgar S (2000) J. Biochem. 267, 5916-5925; Canfield RE (1963) JBC 238, 2698-2707.

*This product is for In vitro research use only.

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

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