



Hen Egg Lysozyme (NYRHEL): sc-73295

BACKGROUND

Hen Egg Lysozyme, also known as lysozyme C (chicken-type), belongs to the glycosyl hydrolase 22 family. Lysozymes are 1,4- β -N-acetylmuramidases and they are responsible for cleaving the glycosidic bond between N-acetylmuramic acid and N-acetylglucosamine in the bacterial peptidoglycan. They are found in many plants and animals and were originally believed to function primarily as a bacteriolytic defensive agent. The function of this family also includes surveillance of mammalian cell membranes, inactivation of certain viruses, stimulation of proliferation and antitumor functions of monocytes as well as enhancement of phagocytic activity of polymorphonuclear leukocytes and macrophages. The Hen Egg Lysozyme is commonly used as a preservative in a variety of foods and as a component of pharmaceutical products. In addition to having enzymatic bacteriolytic activity, Hen Egg Lysozyme also contains non-enzymatic bactericidal domains.

REFERENCES

1. Blake, C.C., et al. 1966. Structure of hen egg white lysozyme. A three-dimensional Fourier synthesis at 2 Angstrom resolution. *Nature* 206: 757-761.
2. Fernandez-Sousa, J.M., et al. 1977. Lysozyme from the insect *Ceratitis capitata* eggs. *Eur. J. Biochem.* 72: 25-33.
3. Roux, P., et al. 2000. Comparison of the kinetics of S-S bond, secondary structure, and active site formation during refolding of reduced denatured hen egg white lysozyme. *Protein Sci.* 8: 2751-2760.
4. Ibrahim, H.R., et al. 2001. Genetic evidence that antibacterial activity of lysozyme is independent of its catalytic function. *FEBS Lett.* 506: 27-32.
5. Nakimbugwe, D., et al. 2006. Cell wall substrate specificity of six different lysozymes and lysozyme inhibitory activity of bacterial extracts. *FEMS Microbiol. Lett.* 259: 41-46.
6. Li, B., et al. 2006. Hen egg white lysozyme as an inhibitor of mushroom tyrosinase. *FEBS Lett.* 580: 1877-1882.
7. Nakimbugwe, D., et al. 2006. Inactivation of Gram-negative bacteria in milk and banana juice by hen egg white and λ lysozyme under high hydrostatic pressure. *Int. J. Food Microbiol.* 112: 19-25.
8. Zhao, J., et al. 2007. Molecular cloning of an invertebrate goose-type lysozyme gene from *Chlamys farreri*, and lytic activity of the recombinant protein. *Mol. Immunol.* 44: 1198-1208.
9. Abergel, C., et al. 2007. Structure and evolution of the Iy protein family, unexpected lysozyme inhibitors in Gram-negative bacteria. *Proc. Natl. Acad. Sci. USA* 104: 6394-6399.

SOURCE

Hen Egg Lysozyme (NYRHEL) is a mouse monoclonal antibody raised against Hen Egg Lysozyme (HEL) of chicken origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Hen Egg Lysozyme (NYRHEL) is recommended for detection of Hen Egg Lysozyme of chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Hen Egg Lysozyme: 14 kDa.

SELECT PRODUCT CITATIONS

1. Ohtani, M., et al. 2012. Construction of an artificially randomized IgNAR phage display library: screening of variable regions that bind to hen egg white lysozyme. *Mar. Biotechnol.* 15: 56-62.
2. Ohtani, M., et al. 2013. Variable domain antibodies specific for viral hemorrhagic septicemia virus (VHSV) selected from a randomized IgNAR phage display library. *Fish Shellfish Immunol.* 34: 724-728.
3. Huang, S., et al. 2023. Heat-denatured lysozyme is a novel potential non-alcoholic disinfectant against respiratory virus. *Food Environ. Virol.* 15: 212-223.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.