



Hen Egg Lysozyme (A100004.0.0): sc-81005

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., Koenig, D.F., Mair, G.A., North, A.C., Phillips, D.C. and Sarma, V.R. 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., Gavilanes, J.G., Municio, A.M., Perez-Aranda, A. and Rodriguez, R. 1977. Lysozyme from the insect *Ceratitis capitata* eggs. *Eur. J. Biochem.* 72: 25-33.
3. Roux, P., Ruoppolo, M., Chaffotte, A.F. and Goldberg, M.E. 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., Matsuzaki, T. and Aoki, T. 2001. Genetic evidence that antibacterial activity of lysozyme is independent of its catalytic function. *FEBS Lett.* 506: 27-32.
5. Zhao, J., Song, L., Li, C., Zou, H., Ni, D., Wang, W. and Xu, W. 2006. Molecular cloning of an invertebrate goose-type lysozyme gene from *Chlamys farreri*, and lytic activity of the recombinant protein. *Mol. Immunol.* 44: 1198-1208.
6. Nakimbugwe, D., Masschalck, B., Deckers, D., Callewaert, L., Aertsen, A. and Michiels, C.W. 2006. Cell wall substrate specificity of six different lysozymes and lysozyme inhibitory activity of bacterial extracts. *FEMS Microbiol. Lett.* 259: 41-46.
7. Li, B., Huang, Y. and Paskewitz, S.M. 2006. Hen egg white lysozyme as an inhibitor of mushroom tyrosinase. *FEBS Lett.* 580: 1877-1882.
8. Nakimbugwe, D., Masschalck, B., Anim, G. and Michiels, C.W. 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.
9. Abergel, C., Monchois, V., Byrne, D., Chenivresse, S., Lembo, F., Lazzaroni, J.C. and Claverie, J.M. 2007. Structure and evolution of the Ivy protein family, unexpected lysozyme inhibitors in Gram-negative bacteria. *Proc. Natl. Acad. Sci. USA* 104: 6394-6399.

SOURCE

Hen Egg Lysozyme (A00004.01) is a mouse monoclonal antibody raised against Hen Egg Lysozyme 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 (A100004.0.0) is recommended for detection of Hen Egg Lysozyme of avian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Hen Egg Lysozyme: 14 kDa.

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.