

Active Recombinant Human Lysozyme

Cat. No. LYZ-64H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Lysozyme is added in lysing bacterial cells to the cell extraction buffer at a range of 0.05-0.5 mg/ml (7,000-70,000 U/ml). Recombinant Human Lysozyme produced in Plant is a single, non-glycosilated polypeptide chain containing 130 amino acids and a molecular mass of 14 kDa.
Species	Human
Source	Rice Grain
Description	Lysozyme is an enzyme found in egg white, tears, and other secretions. Lysozyme is responsible for attacking & breaking down the polysaccharide walls of many kinds of bacteria and thus it provides some protection against infection. Bacteria build a tough skin of carbohydrate chains, interlocked by short peptide strands, that braces their delicate membrane against the cell's high osmotic pressure. Lysozyme breaks these carbohydrate chains, destroying the structural integrity of the cell wall. The bacteria burst under their own internal pressure. Lysozyme (muramidase) hydrolyzes preferentially the β -1,4 glucosidic linkages between N-acetylmuramic acid and N-acetylglucosamine which occur in the mucopeptide cell wall. Lysozyme is a mediator in the anti-tumor function of macrophages which, it has been shown, secrete the enzyme. Cartilage lysozyme has a role in cartilage calcification. Presence of the Lysozyme in cerebrospinal fluid is indicative of tumor of the central nervous system, normally lysozyme activity is practically absent from urine, bile and spinal fluid.
Physical Appearance	Sterile Filtered white lyophilized powder.

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Purity	Greater than 85% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The Recombinant Lysozyme was lyophilized with no additives.
Activity	158,800 Units/mg protein. 1 unit will produce a change of A450 0.001 per minute at pH-6.24 and 25°C, using a suspension of micrococcus lysodeikticus as substrate in a 2.6ml reaction volume.
Stability	Recombinant Lysozyme although stable at room temperature for 3 weeks, should be stored at 2-8°C.
Instructions for Use	Recombinant Human Lysozyme is added in lysing bacterial cells to the cell extraction buffer at a range of 0.05-0.5mg/ml (7,000-70,000 U/ml). The common extraction buffer for E. coli cells contains 0.2mg/ml of recombinant Lysozyme in 100mM Tris-HCl, 2mM EDTA, 0.05% Triton X-100, pH 8. The cell paste is suspended in extraction buffer and incubated for at least 15 min at room temperature. Alternatively, Triton X-100 at 1% and PMSF at 1mM can be added separately and the lysis solution is further incubated for at least 15 min at 37 °C. In other cases, freeze-thaw cycles, sonication, and mechanical cell disruptions are also used to complement the lysozyme lysis protocol.

GENE INFORMATION

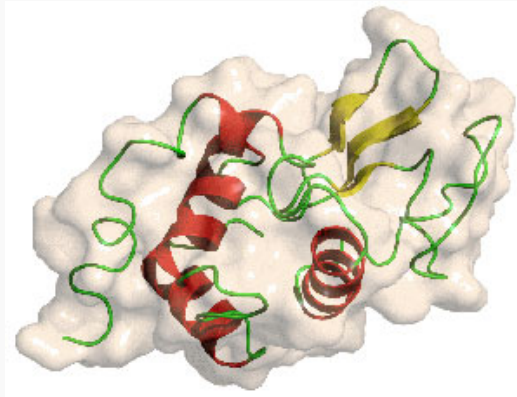
Synonyms	Lysozyme C; EC 3.2.1.17; LYZ; LZM; 1;4-beta-N-acetylmuramidase C; Lysozyme; lysozyme; 1,4-beta-N-acetylmuramidase C; lysozyme (renal amyloidosis); lysozyme C; muramidase; globulin G; mucopeptide glucohydrolase; globulin G1; N,O-diacetylmuramidase; lysozyme g; L-7001; 1,4-N-acetylmuramidase; mucopeptide N-acetylmuramoylhydrolase; PR1-lysozyme; peptidoglycan N-acetylmuramoylhydrolase.
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