

Lysozyme 2 Protein, Human, Recombinant (His)

General Information

Synonyms:	lysozyme like 2;LYZL2
Protein Construction:	A DNA sequence encoding the human LYZL2 (Q7Z4W2-2)(Met 1-Ser148) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Lys 20
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q7Z4W2-2
Molecular Weight:	16.27 kDa (predicted); 19 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The lysozyme 2 gene is a member of a family of lysozyme-like genes. Lysozymes, especially C-type lysozymes, are well-recognized bacteriolytic factors widely distributed in the animal kingdom and play a mainly protective role in host defense. Lysozymes damage bacterial cell walls by catalyzing the hydrolysis of 1,4-beta-linkages between N-acetylmuramic acid and N-acetyl-D-glucosamine residues in a peptidoglycan and between N-acetyl-D-glucosamine residues in chitodextrins. Lysozyme is part of the innate immune system. Reduced lysozyme levels

have been associated with bronchopulmonary dysplasia in newborns. In certain cancers (especially myelomonocytic leukemia) excessive production of lysozyme by cancer cells can lead to toxic levels of lysozyme in the blood. High lysozyme blood levels can lead to kidney failure and low blood potassium, conditions that may improve or resolve with treatment of the primary malignancy.

Reference

Lamesch P, et al. (2007) hORFeome v3.1: a resource of human open reading frames representing over 10,000 human genes. *Genomics*. 89(3):307-15.

Ota T, et al. (2004) Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat Genet*. 36(1): 40-5.

Alanen HI, et al. (2006) ERp27, a new non-catalytic endoplasmic reticulum-located human protein disulfide isomerase family member, interacts with ERp57. *J Biol Chem*. 281(44):33727-38.

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