

EZLys™ Recombinant Human Lysozyme

CATALOG #:	8005-1G 1 g 8005-5G 5 g
LOT #:	_____
APPEARANCE:	Off- white powder
STORAGE:	Store at -20 °C (Note: keep tightly sealed; protect from light)
SOLUBILITY:	Clear solution at 10 mg/ml in PBS, pH 7.4 or H ₂ O
PURITY:	≥ 85% by SDS-PAGE
PROTEIN CONTENT:	≥ 75% ($A_{280}^{0.1\%} = 2.46$)
SHELF LIFE:	1 year under proper storage conditions

SPECIFIC ACTIVITY:

>100,000 units/mg protein. A unit (U) is defined as the amount of enzyme which will reduce the absorbance at 450 nm, using a suspension of *Micrococcus lysodeikticus* as a substrate in a 2.6 ml reaction volume, by 0.001 absorbance units per min at pH 6.24 and 25°C.

DESCRIPTION:

EZLys™ Lysozyme is a recombinant human lysozyme expressed and purified in an animal-free system (rice). It has an identical amino acid sequence and physico-chemical properties of native lysozyme. The enzyme cleaves the (1,4) linkage between N-acetylglucosamine and N-acetylmuramic acid of the peptidoglycan component in the bacterial cell wall. It exhibits four times more activity than commercial chicken lysozyme and is useful in the recovery of proteins expressed in bacteria (e.g. *E. coli*). EZ Lysozyme is designed for gentle cell lysis which leads to a minimal risk of protein denaturation.

ADVANTAGES OF USING THE REAGENT:

- 1) Gentle cell lysis with minimal risk of denaturing proteins.
- 2) Animal-free production; hence, free of infectious contaminants from animal origin.
- 3) Five times more protein recovered from *E. coli* compared to chicken lysozyme.
- 4) Eliminates cell harvest to allow in-culture protein extraction.
- 5) High activity adds minimal volume to final lysate
- 6) Four times more active per mg to lyse *Micrococcus* and *E. coli* than chicken lysozyme
- 7) The reagent can easily be removed by dialysis or spin-column buffer exchange.

SUGGESTED PROTOCOL:

- 1) Add to cell extraction buffer at a range of 50-500 µg/ml (7,000 – 70,000 U/ml).
- 2) Resuspend the cell paste in this extraction mix and incubate for at least 15 minutes at room temperature.
- 3) Alternatively, Lyse with cell extraction buffer first, then add EZLys Lysozyme and further incubate at 37 °C for 15 minutes.
- 4) Clarify the lysed cell suspension by centrifugation at 20,000 x g x 15 minutes.
- 5) Optimization of cell lysis and protein recovery will need to be empirically determined.

RELATED PRODUCTS:

- Antibiotics
- Cell Fractionation kits
- Protein Extraction Kits
- Cell Lysis Agents
- Detergents
- Refolding Buffers
- Phosphatase Inhibitors
- Phosphatase Inhibitor Cocktails
- Protease Inhibitors
- Protease Inhibitor Cocktails
- Tag Antibodies (HA, His, cMyc, GST, GFP, etc.)
- Cellular Marker Antibodies
- Loading Control Antibodies
- Secondary Antibodies
- Protein Quantitation Kit
- SDS-PAGE Loading Buffer
- Western Blot Substrate Kit

OTHER FEATURED PRODUCTS:

- Multi-color Fluorescent Proteins
- Stem Cell Research Products
- Apoptosis Assay Kits & Reagents
- Metabolism Assay Kits
- Obesity and Diabetes Research Products
- Protein Purification Tools
- Cytokines & Growth Factors

FOR RESEARCH USE ONLY! Not to be used on humans.