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Guidelines for Use

Lysobac™

Recombinant Human Lysozyme
Bioprocess Cell Lysis Grade
Animal-free
Immunoglobulin free

Introduction

Lysobac is a recombinant human lysozyme which is expressed and purified from an animal-free system. Lysobac has identical amino acid sequence and physico-chemical properties to the native form of lysozyme (EC 3.2.1.17) commonly found in human biological fluids and secretions. Lysozyme lyses the peptidoglycan polymer typically found in most bacterial cell walls. The enzyme cleaves the β (1,4) linkage between N-acetylglucosamine and N-acetylmuramic acid of the peptidoglycan component of the cell wall. In in-house studies, Lysobac exhibited four times more activity than a commercially available chicken lysozyme in lysing *Micrococcus* and *E. coli* cells. Lysobac is an animal-free alternative for human or chicken lysozyme used in recovery of recombinant proteins expressed in bacteria such as *E. coli*.

Storage

Recommended storage at 2 - 8° C, tightly sealed, and protected from light.

Instructions for use

Lysobac is a recombinantly-expressed and animal-free bacterial cell lysis agent for use in bioprocessing and diagnostics applications, and life science research. In lysing bacterial cells, Lysobac is added to the cell extraction buffer at a range of 0.05 to 0.5 mg/mL (7,000 to 70,000 U/mL). Typically, the extraction buffer contains 100 mM Tris-HCl, 2 mM 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 1 mM can be added separately and the lysis solution is further incubated for at least 15 min at 37 °C. The lysed cell suspension is clarified by centrifugation at 20,000g for at least 15 min. The extraction conditions and concentration of Lysobac needed for optimal cell lysis and protein recovery depends on various factors and has to be determined empirically.

For further information on Lysobac contact InVitria technical support at 1-800-916-8311.