

Product Information

Lysostaphin

from *Staphylococcus staphylolyticus*

Reagent designed and manufactured under cGMP controls suitable for use in an IVD application.

Catalog Number **SRE0053**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 9011-93-2

EC 3.4.24.75

Synonym: Glycyl-glycine Endopeptidase

Product Description

Lysostaphin is a zinc metalloenzyme, which can be isolated from a bacterial culture of *Staphylococcus staphylolyticus*. It has specific lytic action against *Staphylococcus* species, including *S. aureus*.^{1,2}

Lysostaphin has hexosaminidase, amidase, and endopeptidase activities. It cleaves polyglycine crosslinks in the cellular wall of *Staphylococcus* species, which leads to cell lysis.^{3,4}

Purified extracellular lysostaphin from *S. staphylolyticus* is a single polypeptide chain with a molecular mass of 26,926 Da, containing 246 amino acid residues.⁵

Isoelectric point: 9.5

pH optimum:⁶ 7.5

The product is a lyophilized powder containing 50–70% protein, with the balance primarily as NaCl.

Specific Activity: ≥ 500 units/mg protein

Unit Definition: One unit will reduce the turbidity (A_{620}) of a suspension of *S. aureus* cells from 0.250 to 0.125 in 10 minutes at pH 7.5 at 37 °C in a 6.0 ml reaction mixture.

Precautions and Disclaimer

For manufacturing, processing, or repacking. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is soluble in water (10 mg/ml), yielding a clear to slightly hazy solution. It is recommended that fresh solutions be prepared, as the product loses activity in solution.

Stability testing of frozen solutions of this product has not been performed in our laboratories. One published reference cites storage of 200 units/mL stock solutions of lysostaphin in a buffer of 0.05 M Tris-HCl and 0.145 M NaCl at pH 7.4.⁷ A second reference indicates storage of 2 mg/mL stock solutions in 20 mM sodium acetate buffer, pH 4.5, in frozen aliquots.⁸ However, these conditions have not been tested in our laboratories.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$. When stored properly and unopened at $-20\text{ }^{\circ}\text{C}$, the enzyme has a recommended retest date of 3 years.

References

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LB,GCY,EM,RBG,TA,PHC,MAM 06/16-1