

## Product Information

### Lysostaphin from *Staphylococcus staphylolyticus*

Catalog Number **L4402**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

E.C. 3.4.24.75  
CAS RN 9011-93-2  
Synonym: Glycyl-glycine Endopeptidase

#### Product Description

Lysostaphin is a lytic enzyme isolated from a bacterial culture of *Staphylococcus staphylolyticus*, which lyses *Staphylococcus* species, including *S. aureus*. Lysostaphin has hexosaminidase activity (specific for the glucosaminyl-muramic acid bond of the bacterial carbohydrate backbone, but does not react with *S. aureus*<sup>1</sup>), amidase activity, and endopeptidase activity, which cleaves polyglycine cross-links in the cellular wall of *Staphylococcus* species.

Molecular mass:<sup>2</sup>  $\sim 25$  kDa (sedimentation, electrophoresis, and gel filtration). It is a single polypeptide chain.

pH optimum:  $\sim 7.5$

This product has been affinity purified. It is a lyophilized powder containing 40–60% protein with the balance being primarily potassium phosphate buffer salts and NaCl.

Specific Activity:  $\geq 2,000$  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  $37\text{ }^{\circ}\text{C}$  in a 6.0 ml reaction mixture.

Purity:  $\geq 97\%$  (SDS-PAGE)

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material 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.

Solutions should be freshly prepared, as the product loses activity in solution. Do **not** aliquot the prepared solution and freeze.

#### Storage/Stability

Store the product at  $-20\text{ }^{\circ}\text{C}$ . When stored at  $-20\text{ }^{\circ}\text{C}$ , the enzyme retains activity for at least 3 years.

#### References

1. Browder, H.P., et al., Biochem. Biophys. Res. Commun., **19**, 383 (1965).
2. Trayer, H.R., and Buckley, C E., J. Biol. Chem., **245**, 4842-4846 (1970).
3. Schindler, C.A., and Schuhardt, V.T., Proc. Natl. Acad. Sci. USA, **51**, 414 (1964).
4. Schindler, C.A., and Schuhardt, V.T., Biochem. Biophys. Acta, **97**, 242 (1965).
5. Klesius, P.H., and Schuhardt, V.T., J. Bacteriol., **95**, 739 (1968).
6. Sugai, M., et al., J. Microbiol. Methods, **12**, 133-138 (1990).

EM, RBG, GY, TA, MAM, PHC 11/10-1

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