

## Manual

# Lysostaphin

Enzyme for specific lysis of *Staphylococcus spp.* cell wall.  
Concentration 15 U/ $\mu$ l.

catalog #	size
1007-3	3000 U
1007-15	15000 U

For research use only.

### Guarantee

A&A Biotechnology provides guarantee on this product.  
The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

# Advantages

- Efficient lysis of *Staphylococcus* spp. cell wall.
- Highly stable at low pH values in the range of 4-5.

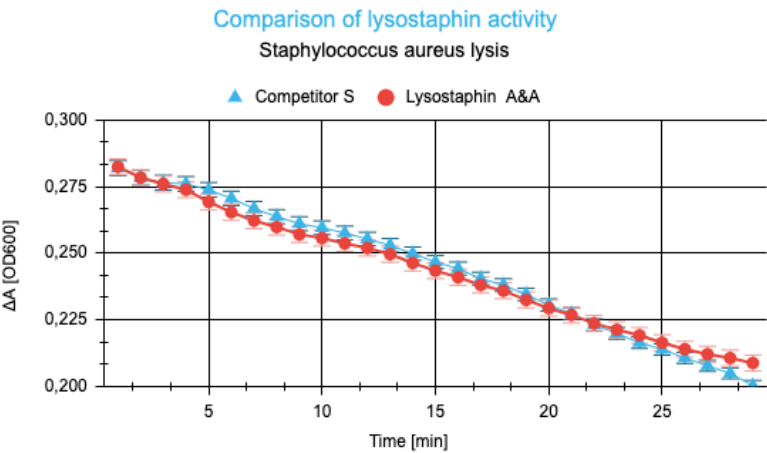


Fig. 1 A&A lysostaphin activity compared to a competitor enzyme (1U of the enzyme was used for the test).

# Description

**Lysostaphin** (EC 3.4.24.75) is a recombinant enzyme cloned from *S. simulans* and expressed in *E. coli* cells. Lysostaphin is an endopeptidase specific for Gly-Gly bond in pentaglycine interpeptide of *Staphylococcus* peptidoglycan cell wall.

# Contents

	1007-3	1007-15	storage
Lysostaphin	3000 U	15000 U	-20 °C
storage buffer: 20 mM CH <sub>3</sub> COONa, pH 4,5, 1 mM ZnCl <sub>2</sub> , 50% glycerol (v/v)			

# Application

- Isolation of DNA, RNA and proteins from *Staphylococcus* cultures.
- Study of the structure and function of the cell wall of *Staphylococcus* bacteria.
- Development of new treatments for *Staphylococcus* infections.

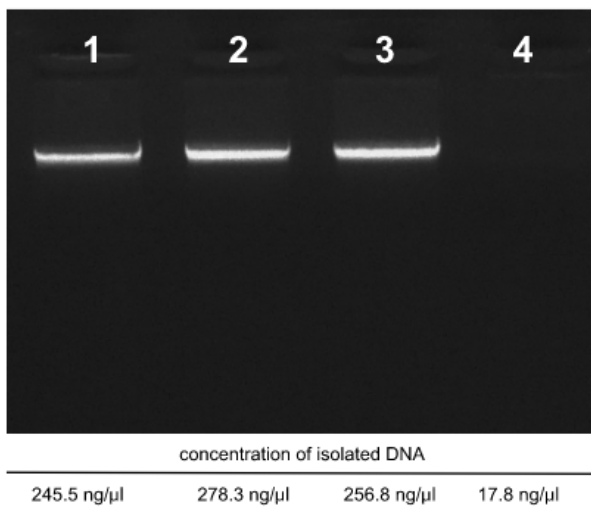


Fig. 2 DNA isolation from a 1 ml overnight culture of *S. aureus* using Genomic Mini AX *Staphylococcus* kit A&A Biotechnology . 0.8% agarose gel stained with ethidium bromide. 2 μl of isolated DNA was applied on the gel. 1,2,3 - gDNA from *S. aureus* isolated with lysostaphin A&A Biotechnology; 4 - gDNA from *S. aureus* isolated without lysostaphin.

## Unit definition

One unit (1U) of lysostaphin is defined as the amount of enzyme required to cause a reduction in turbidity of  $\Delta A_{600}=0.1$  of a suspension of *Staphylococcus aureus* cells in a 100 μl reaction mixture at pH 7.5 and 37°C over a 30-minute period.

## Protocol

It is recommended to use 5 μl of lysostaphin per reaction conducted with 1 ml of overnight culture at 37 °C for 10 min or until complete lysis.

## References

1. Recsei, P.A., Gruss, A.D., Novick, R.P. (1987) *Proc. Nat. Acad. Sci., U.S.A.*, 84: 1127-1131
2. Iversen, O.-J., Grov, A. (1973) *Eur. J. Biochem.*, 38: 293-300
3. Kokai-Kun, J.F., Walsh, S.M., Chanturiya, T., Mond, J.J., (2003) *Antimicrob. Agents. Chemother.*, 47 (5): 1589-1597



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