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Manual

Lysostaphin (lyophilisate)

Enzyme for specific lysis of *Staphylococcus spp.* cell wall.
Form: lyophilisate 5 mg, activity >3000 U/mg.

catalog #	size
1007-15L	15 000 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.

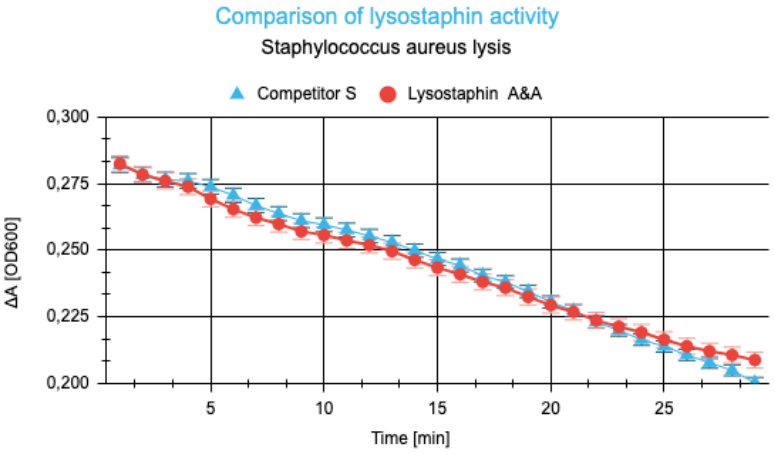


Fig. 1 A&A lysostaphin activity compared to a competitor enzyme (1U of the enzyme was used for the test).

Description

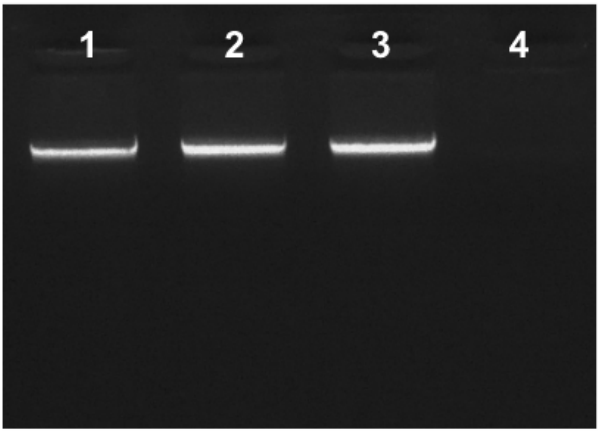
Lysostaphin (EC 3.4.24.75) is a recombined enzyme cloned from *S. simulans* and expressed in *E. coli* cells. Lysostaphin is an endopeptidase specific for Gly-Gly bond in pentaglycine interpeptide of *Staphylococcus* peptidoglycan cell wall.

Contents

	1007-15L		
	quantity	**catalog #**	**storage**
lysostaphin lyophilisate 5 mg	15 000 U	K-LZF-15KU	-20 °C
lysostaphin storage buffer 20 mM CH_3COONa, pH 4,5, 1 mM $ZnCl_2$, 50% glycerol (v/v)	1 ml	K-BLZF-1	-20 °C

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.



concentration of isolated DNA			
245.5 ng/µl	278.3 ng/µl	256.8 ng/µl	17.8 ng/µl

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 ul 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 (1 U) of lysostaphin is defined as the amount of enzyme required to cause a reduction in turbidity of ΔA600=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

To obtain lysostaphin solution with concentration 15 000 U/ml, dissolve the whole content of lysostaphin lyophilisate in 1 ml of lysostaphin storage buffer.
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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