

Specification



Lysozyme *BioChemica*

A3711

Synonym	[E.C. 3.2.1.17], Muramidase
origin	from chicken egg white
additional product description	Hydrochloride form salt-free, albumin-free, freeze-dried
M	approx. 14400 g/mol
CAS-No.:	9001-63-2
HS-No.:	35079090
EC-No.:	232-620-4
Storage:	-20°C
LGK:	10 - 13
Specification	
Activity (pH 6.2)	min. 20000 U/mg
Literature	<p>(1) Ausubel, F.A., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A. & Struhl, K. (eds.) 2001. <i>Current Protocols in Molecular Biology</i>. John Wiley & Sons, New York.</p> <p>(2) Sambrook, J. & Russell, D.W. (2001) <i>Molecular Cloning: A Laboratory Manual</i>, 3rd Edition. pp. A1.8+4.51. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.</p>
Comment	<p>Lysozyme (Muramidase) preferentially hydrolyses the β-1,4-glycosidic binding between N-Acetyl muraminic acid and N-Acetyl glucosamine, a component of the proteoglycan-cell wall of certain microorganisms. The enzyme is present in many organisms. In molecular biology, the enzyme from chicken white egg is used to lyse <i>E. coli</i> for the isolation of plasmid-DNA (ref. 1 miniprep: Suppl. 15; pp. 1.6.4-7). The working concentration is 200 μg/300 μl. To increase the plasmid yield (approx. 5 - 10 %) in the so-called 'maxiprep', lysozyme may be added (ref. 1 maxiprep: Suppl. 41; pp. 1.7.2-4). Another application is the lysis of bacteria for the preparation of bacterial RNA (ref. 1 Suppl. 15; pp. 4.4.4-5). In this case the working concentration is 40 μg/ml (stock solution 50 mg/ml).</p> <p>Form: The protein itself is Lysozyme chloride - the chloride is part of the protein structure. There is no free sodium chloride in the preparation. The maximum chloride content is 4 %.</p> <p>Stability: The lyophilized powder of lysozyme is stable for many years at +4°C. In solution, the stability at pH values from 4 to 5 at +4°C is several weeks and at room temperature several days. The pH-optimum is at 9.2, the isoelectric point at 11.0. Lysozyme will be inhibited by surfactants like SDS or alcohols and fatty acids, imidazole and indol-derivatives. Stock solutions in 10 mM Tris · HCl (pH 8.0) are prepared with a concentration of 10, 25 or 50 mg/ml, usually just before use.</p>