ACE Biolabs
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Datasheet

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Benzonase Nuclease (250U/µl)

Cat# ER1017 – 25KU | ER1018 – 100KU

Storage at -20 ℃

INTRODUCTION

Benzonase is a genetically engineered endonuclease from *Serratia marcescens.* The protein is a dimer of 30 kDa subunits with two essential disulfide bonds. This endonuclease attacks and degrades all forms of DNA and RNA (single stranded, double stranded, linear and circular) and is effective over a wide range of operating conditions. The optimum pH for enzyme activity is found to be 8.0-9.2. It completely digests nucleic acids to 5'- monophosphate terminated oligonucleotides 3 to 5 bases in length. This is ideal for removal of nucleic acids from recombinant proteins and for applications where complete digestion of nucleic acids is desirable. It also reduces viscosity in protein extracts and prevents cell clumping. Pre-treatment of a protein sample improves its resolution on 2D gel electrophoresis by eliminating any bound nucleic acids.

APPLICATION

- ✓ Elimination of nucleic acids and viscosity from recombinant proteins
- ✓ Enhanced protein purification via complete cell lysis and viscosity reduction
- ✓ Increased two-dimensional gel electrophoresis gel resolution

UNIT DEFINITION

One unit will digest sonicated salmon sperm DNA to acid-soluble oligonucleotides equivalent to a ΔA260 of 1.0 in 30 min at pH 8.0 at 37 °C (reaction volume 2.625 ml).

USAGE RECOMMENDATION

Homogenize appropriate amount protein sample with lysis buffer and 1 µl Benzonase Nuclease. Mix well by vortex, and then incubate for 30 min at room temperature. Centrifuge lysate with 13000 rpm for 10 min at 4 ˚C to remove precipitants. Measure protein amount by BCA Protein Assay Kit (ACE BioLabs #A1035)

Sample Type	Sample Amount	Lysis Buffer Amount	Benzonase
Tissue	30-50 mg	100-200 µl RIPA buffer	1 -2 µl
Cell	10^6-10^7 cells	100 µl RIPA buffer	1 -2 µl
E. coli	pellet from 500 µl culture	100 µl RIPA buffer	1 -2 µl

PRODUCT USE LIMITATION

These products are intended for research use only.