

Datasheet for ABIN2180646

BenzNuclease DNA and RNA Nuclease (Ultra Pure, Protease Free)

1 Image

Overview

Quantity:	10 kU
Gene:	BenzNuclease
Species:	Serratia marcescens
Host:	Escherichia coli (E. coli)
Antibody Type:	Recombinant
Application:	DNA Modification (DNA Mod)

Product Details

Specificity:	One unit will digest sonicated salmon sperm DNA to acid-soluble oligonucleotides equivalent to a ΔA_{260} of 1.0 in 30 min at pH 8.0 at 37 °C, <i>which corresponds approximately to complete digestion of 37 μg DNA</i> . Note that 1 KU=1000 units.
Characteristics:	N/A
Grade:	Ultra Pure Grade

Target Details

Gene:	BenzNuclease
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Application Details

Application Notes:	Its high intrinsic activity and broad substrate tolerance make the endonuclease an ideal tool in a variety of biotechnological and pharmaceutical applications: removal of nucleic acid from protein samples (Elimination of nucleic acids from recombinant proteins, Purification of protein fragments from inclusion bodies, Sample preparation in western blotting or twodimensional gel electrophoresis), Viscosity reduction in protein extracts.
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Application Details

Reagent Preparation: Reaction buffer: 50 mM Tris-HCl, 1 mM MgCl₂, pH 8.0 (*In the case of extensive dilution before use, carrier protein such as 0.1 mg/ml HSA or BSA is generally recommended to avoid any enzyme loss from surface adsorption*)

DNA Substrate: 1 mg/ml salmon sperm DNA is dissolved overnight at 4 °C, *in reaction buffer, and is then sonicated on ice to obtain a homogenous solution.*

Enzyme: Different dilution of nuclease with reaction buffer

Stop reagent: Trichloroacetic acid (TCA)

Assay Procedure: Measurement of activity: The activity of any unknown nuclease can be determined from a single measurement by means of the standard curve. The specific activity of BenzNuclease is >1.5 x 10⁶ unit/mg protein.

Calculation of Results: Standard curve establishment:

- 400 µl substrate + 100 µl enzyme of known activity = 500 µl mixture
- Incubate the mixture at 37°C **for 30 min.**
- Stop the reaction by addition of 400 µl cold TCA and incubate on ice for 10 min.
- Centrifuge at 8500 g for 5 min.
- Measure the absorbance of supernatant at 260 nm.
- Lot a standard curve with nuclease of known activities for each set of measurements.

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Please see Certificate of Analysis for specific instructions. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Concentration: 250 U/µL

Buffer: N/A

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -20 °C

Storage Comment: No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

Publications

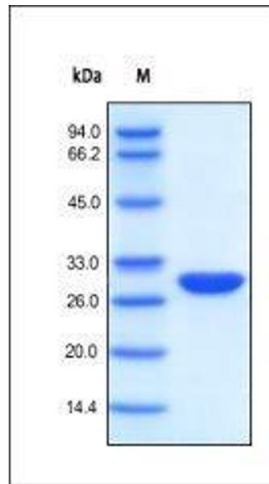
Product cited in: Johnson, Drugan, Miller, Evans: "38" in: , Vol. 1363, Issue Nucleic acids research, pp. 28-39, (

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Images



SDS-PAGE

Image 1. The purity of BenzNuclease was determined by SDS-PAGE reduced and staining overnight with Coomassie Blue.