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ProductInformation

Anti-Deoxyribonuclease I (DNASE I)
Developed in Rabbit
IgG Fraction Antiserum

Product Number **D 0188**

Product Description

Anti-Deoxyribonuclease I (Dnase I) is developed in rabbit using purified bovine pancreatic DNase I as immunogen.

Anti-DNase I specifically recognizes bovine DNase I (33 kDa) by immunoblotting.

Deoxyribonuclease I (DNase I) is a Ca^{2+} and Mg^{2+} dependent endonuclease. DNase I is synthesized in the pancreas and stored in zymogen granules. It has been used to reduce the viscosity of cystic fibrosis sputum.[1] A DNase I-like enzyme appears to catalyze the degradation of chromatin to oligo-and mononucleosomes during apoptosis.[2, 3] A recent study has demonstrated an endonuclease with activity and antigenicity indistinguishable from DNase I in thymocytes, cells susceptible to apoptosis.[4]

Deoxyribonuclease I (DNase I) is an endonuclease that hydrolyzes double-stranded or single-stranded DNA preferentially at sites adjacent to pyrimidine nucleotides. The product of hydrolysis is a complex mixture of 5'-phosphate mononucleotides and oligonucleotides. In the presence of magnesium ion, DNase I attacks each strand of DNA independently and the cleavage sites are random.

Reagent

Anti-DNase I is supplied as the IgG fraction in phosphate buffered saline, pH 7.2, containing 0.01% sodium azide.

Formulation is approximately 200 µg/200 µl.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

Store at –20 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Working concentration is 1 µg/ml by immunoblotting using bovine pancreatic Dnase I, anti-rabbit IgG – peroxidase conjugate and enhanced chemiluminescent detection.

Note: In order to obtain the best results and assay sensitivity in various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Shak, S., et al., Proc. Natl. Acad. Sci. USA, **87**, 9188 (1990).
2. Wyllie, A.H., Nature, **284**, 555 (1980).
3. Arends, M.J., et al., Am. J. Pathol., **136**, 593 (1990).
4. Peitsch, M.C., et al., EMBO J., **12**, 377 (1993).

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