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DNase I Rabbit pAb

Catalog # AP98362

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P24855
Other Accession	P24855
Reactivity	Rat, Human
Predicted	Pig, Mouse, Rabbit, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31434
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DNase I
Epitope Specificity	101-200/282
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the DNase I family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Deoxyribonuclease I gene is approximately 3.2 kb long with 9 exons separated by 8 introns. In the form of a bovine pancreatic enzyme preparation, it occupies an important place in the history of protein chemistry and enzymology: it was the first enzyme to be recognized as specific for DNA; it was the first DNase to be crystallized; and it was the first DNase for which a specific protein inhibitor was characterized. DNase I is a Ca2+ and Mg2+ dependant 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. A DNase I-like enzyme appears to catalyze the degradation of chromatin to oligo- and mononucleosomes during apoptosis. A recent study has demonstrated an endonuclease with activity and antigenicity indistinguishable from DNase I in thymocytes, cells susceptible to apoptosis. 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 Mg ion, DNase I attacks each strand of DNA independently and the cleavage sites are random.

Additional Information

Gene ID	1773
Other Names	DNL1; DRNI; DNAS1_HUMAN; DNASE1; Deoxyribonuclease I (DNase I); 3.1.21.1; deoxyribonuclease 1; deoxyribonuclease I
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	DNASE1 (HGNC:2956)
Synonyms	DNL1, DRNI
Function	Serum endocuclease secreted into body fluids by a wide variety of exocrine and endocrine organs (PubMed:11241278, PubMed:2251263, PubMed:2277032). Expressed by non-hematopoietic tissues and preferentially cleaves protein-free DNA (By similarity). Among other functions, seems to be involved in cell death by apoptosis (PubMed:11241278). Binds specifically to G-actin and blocks actin polymerization (By similarity). Together with DNASE1L3, plays a key role in degrading neutrophil extracellular traps (NETs) (By similarity). NETs are mainly composed of DNA fibers and are released by neutrophils to bind pathogens during inflammation (By similarity). Degradation of intravascular NETs by DNASE1 and DNASE1L3 is required to prevent formation of clots that obstruct blood vessels and cause organ damage following inflammation (By similarity).
Cellular Location	Secreted. Zymogen granule. Nucleus envelope. Note=Secretory protein, stored in zymogen granules and found in the nuclear envelope
Tissue Location	Principally in tissues of the digestive system. Highest levels found in urine, but also relatively abundant in semen and saliva

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.