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DNase II Antibody

Catalog # ASC10045

Product Information

Application	WB, E, IHC-P
Primary Accession	O00115
Other Accession	AF047016, 2921838
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	39581
Conjugate	Unconjugated
Application Notes	DNase II antibody can be used for detection of DNase II expression by Western blot at 0.5 g/mL. An approximate 40 kDa band can be detected, which represents the pro-enzyme of DNase II. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	1777
Other Names	DNase II Antibody: DNL, DNL2, DNASE2A, Deoxyribonuclease-2-alpha, Acid DNase, DNase II alpha, deoxyribonuclease II, lysosomal
Target/Specificity	DNASE2;
Reconstitution & Storage	DNase II antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	DNase II Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DNASE2
Synonyms	DNASE2A, DNL2
Function	Hydrolyzes DNA under acidic conditions with a preference for double-stranded DNA. Plays a major role in the clearance of nucleic acids generated through apoptosis, hence preventing autoinflammation (PubMed:29259162, PubMed:31775019). Necessary for proper fetal development and for definitive erythropoiesis in fetal liver and bone marrow, where it degrades nuclear DNA expelled from erythroid precursor cells (PubMed:29259162).

Cellular Location Lysosome.

Tissue Location Expressed in monocytes/macrophages (at protein level).

Background

DNase II Antibody: Apoptosis is characterized by several morphological nuclear changes including chromatin condensation and nuclear fragmentation. These changes are triggered by the activation of members of caspase family, caspase activated DNase, and several novel proteins including AIF and Acinus. DNase II causes both chromatin condensation and DNA fragmentation. The genes encoding human, porcine, and murine DNase II have been cloned. The DNase II gene encodes a 40 kDa proenzyme. The mature enzyme consists of two non-identical subunits, the 32 kDa (alpha) and 12 kDa (beta) chains, generated by proteolytic processing. Overexpression of DNase II induces chromatin condensation. DNase II is ubiquitously expressed in human tissues.

References

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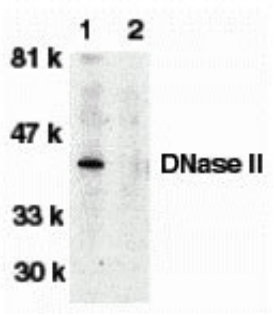
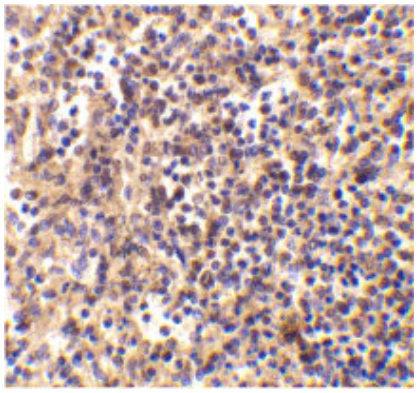
Yasuda T, Takeshita H, Iida R, Nakajima T, Hosomi O, Nakashima Y, Kishi K. Molecular cloning of the cDNA encoding human deoxyribonuclease II. J Biol Chem 1998;273:2610-6
Krieser RJ, Eastman A. The cloning and expression of human deoxyribonuclease II. A possible role in apoptosis. J Biol Chem 1998;273:30909-14
Shiokawa D, Tanuma S. Cloning of cDNAs encoding porcine and human DNase II. Biochem Biophys Res Commun 1998;247:864-9

Images



Western blot analysis of DNase II in human spleen tissue lysate in the absence (lane 1) or presence (lane 2) of blocking peptide with DNase antibody II at 1:500 dilution.



Immunohistochemistry of DNaseII in human spleen tissue with DNaseII antibody at 5 µg/mL.