



DNase I (h): 293T Lysate: sc-159797

BACKGROUND

Internucleosomal DNA fragmentation following the activation of endonucleases is the common end point of apoptosis. DNase I, a $\text{Ca}^{2+}/\text{Mg}^{2+}$ -dependent endonuclease ubiquitously expressed in mammalian tissues, has been implicated to mediate internucleosomal DNA degradation in human cells undergoing apoptosis. DNase I is highly polymorphic, and at least six alleles of DNase I are known. DNase II, the ubiquitously expressed acidic deoxyribonuclease, acts downstream of caspase activation and may also induce DNA digestion during apoptosis. DNase I cleaves DNA to 5'-phosphodinucleotide and 5'-phospho- oligonucleotide end-products, whereas DNase II cleaves DNA to 3'-phosphomononucleotide and 3'-phosphooligonucleotide end-products. The mechanism by which DNase II cuts DNA is similar to DNase I, which produces nicks rather than double-strand cuts. DNase II is usually present in cytoplasm of epithelial cells, but it appears concentrated in the nuclei of lens fibers. In contrast, DNase I is always concentrated in nuclei of epithelial and fiber cells. The gene encoding DNase II maps to human chromosome 19.

REFERENCES

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6. Oliveri, M., Daga, A., Cantoni, C., Lunardi, C., Millo, R. and Puccetti, A. 2001. DNase I mediates internucleosomal DNA degradation in human cells undergoing drug-induced apoptosis. *Eur. J. Immunol.* 31: 743-751.

CHROMOSOMAL LOCATION

Genetic Locus: DNASE1 (human) mapping to 16p13.3.

PRODUCT

DNase I (h): 293T Lysate represents a lysate of human DNase I transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DNase I (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DNase I antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.